

NCC

低功率射頻電機型式試驗報告

產品名稱 : OmniAccess Stellar
型號 : OAW-AP1201
廠牌 : Alcatel-Lucent Enterprise
申請者 : 皇輝科技股份有限公司
申請者地址 : 臺北市內湖區民權東路6段11巷43之1號3樓
測試標準 : LP0002 (107 年版)
參考法規 : ANSI C63.10-2013
測試結果 : 符合
測試日期 : 2018.11.15 ~ 2018.11.30

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修訂紀錄

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1. 一般資訊

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申請者地址	:	臺北市內湖區民權東路 6 段 11 巷 43 之 1 號 3 樓
製造商	:	ALE International
實驗室	:	台灣曼瑞檢測科技有限公司
實驗室地址	:	33377 台灣桃園市龜山區復興二路 38 號
實驗室資訊	:	1. MRT facility is a FCC registered (Reg. No. 291082) test facility with the site description report on file and is designated by the FCC as an Accredited Test Film. 2. MRT facility is an IC registered (MRT Reg. No. 21723) test laboratory with the site description on file at Industry Canada. 3. MRT Lab is accredited to ISO 17025 by the Taiwan Accreditation Foundation (TAF Cert. No. 3261) in EMC, Telecommunications and Radio testing for FCC (Designation Number: TW3261), Industry Taiwan, EU and TELEC Rules.
實驗室測試環境條件	:	溫度 (°C) : 20-35 / 濕度 (%RH) : 30-65

2. 產品描述

2.1. 產品資訊

產品名稱	OmniAccess Stellar
產品型號	OAW-AP1201
廠牌	Alcatel-Lucent Enterprise
工作模式	主控運作模式
頻率範圍	For 802.11a/n-HT20/ac-VHT20: 5180 ~ 5320 MHz, 5500 ~ 5720 MHz, 5745 ~ 5825 MHz For 802.11n-HT40/ac-VHT40: 5190 ~ 5310 MHz, 5510 ~ 5710 MHz, 5755 ~ 5795 MHz For 802.11ac-VHT80 5210 MHz, 5290 MHz, 5530 MHz, 5610 MHz, 5690 MHz, 5775MHz
調變模式	OFDM for IEEE 802.11a/n/ac
傳輸速率	802.11a: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 300Mbps 802.11ac: up to 866.6Mbps
待測物額定電壓	POE input or AC adapter input
配件(選配)	
充電器 1	Model No.: ADP-30HR B Input Power: 100 - 240V ~ 50/60Hz, 1.0A Output Power: 48VDC/0.66A
充電器 2	Model No.: PD-9001 GR/AT/AC Input Power: 100 - 240V ~ 50/60Hz, 0.67A Output Power: 55VDC/0.6A

2.2. 動態雷達操作通道清單

802.11a/n-HT20/ac-VHT20

Channel	Frequency	Channel	Frequency	Channel	Frequency
52	5260 MHz	56	5280 MHz	60	5300 MHz
64	5320 MHz	100	5500 MHz	104	5520 MHz
108	5540 MHz	112	5560 MHz	116	5580 MHz
120	5600 MHz	124	5620 MHz	128	5640 MHz
132	5660 MHz	136	5680 MHz	140	5700 MHz
144	5720 MHz	--	--	--	--

802.11n-HT40/ac-VHT40

Channel	Frequency	Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz	102	5510 MHz
118	5590 MHz	126	5630 MHz	134	5670 MHz
142	5710 MHz	--	--	--	--

802.11ac-VHT80

Channel	Frequency	Channel	Frequency	Channel	Frequency
58	5290 MHz	106	5530 MHz	122	5610 MHz
138	5690 MHz	--	--	--	--

2.3. 天線規格

Antenna Type	Frequency Band (GHz)	TX Paths	Per Chain Max Antenna Gain (dBi)		Beam-Forming Directional Gain (dBi)	CDD Directional Gain(dBi)	
			Ant 0	Ant 1		For Power	For PSD
Wi-Fi Internal Antenna							
PCB	2412 ~ 2462	2	4.70	3.70	7.22	4.70	7.71
	5150 ~ 5250	2	3.80	3.00	6.42	3.80	6.81
	5250 ~ 5350	2	3.80	3.00	6.42	3.80	6.81
	5470 ~ 5725	2	4.60	3.80	7.22	4.60	7.61
	5725 ~ 5850	2	4.60	3.00	6.85	4.60	7.61
Bluetooth Internal Antenna							
PCB	2402 ~ 2480	1	3.70		--		

Note:

- The EUT supports SISO technology for 802.11b mode only.
- The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.
For CDD transmissions, directional gain is calculated as follows, $N_{ANT} = 2$, $N_{SS} = 1$.
If all antennas have the same gain, G_{ANT} , Directional gain = $G_{ANT} + \text{Array Gain}$, where Array Gain is as follows.
 - For power spectral density (PSD) measurements on all devices,
Array Gain = $10 \log (N_{ANT} / N_{SS}) \text{ dB} = 3.01$;
 - For power measurements on IEEE 802.11 devices,
Array Gain = 0 dB for $N_{ANT} \leq 4$;
- The EUT also supports Beam Forming mode, and the Beam Forming support 802.11n/ac, not include 802.11a/b/g. The Beam-Forming Directional Gain (dBi) = 3.0 dBi.

2.4. 測試模式

Test Mode	Make the EUT communicate with notebook at DFS channel
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3. 動態頻率選擇和測試雷達波

3.1. 動態頻率選擇偵測門檻及操作模式

(1) 最低動態頻率選擇的偵測門檻

A) 最大 EIRP 為200 mW~1 W之設備，其最低動態頻率選擇的偵測門檻值為-64 dBm。

B) 最大 EIRP 低於200 mW，且功率頻譜密度小於10 dBm/MHz 之設備，其最低動態頻率選擇的偵測門檻值為-62 dBm。

C) 最大EIRP 低於200 mW，且功率頻譜密度大於或等於10 dBm/MHz 之設備，其最低動態頻率選擇的偵測門檻值為-64 dBm。

D) 此偵測門檻值為1 微秒內之平均接收功率，並以0 dBi 天線為參考基準。頻道初始設定得由系統隨機選取或使用者手動選取。

(2) 操作模式：動態頻率選擇之規定適用於以下之操作模式：

(A) 頻道可用性檢查時間之規定，適用於主控運作模式。

(B) 頻道移動時間之規定，適用於主控及受控運作模式。

3.2. 雷達信號參數

This section provides the parameters for required test waveforms, minimum percentage of successful detections, and the minimum number of trials that must be used for determining DFS conformance. Step intervals of 0.1 microsecond for Pulse Width, 1 microsecond for PRI, 1 MHz for chirp width and 1 for the number of pulses will be utilized for the random determination of specific test waveforms.

Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 3-6	$\text{Roundup} \left\{ \left(\frac{1}{360} \right), \left(\frac{19 \cdot 10^6}{\text{PRI}_{\text{usec}}} \right) \right\}$	60%	30

		Test B: 15 unique PRI values randomly selected within the range of 518-3066 μ sec, with a minimum increment of 1 μ sec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120
Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.					

Parameters for Short Pulse Radar Waveforms

A minimum of 30 unique waveforms are required for each of the Short Pulse Radar Types 2 through 4. If more than 30 waveforms are used for Short Pulse Radar Types 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms.

Pulse Repetition Frequency Number	Pulse Repetition Frequency (Pulses Per Second)	Pulse Repetition Interval (Microseconds)
1	1930.5	518
2	1858.7	538
3	1792.1	558
4	1730.1	578
5	1672.2	598
6	1618.1	618
7	1567.4	638
8	1519.8	658
9	1474.9	678
10	1432.7	698
11	1392.8	718
12	1355	738

13	1319.3	758
14	1285.3	778
15	1253.1	798
16	1222.5	818
17	1193.3	838
18	1165.6	858
19	1139	878
20	1113.6	898
21	1089.3	918
22	1066.1	938
23	326.2	3066

Pulse Repetition Intervals Values for Test A

Long Pulse Radar Test Waveform

Radar Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Number of Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Number of Trials
5	50 - 100	5 - 20	1000 - 2000	1 - 3	8 - 20	80%	30

Parameters for Long Pulse Radar Waveforms

The parameters for this waveform are randomly chosen. Thirty unique waveforms are required for the Long Pulse Radar Type waveforms. If more than 30 waveforms are used for the Long Pulse Radar Type waveforms, then each additional waveform must also be unique and not repeated from the previous waveforms.

Frequency Hopping Radar Test Waveform

Radar Type	Pulse Width (μsec)	PRI (μsec)	Pulses Per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Number of Trials
6	1	333	9	0.333	300	70%	30

Parameters for Frequency Hopping Radar Waveforms

For the Frequency Hopping Radar Type, the same Burst parameters are used for each waveform. The hopping sequence is different for each waveform and a 100-length segment is selected from the hopping sequence defined by the following algorithm:

The first frequency in a hopping sequence is selected randomly from the group of 475 integer frequencies from 5250 – 5724MHz. Next, the frequency that was just chosen is removed from the group and a frequency is randomly selected from the remaining 474 frequencies in the group. This process continues until all 475 frequencies are chosen for the set. For selection of a random frequency, the frequencies remaining within the group are always treated as equally likely.

3.3. 測試限值

參數	限值
不可佔用期間	30 分鐘
頻道可用性檢查時間	60 秒
頻率移動時間	10 秒
頻道關閉傳輸時間	200 毫秒 + 在 10 秒週期內的 60 毫秒
U-NII 偵測頻寬	最小為 UNII 99% 發射頻寬的全部

註一：頻道移動時間與頻道關閉傳輸時間開始的瞬間如下所述：

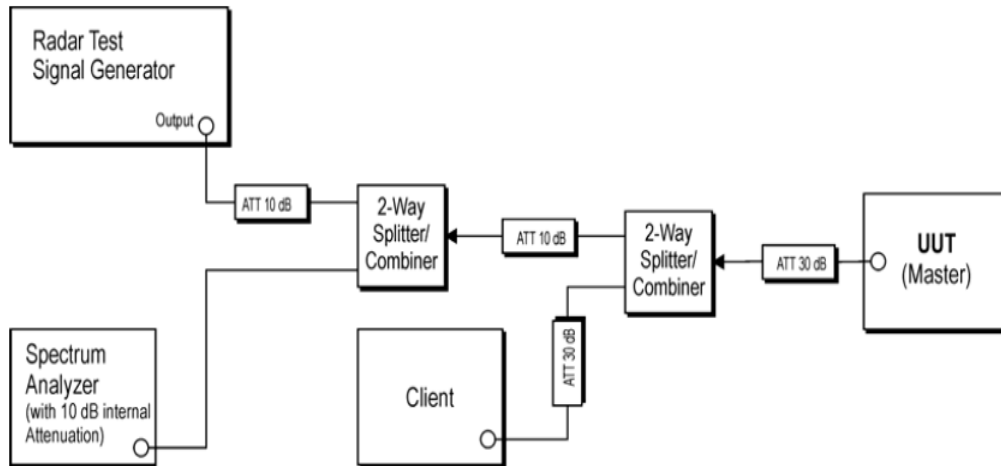
- 對短脈衝雷達信號，此瞬間為叢訊的結束時間點算起。
- 對跳頻雷達信號，此瞬間為最後一個產生的叢訊結束時間點算起。
- 對長脈衝雷達測試信號，此瞬間為雷達波型信號結束的 12 秒時間點算起。

註二：頻道關閉傳輸時間包含於頻道移動時間起始的 200 毫秒，加上在 10 秒週期內剩下為了促成頻道移動所需的任何額外間歇性的管理與控制信號〔合計時間為 60 毫秒〕。此控制信號的合計持續時間不包含傳輸間的 quiet 週期。

註三：在 U-NII 檢測帶寬檢測測試，雷達類型“0”應該被使用。對每個頻率步進的檢測的最小百分比是 90%。測試是被執行在沒有資料傳輸的狀態下。

3.4. 測試架設圖

The FCC KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02 describes a radiated test setup and a conducted test setup. The conducted test setup was used for this testing. Figure shows the typical test setup.



Conducted Test Setup where UUT is a Master and Radar Test Waveforms are injected into the Masters

4. 測試設備明細

動態雷達選擇 (DFS) – SR2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Agilent	N9010A	MRTTWA00012	1 year	2019/07/10
EXA Signal Analyzer	KEYSIGHT	N9010B	MRTSUE06457	1 year	2019/07/19
ESG Vector Signal Generator	Agilent	N5182B	MRTSUE06026	1 year	2019/04/05
Temperature/Humidity Meter	TEN BILLION	TTH-B3UP	MRTTWA00036	1 year	2019/05/10
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	MRTTWA00003	1 year	2019/04/05
Notebook	ASUS	PRO45V	MRTSUE06180	N/A	N/A

Client Information

Instrument	Manufacturer	Type No.
Wireless Network Adapter	Intel	7260HMW

Software	Version	Manufacturer	Function
Pulse Building	N/A	Agilent	Radar Signal Generation Software
DFS Tool	V 6.9.2	Agilent	DFS Test Software

5. 測試結果

產品名稱 OmniAccess Stellar
型號 OAW-AP1201

量測項目	限制值	測試結果	測試數據
UNII 偵測頻寬量測	參考 3.3 章節	符合	第 6 章節
頻道可用性檢查時間量測	參考 3.3 章節	符合	第 7 章節
頻率移動時間, 頻道關閉傳輸時間	參考 3.3 章節	符合	第 8 章節
30 分鐘不可佔用期間量測	參考 3.3 章節	符合	
動態頻率選擇偵測門檻值量測	參考 3.3 章節	符合	第 9 章節

6. 雷達系統波形校驗

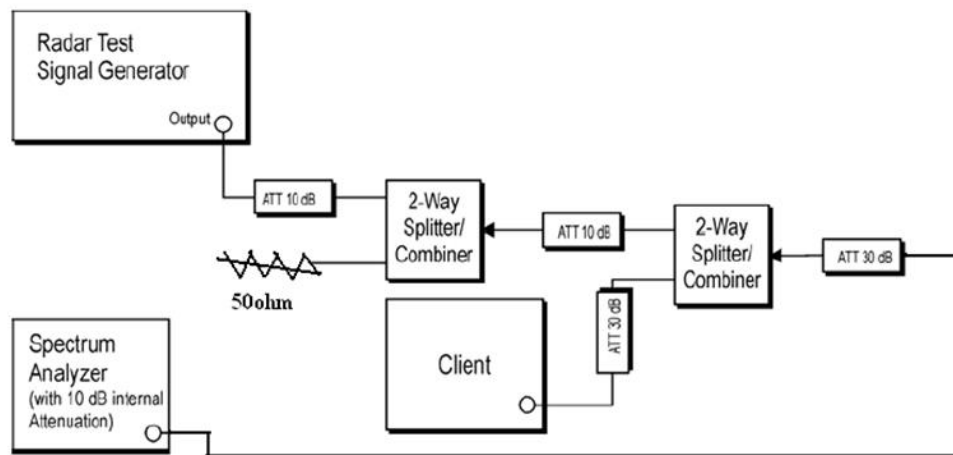
6.1. 量測方法

下圖之設備架構為用於校驗輻射測試之雷達波形，使用頻譜分析儀確認雷達測試信號之振幅位準。

將頻譜分析儀的中心頻率設為雷達波之頻率，頻率掃描範圍調整為零〔時域〕，解析頻寬與視訊頻寬分別為 3MHz 與 3MHz，並使用 peak detection 觀察雷達訊號產生器所创建的雷達波。

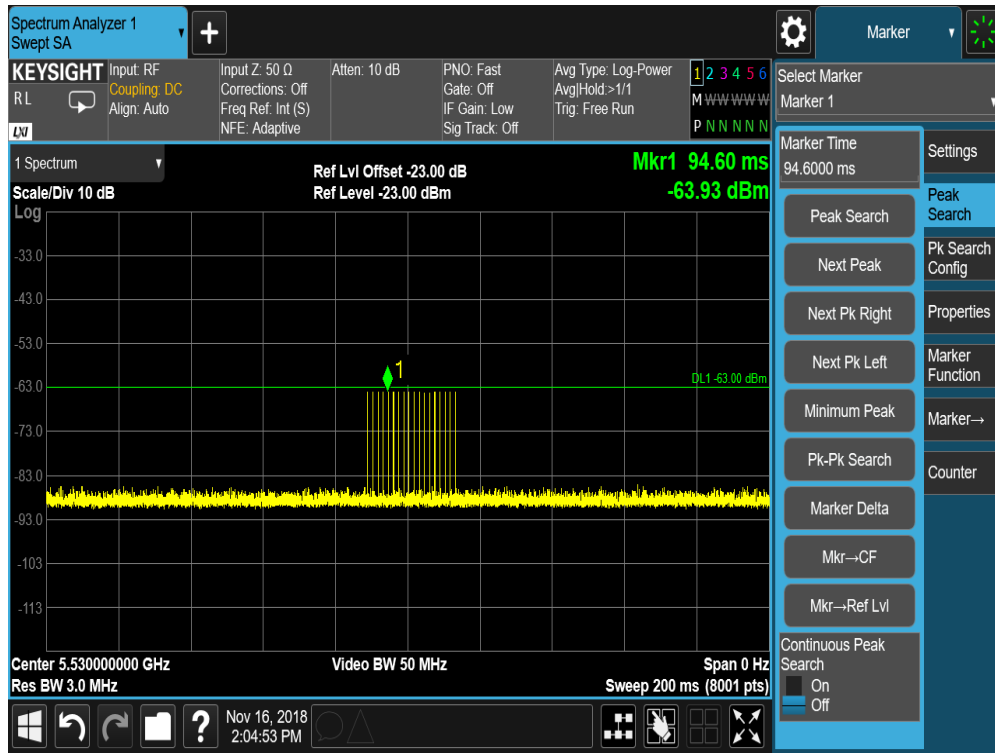
將雷達訊號產生器的振幅位準調整至頻譜分析儀上觀察到的位準為-63dBm，此位準為接收輸入端以 0dBi 的接收天線為參考基準。

6.2. 校驗架構圖

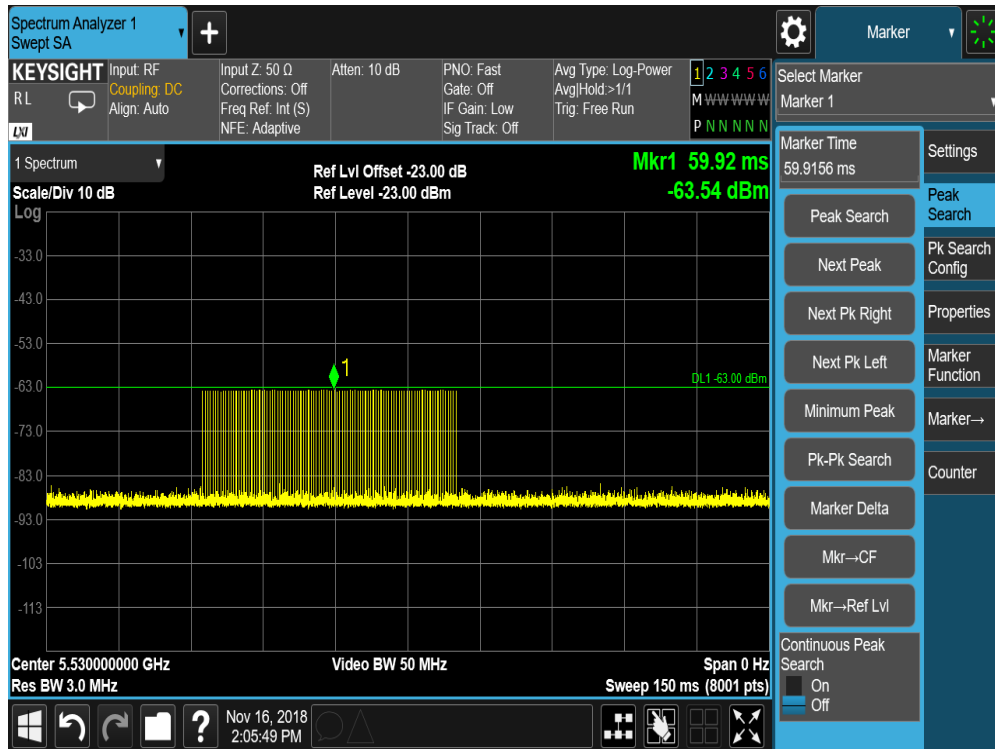


6.3. 校驗結果

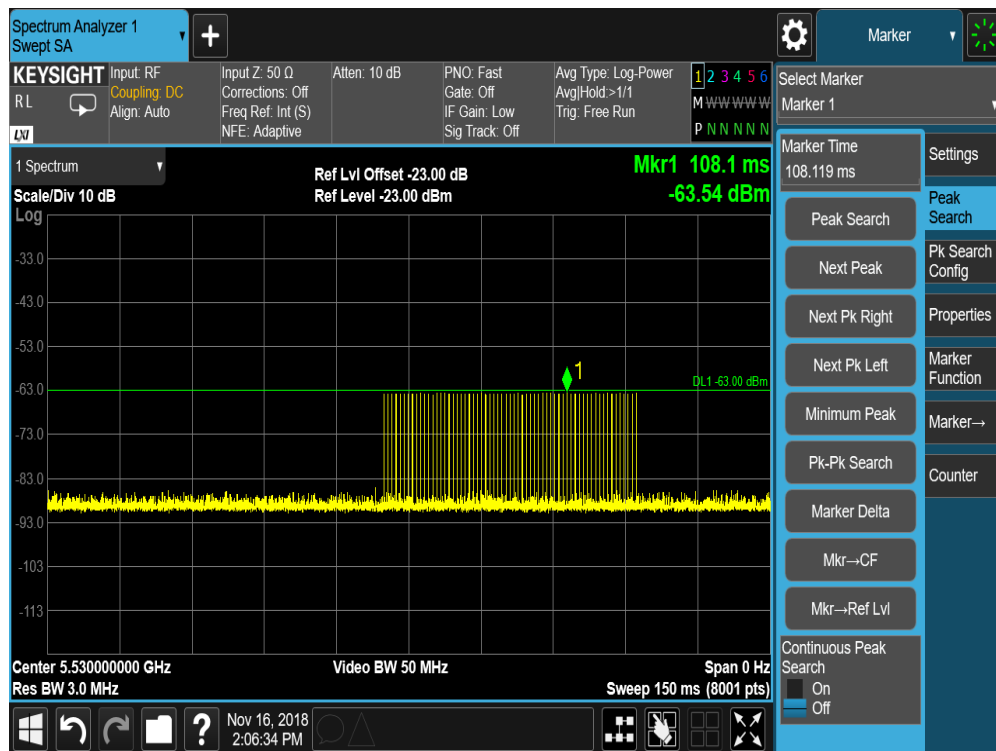
雷達測試信號 Type #0 校驗圖 for 5530MHz



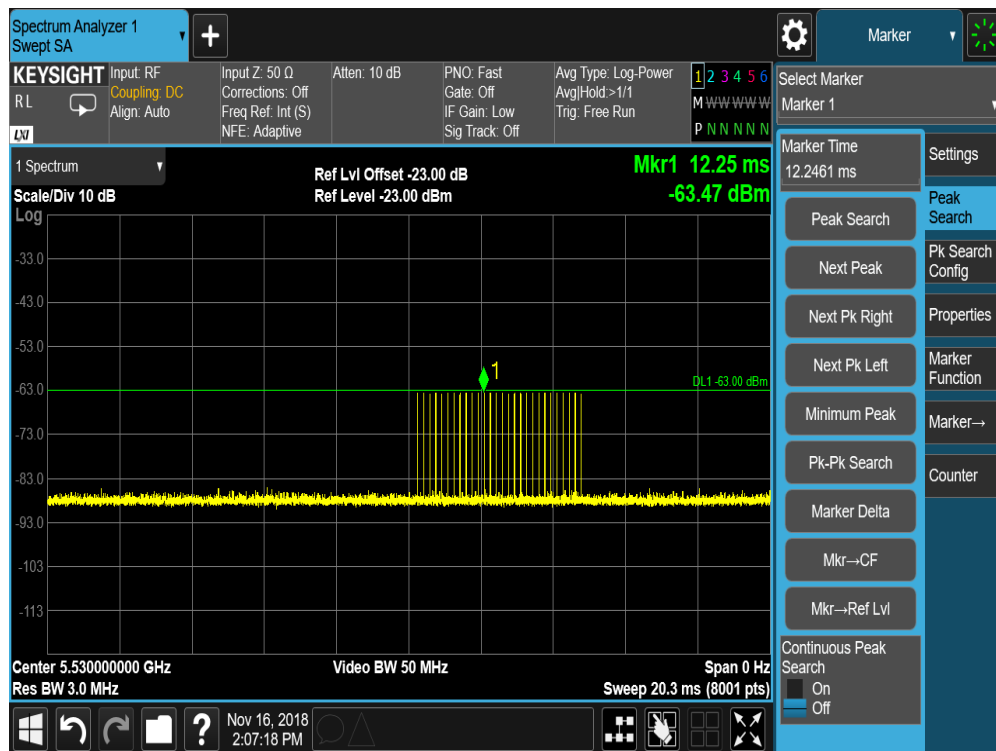
雷達測試信號 Type #1(Test A)校驗圖 for 5530MHz



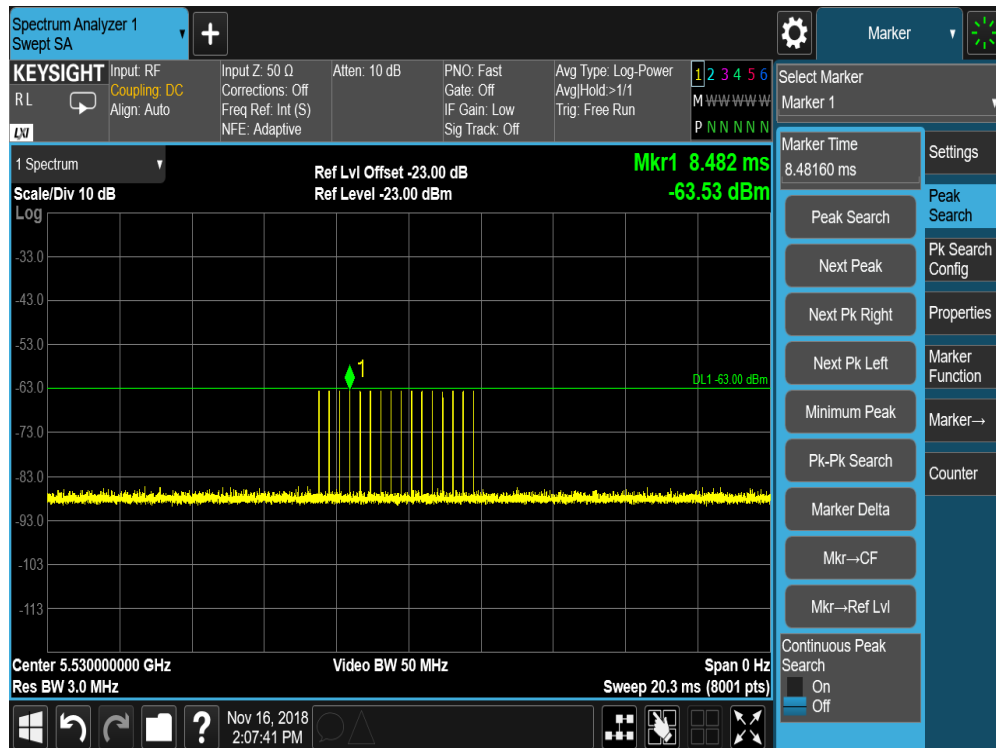
雷達測試信號 Type #1(Test B)校驗圖 for 5530MHz



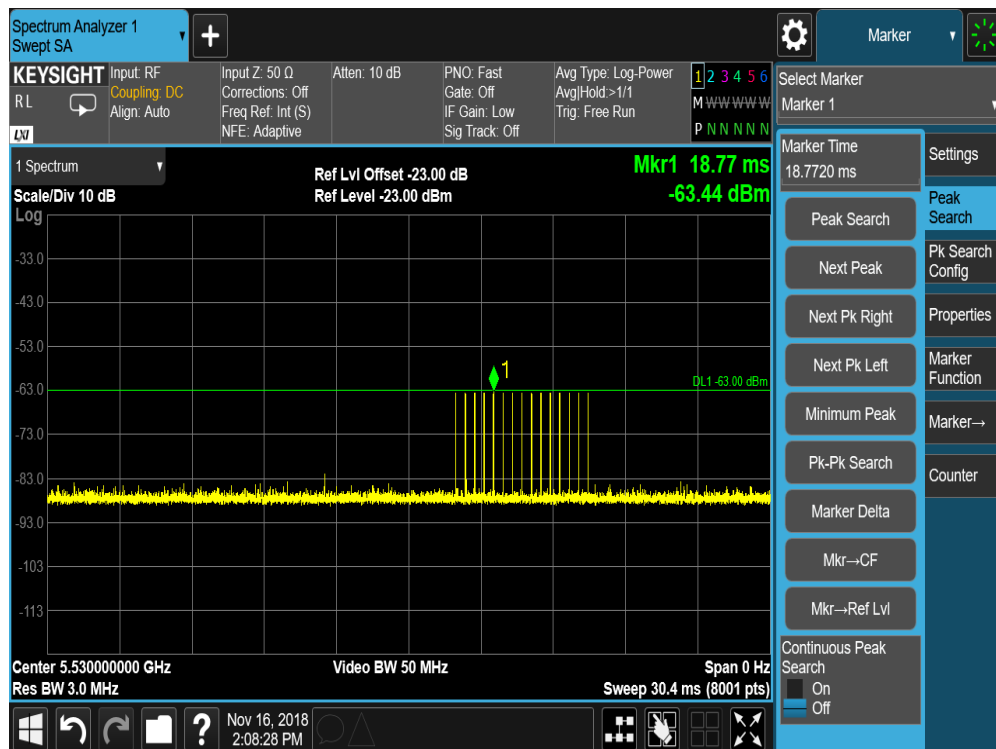
雷達測試信號 Type #2 校驗圖 for 5530MHz



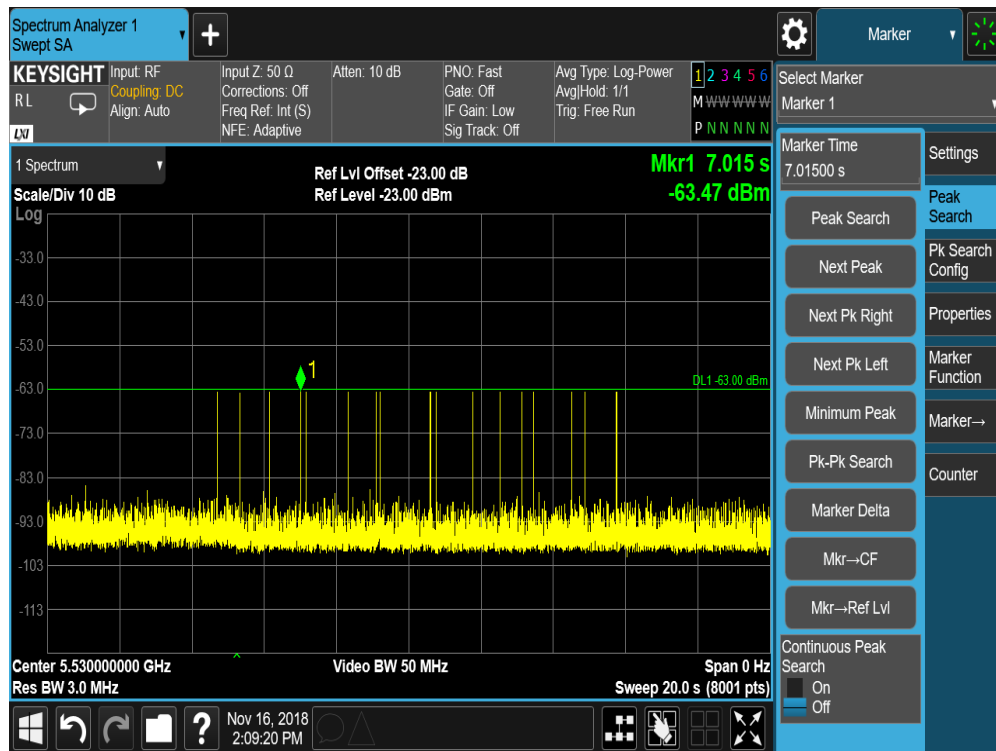
雷達測試信號 Type #3 校驗圖 for 5530MHz



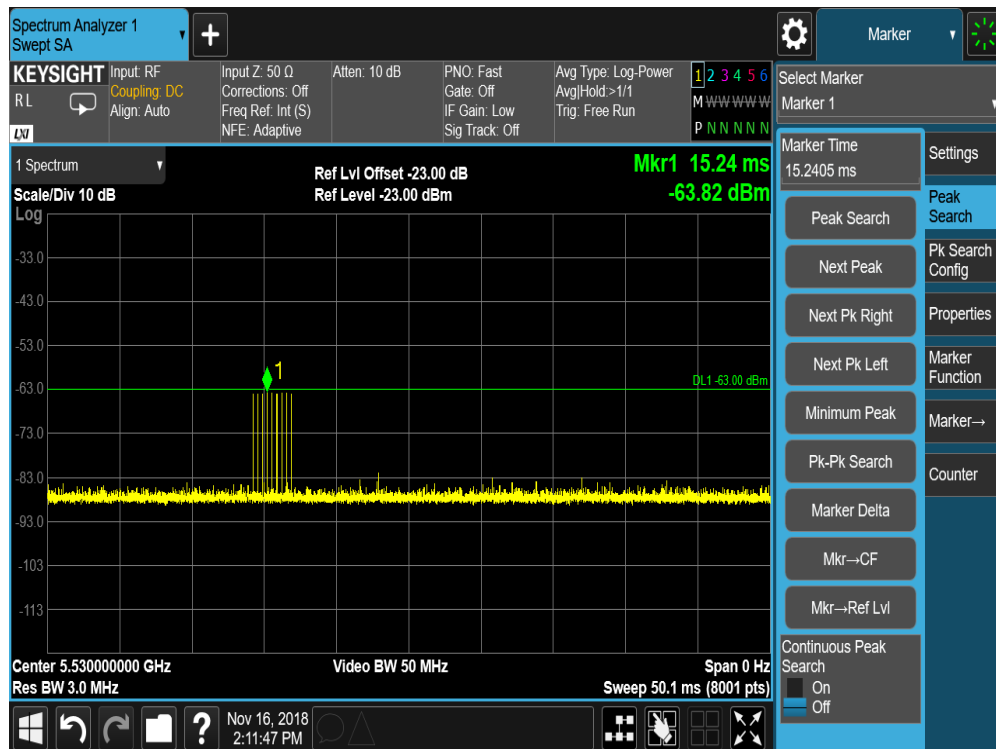
雷達測試信號 Type #4 校驗圖 for 5530MHz



雷達測試信號 Type #5 校驗圖 for 5530MHz



雷達測試信號 Type #6 校驗圖 for 5530MHz



Channel Loading Plot

802.11ac-VHT20 (5500MHz)



802.11ac-VHT40 (5510MHz)



802.11ac-VHT80 (5530MHz)



測試模式	測試頻率	占空比	要求占空比	測試結果
802.11ac-VHT20	5500 MHz	22.16%	>17%	Pass
802.11ac-VHT40	5510 MHz	25.18%	>17%	Pass
802.11ac-VHT80	5530 MHz	24.11%	>17%	Pass

7. UNII 偵測頻寬

7.1. 適用標準

待測物在其宣告頻寬測試偵測頻寬,在中心頻率以1MHz遞增及遞減雷達訊號每個頻率測試10次確認偵測成功機率(至少90%)並紀錄,必須要符合UNII 99% occupied bandwidth之100%頻寬。

7.2. 量測方法

1. Adjust the equipment to produce a single Burst of any one of the Short Pulse Radar Types 0-4 in Table 3-5 at the center frequency of the EUT Operating Channel at the specified DFS Detection Threshold level.
2. The generating equipment is configured as shown in the Conducted Test Setup above section 3.5.
3. The EUT is set up as a stand-alone device (no associated Client or Master, as appropriate) and no traffic. Frame based systems will be set to a talk/listen ratio reflecting the worst case (maximum) that is user configurable during this test.
4. Generate a single radar Burst, and note the response of the EUT. Repeat for a minimum of 10 trials. The EUT must detect the Radar Waveform using the specified U-NII Detection Bandwidth criterion shown in Table 3-5. In cases where the channel bandwidth may exceed past the DFS band edge on specific channels (i.e., 802.11ac or wideband frame based systems) select a channel that has the entire emission bandwidth within the DFS band. If this is not possible, test the detection BW to the DFS band edge.
5. Starting at the center frequency of the UUT operating Channel, increase the radar frequency in 5 MHz steps, repeating the above test sequence, until the detection rate falls below the U-NII Detection Bandwidth criterion specified in Table 3-3. Repeat this measurement in 1MHz steps at frequencies 5 MHz below where the detection rate begins to fall. Record the highest frequency (denote as FH) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies above FH is not required to demonstrate compliance.
6. Starting at the center frequency of the EUT operating Channel, decrease the radar frequency in 1 MHz steps, repeating the above item 4 test sequence, until the detection rate falls below the U-NII Detection Bandwidth criterion. Record the lowest frequency (denote as FL) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies below FL is not required to demonstrate compliance.
7. The U-NII Detection Bandwidth is calculated as follows: $\text{U-NII Detection Bandwidth} = \text{FH} - \text{FL}$
8. The U-NII Detection Bandwidth must be at least 100% of the EUT transmitter 99% power, otherwise, the EUT does not comply with DFS requirements.

7.3. 檢測頻寬概率測試結果

EUT Frequency = 5500MHz for 802.11ac-VHT20											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5490	0	0	0	0	0	0	0	0	0	0	0%
5491 FL	1	1	1	1	1	1	1	1	1	1	100%
5492	1	1	1	1	1	1	1	1	1	1	100%
5493	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5506	1	1	1	1	1	1	1	1	1	1	100%
5507	1	1	1	1	1	1	1	1	1	1	100%
5508	1	1	1	1	1	1	1	1	1	1	100%
5509 FH	1	1	1	1	1	1	1	1	1	1	100%
5510	0	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth = FH - FL = 5509MHz - 5491MHz = 18MHz											
EUT 99% Bandwidth = 17.91MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 17.91MHz x 100% = 17.91MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5500MHz. The 99% channel bandwidth is 17.91MHz. (See the 99% BW section of the RF report for further measurement details).

EUT Frequency = 5510MHz for 802.11ac-VHT40											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5490	0	0	0	0	0	0	0	0	0	0	0%
5491 FL	1	1	1	1	1	1	1	1	1	1	100%
5492	1	1	1	1	1	1	1	1	1	1	100%
5493	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5515	1	1	1	1	1	1	1	1	1	1	100%
5520	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%
5526	1	1	1	1	1	1	1	1	1	1	100%
5527	1	1	1	1	1	1	1	1	1	1	100%
5528	1	1	1	1	1	1	1	1	1	1	100%
5529 FH	1	1	1	1	1	1	1	1	1	1	100%
5530	0	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth = FH - FL = 5529MHz - 5491MHz = 38MHz											
EUT 99% Bandwidth = 36.03MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 36.03MHz x 100% = 36.03MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5510MHz. The 99% channel bandwidth is 36.03MHz. (See the 99% BW section of the RF report for further measurement details).

EUT Frequency = 5530MHz for 802.11ac-VHT80											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5490	0	0	0	0	0	0	0	0	0	0	0%
5491 FL	1	1	1	1	1	1	1	1	1	1	100%
5492	1	1	1	1	1	1	1	1	1	1	100%
5493	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5515	1	1	1	1	1	1	1	1	1	1	100%
5520	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%
5530	1	1	1	1	1	1	1	1	1	1	100%
5535	1	1	1	1	1	1	1	1	1	1	100%
5540	1	1	1	1	1	1	1	1	1	1	100%
5545	1	1	1	1	1	1	1	1	1	1	100%
5550	1	1	1	1	1	1	1	1	1	1	100%
5555	1	1	1	1	1	1	1	1	1	1	100%
5560	1	1	1	1	1	1	1	1	1	1	100%
5565	1	1	1	1	1	1	1	1	1	1	100%
5566	1	1	1	1	1	1	1	1	1	1	100%
5567	1	1	1	1	1	1	1	1	1	1	100%
5568	1	1	1	1	1	1	1	1	1	1	100%
5569 FH	1	1	1	1	1	1	1	1	1	1	100%
5570	0	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth = FH - FL = 5569MHz - 5491MHz = 78MHz											
EUT 99% Bandwidth = 75.88MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 75.88MHz x 100% = 75.88MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5530MHz. The 99% channel bandwidth is 75.88MHz. (See the 99% BW section of the RF report for further measurement details).

8. 頻道可用性檢查時間量測

8.1. 適用標準

設備必須檢查其可在某一頻道上起始傳送之前是否有雷達系統已經操作在該頻道上，以及何時其必須移動到另一新的頻道，在60 秒內若沒有偵測到功率位準大過上述之,擾門檻值的雷達訊號時，設備才可開始使用該頻道。

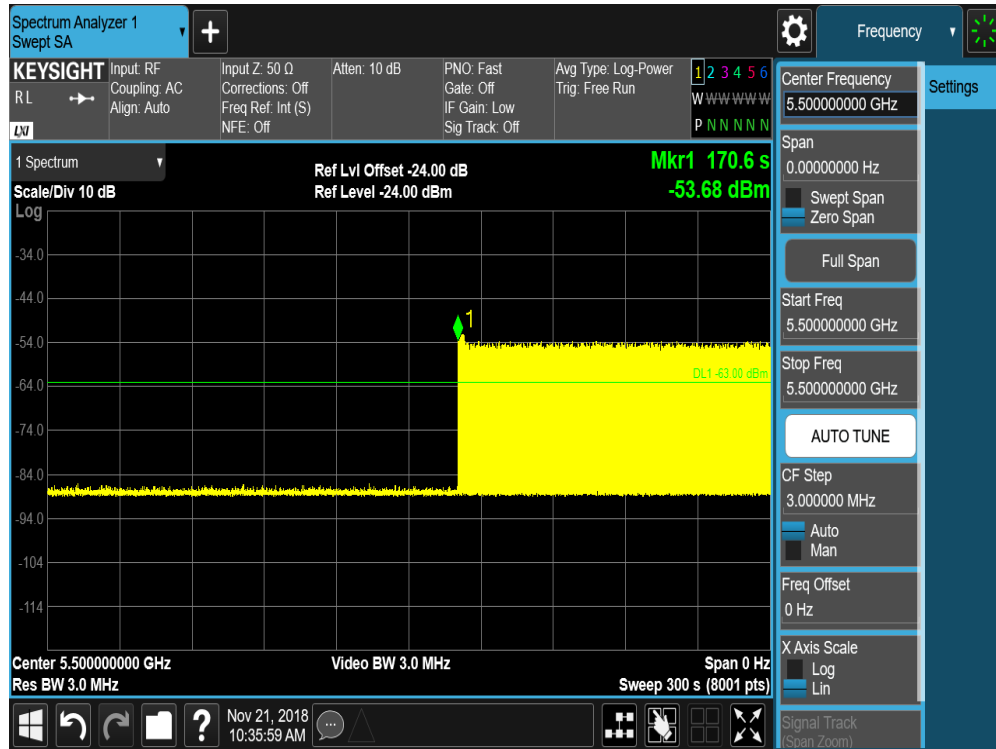
8.2. 量測方法

1. The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB occurs at the beginning of the Channel Availability Check Time.
2. The EUT is in completion power-up cycle (from T0 to T1). T1 denotes the instant when the EUT has completed its power-up sequence. The Channel Availability Check Time commences at instant T1 and will end no sooner than T1 + 60 seconds. A single Burst of one of Short Pulse Radar Types 0-4 at DFS Detection Threshold + 1 dB will commence within a 6 second window starting at T1.
3. The EUT is powered on at T0. T1 denotes the instant when the EUT has completed its power-up sequence. The Channel Availability Check Time commences at instant T1 and will end no sooner than T1 + 60 seconds. A single Burst of one of Short Pulse Radar Types 0-4 at DFS Detection Threshold + 1 dB will commence within a 6 second window starting at T1+ 54 seconds.
4. Visual indication on the EUT of successful detection of the radar Burst will be recorded and reported. Observation of emissions will continue for 2.5 minutes after the radar Burst has been generated. Verify that during the 2.5 minutes measurement window no EUT transmissions occurred.

8.3. 頻道可用性檢查時間量測測試結果

The EUT does not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle (110.6 sec). Initial beacons/data transmissions are indicated by marker 1 (170.6 sec).

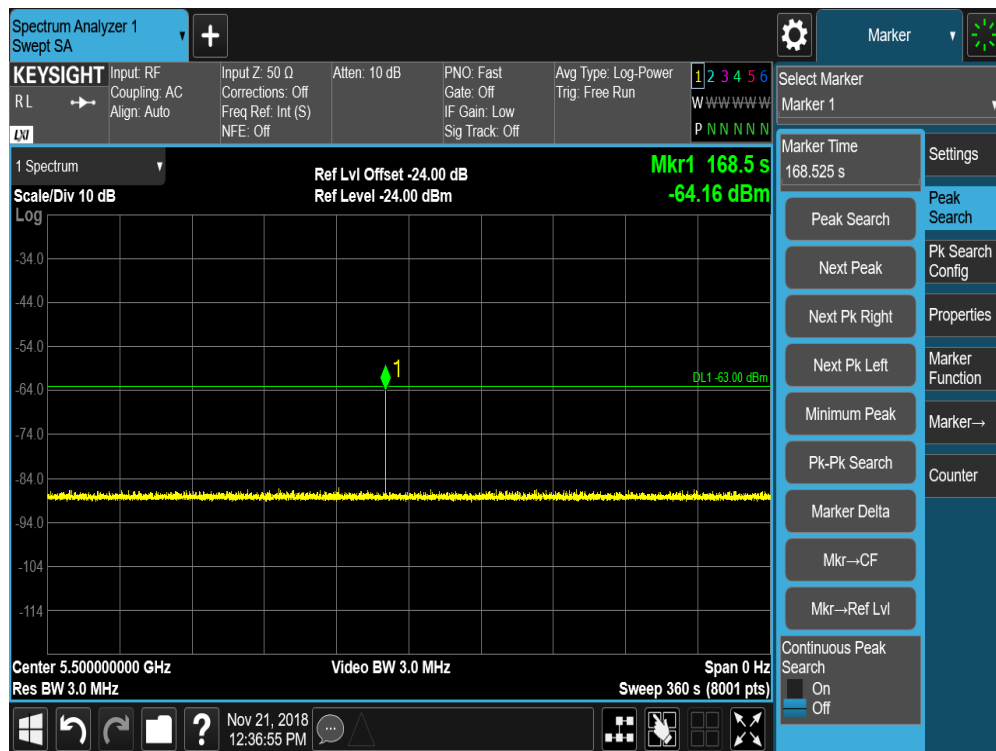
Initial Channel Availability Check Time for 802.11ac-VHT20 (5500MHz)



Radar Burst at the Beginning of the Channel Availability Check Time for 802.11ac-VHT20



Radar Burst at the End of the Channel Availability Check Time for 802.11ac-VHT20



9. 頻道關閉傳輸時間及不可佔用期間

9.1. 適用標準

頻道移動時間：在偵測到雷達的存在後，所有在該操作頻道上的所有傳輸須在10秒內停止，在偵測到雷達訊號後，該期間內的傳輸應維持最多200 毫秒的正常通訊。另外，間歇性的管理與控制訊號可在剩餘的時間中傳送，以便撤離該操作頻道。

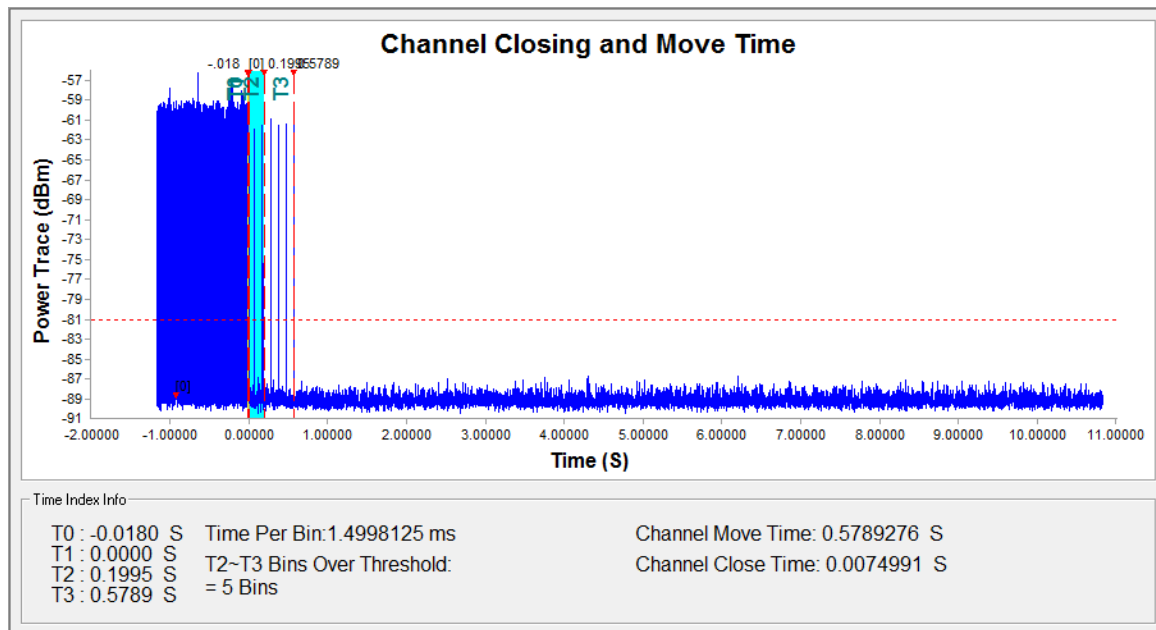
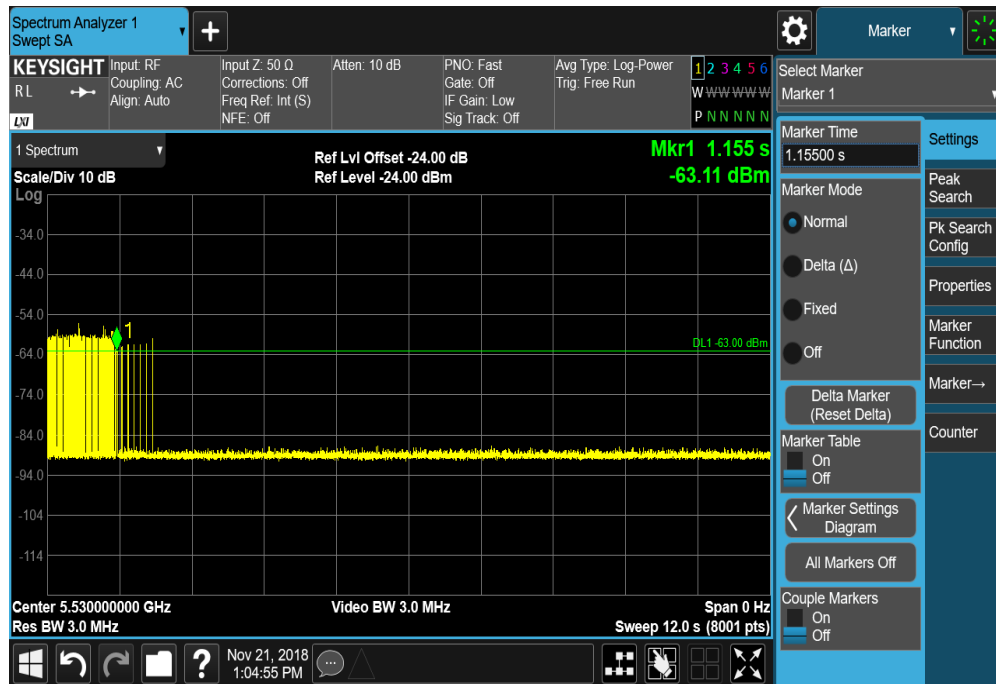
不可佔用期間：某一頻道已被頻道可用性檢查或”服務中”監視顯示含有雷達系統，至少須有30 分鐘的不可佔用期間。不可佔用期間起始於偵測到雷達系統的當時。

9.2. 量測方法

1. The test should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0.
2. When the radar burst with a level equal to the DFS Detection Threshold + 1dB is generated on the Operating Channel of the U-NII device. A U-NII device operating as a Master Device will associate with the Client Device at Channel. Stream the MPEG test file from the Master Device to the Client Device on the selected Channel for the entire period of the test. At time T0 the Radar Waveform generator sends a Burst of pulses for each of the radar types at Detection Threshold + 1dB.
3. Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the EUT during the observation time (Channel Move Time).
4. Measurement of the aggregate duration of the Channel Closing Transmission Time method. With the spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by: $Dwell (1.5ms) = S (12 \text{ sec}) / B (8000)$; where Dwell is the dwell time per spectrum analyzer sampling bin, S is the sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by: $C = N \times Dwell$; where C is the Closing Time, N is the number of spectrum analyzer sampling bins showing a U-NII transmission and Dwell is the dwell time per bin.
5. Measure the EUT for more than 30 minutes following the channel close/move time to verify that the EUT does not resume any transmissions on this Channel.

9.3. 頻道關閉傳輸時間及不可佔用期間測試結果

頻道關閉傳輸時間 for 802.11ac-VHT80 – 5530MHz



不可佔用期間 for 802.11ac-VHT80 – 5530MHz



項目	結果	限值
	Type 0	
頻率移動時間(s)	0.579s	<10s
頻道關閉傳輸時間(ms)	7.5ms	< 60ms
不可佔用期間 (min)	≥ 30min	≥ 30 min

10.動態頻率選擇偵測門檻

10.1. 適用標準

The minimum percentage of successful detection requirements found in below table when a radar burst with a level equal to the DFS Detection Threshold + 1dB is generated on the Operating Channel of the U-NII device (In- Service Monitoring).

Radar Type	Minimum Number of Trails	Detection Probability
0	30	$P_d > 60\%$
1	30(15 of test A and 15 of test B)	$P_d > 60\%$
2	30	$P_d > 60\%$
3	30	$P_d > 60\%$
4	30	$P_d > 60\%$
Aggregate (Radar Types 1-4)	120	$P_d > 80\%$
5	30	$P_d > 80\%$
6	30	$P_d > 70\%$

The percentage of successful detection is calculated by:

$(\text{Total Waveform Detections} / \text{Total Waveform Trails}) * 100 = \text{Probability of Detection Radar Waveform}$
In addition an aggregate minimum percentage of successful detection across all Short Pulse Radar Types 1-4 is required and is calculated as follows: $(P_{d1} + P_{d2} + P_{d3} + P_{d4}) / 4$.

10.2. 量測方法

1. Stream the MPEG test file from the Master Device to the Client Device on the test Channel for the entire period of the test.
2. At time T0 the Radar Waveform generator sends the individual waveform for each of the Radar Types 1-6, at levels equal to the DFS Detection Threshold + 1dB, on the Operating Channel.
3. Observe the transmissions of the EUT at the end of the Burst on the Operating Channel for duration greater than 10 seconds for Short Pulse Radar Types 0 to ensure detection occurs.
4. Observe the transmissions of the EUT at the end of the Burst on the Operating Channel for duration greater than 22 seconds for Long Pulse Radar Type 5 to ensure detection occurs.
5. The device can utilize a test mode to demonstrate when detection occurs to prevent the need to reset the device between trial runs.
6. The Minimum number of trails, minimum percentage of successful detection and the average minimum percentage of successful detection are found in below table.

10.3. 動態頻率選擇偵測門檻測試結果

Test Site	SR2	Test Date	2018/11/21
Test Engineer	Kevin Ker	Test Channel	802.11ac-VHT20 5500MHz
Test Item	Radar Statistical Performance		

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	1	3066	18	1
2	5491	1	698	76	1
3	5491	1	658	81	1
4	5491	1	618	86	1
5	5491	1	878	61	1
6	5491	1	938	57	1
7	5491	1	558	95	1
8	5491	1	758	70	1
9	5491	1	678	78	1
10	5491	1	838	63	1
11	5500	1	778	68	1
12	5500	1	898	59	1
13	5500	1	798	67	1
14	5500	1	598	89	1
15	5500	1	718	74	1
16	5500	1	1416	38	1
17	5500	1	1139	47	1
18	5500	1	1367	39	1
19	5500	1	1856	29	1
20	5500	1	2873	19	1
21	5509	1	579	92	1
22	5509	1	1259	42	1
23	5509	1	2061	26	1
24	5509	1	1772	30	1
25	5509	1	1020	52	1
26	5509	1	2167	25	1

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
27	5509	1	1037	51	1
28	5509	1	2359	23	1
29	5509	1	2751	20	1
30	5509	1	712	75	1
Detection Percentage (%)					100%

Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	1.3	200	27	1
2	5491	3.3	191	27	1
3	5491	2.9	174	26	1
4	5491	3.6	194	29	1
5	5491	1.4	174	24	1
6	5491	1.5	163	26	1
7	5491	4.5	165	29	1
8	5491	1.0	174	28	1
9	5491	3.3	166	24	1
10	5491	2.2	165	25	1
11	5500	3.3	215	24	1
12	5500	4.8	212	24	1
13	5500	1.2	228	27	1
14	5500	3.0	205	25	1
15	5500	1.9	218	24	1
16	5500	2.1	175	26	1
17	5500	1.5	222	23	1
18	5500	2.9	165	25	1
19	5500	4.9	167	28	1
20	5500	3.0	197	24	1
21	5509	2.2	169	23	1
22	5509	4.2	212	25	1
23	5509	1.5	192	26	1
24	5509	5.0	188	25	1
25	5509	3.8	227	23	1
26	5509	2.2	219	26	1
27	5509	4.2	165	27	1
28	5509	3.8	173	24	1
29	5509	1.9	204	25	1
30	5509	2.4	193	26	1
Detection Percentage (%)					100%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	7.1	500	17	1
2	5491	6.5	415	17	1
3	5491	6.7	396	16	1
4	5491	9.4	342	16	1
5	5491	7.5	457	17	1
6	5491	7.2	247	17	1
7	5491	8.7	382	18	1
8	5491	7.2	373	18	1
9	5491	8.4	489	17	1
10	5491	9.5	218	16	1
11	5500	9.2	256	16	1
12	5500	7.2	217	17	1
13	5500	7.6	219	17	1
14	5500	6.3	415	17	1
15	5500	6.9	283	16	1
16	5500	9.8	231	16	1
17	5500	8.6	469	16	1
18	5500	8.3	474	18	1
19	5500	8.2	476	17	1
20	5500	9.4	461	18	1
21	5509	8.1	402	16	1
22	5509	6.6	469	18	1
23	5509	8.1	485	17	1
24	5509	8.4	332	17	1
25	5509	9.5	366	17	1
26	5509	6.4	254	16	1
27	5509	9.2	417	16	1
28	5509	7.1	311	17	1
29	5509	6.2	287	17	1
30	5509	9.8	416	18	1
Detection Percentage (%)					100%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	17.5	314	16	1
2	5491	19.0	392	15	1
3	5491	15.4	216	12	1
4	5491	13.5	406	14	1
5	5491	12.7	400	16	1
6	5491	18.5	342	16	1
7	5491	13.5	209	16	1
8	5491	12.6	252	15	1
9	5491	13.3	239	15	1
10	5491	17.7	317	16	1
11	5500	12.3	488	16	1
12	5500	16.6	273	15	1
13	5500	13.8	416	15	1
14	5500	12.2	278	13	1
15	5500	18.7	289	13	1
16	5500	13.7	252	14	1
17	5500	12.9	431	15	1
18	5500	12.3	209	13	1
19	5500	17.3	305	14	1
20	5500	17.3	479	14	1
21	5509	13.6	471	15	1
22	5509	11.9	459	13	1
23	5509	14.3	309	15	1
24	5509	14.8	440	13	1
25	5509	17.9	356	14	1
26	5509	17.1	358	16	1
27	5509	15.7	467	14	1
28	5509	15.6	483	14	1
29	5509	14.2	344	15	1
30	5509	18.7	467	16	1
Detection Percentage (%)					100%

Note: In addition an average minimum percentage of successful detection across all four Short pulse radar test

waveforms is as follows: $\frac{P_d1 + P_d2 + P_d3 + P_d4}{4} = (100\% + 100\% + 100\% + 100\%) / 4 = 100\% (>80\%)$

Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5497.8	1	16	5500.0	1
2	5495.8	1	17	5500.0	1
3	5495.0	1	18	5500.0	1
4	5494.2	1	19	5500.0	1
5	5498.2	1	20	5500.0	1
6	5493.0	1	21	5505.8	1
7	5496.6	1	22	5507.0	1
8	5493.4	1	23	5502.2	1
9	5498.6	1	24	5505.4	1
10	5494.6	1	25	5501.4	1
11	5500.0	1	26	5504.2	1
12	5500.0	1	27	5501.8	1
13	5500.0	1	28	5506.6	1
14	5500.0	1	29	5505.0	1
15	5500.0	1	30	5503.4	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_1										
Num of Bursts = 17 Burst Interval (us)= 705882 Burst # Off Time (us) # Pulses Chirp (MHz) PW (us) Pulse 1 Pri (us) Pulse 2 Pri (us) Pulse 3 Pri (us) Start Loc (us) Start Burst Interval (us) End Burst Interval (us)										
1	604136	1	17	100	1967	0	0	604136	0	705881
2	108598	2	17	60	1786	1831	0	714701	705882	1411763
3	963144	1	17	50	1255	0	0	1681462	1411764	2117645
4	708810	2	17	100	1503	1911	0	2391527	2117646	2823527
5	902419	1	17	60	1932	0	0	3297360	2823528	3529409
6	510615	1	17	100	1685	0	0	3809907	3529410	4235291
7	925239	2	17	90	1800	1745	0	4736831	4235292	4941173
8	823026	3	17	65	1823	1530	1172	5563402	4941174	5647055
9	503830	1	17	60	1115	0	0	6071757	5647056	6352937
10	560909	3	17	95	1897	1355	1307	6633781	6352938	7058819
11	778278	2	17	65	1165	1720	0	7416618	7058820	7764701
12	453968	2	17	90	1199	1875	0	7873471	7764702	8470583
13	1016215	2	17	85	1131	1047	0	8892760	8470584	9176465
14	382874	3	17	95	1035	1138	1790	9277812	9176466	9882347
15	725603	2	17	80	1663	1894	0	10007378	9882348	10588229
16	1124604	1	17	95	1422	0	0	11135539	10588230	11294111
17	409908	2	17	70	1430	1222	0	11546869	11294112	11999993
Total number of pulses in waveform = 31 *****										

**Type 5 Radar Waveform_2**

Num of Bursts = 10
Burst Interval (us)= 1200000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	518478	2	12	95	1944	1618	0	518478	0	1199999
2	1132576	3	12	100	1137	1669	1758	1654616	1200000	2399999
3	1538142	1	12	60	1320	0	0	3197322	2400000	3599999
4	904242	3	12	90	1128	1160	1638	4102884	3600000	4799999
5	1162704	2	12	70	1846	1261	0	5269514	4800000	5999999
6	1749368	2	12	60	1174	1503	0	7021989	6000000	7199999
7	839447	3	12	95	1841	1966	1961	7864113	7200000	8399999
8	1627793	3	12	95	1200	1576	1119	9497674	8400000	9599999
9	344854	3	12	70	1587	1252	1902	9846423	9600000	10799999
10	1211623	3	12	60	1866	1512	1394	11062787	10800000	11999999

Total number of pulses in waveform = 25

Type 5 Radar Waveform_3

Num of Bursts = 19
Burst Interval (us)= 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	113936	2	10	100	1089	1629	0	113936	0	631578
2	1004399	3	10	70	1651	1734	1863	1121053	631579	1263157
3	558976	3	10	100	1666	1806	1618	1685277	1263158	1894736
4	548632	2	10	55	1132	1545	0	2238999	1894737	2526315
5	874823	3	10	85	1914	1372	1921	3116499	2526316	3157894
6	636695	2	10	50	1475	1410	0	3758401	3157895	3789473
7	158917	2	10	100	1380	1490	0	3920203	3789474	4421052
8	961781	2	10	80	1559	1613	0	4884854	4421053	5052631
9	773966	3	10	95	1145	1557	1670	5661992	5052632	5684210
10	477652	1	10	80	1089	0	0	6144016	5684211	6315789
11	350329	1	10	60	1175	0	0	6495434	6315790	6947368
12	821715	3	10	80	1712	1750	1101	7318324	6947369	7578947
13	281570	3	10	95	1907	1055	1328	7604457	7578948	8210526
14	882892	1	10	50	1085	0	0	8491639	8210527	8842105
15	975159	2	10	100	1873	1954	0	9467883	8842106	9473684
16	274725	3	10	95	1364	1771	1543	9746435	9473685	10105263
17	715485	2	10	55	1504	1149	0	10466598	10105264	10736842
18	383825	1	10	95	1537	0	0	10853076	10736843	11368421
19	1067691	2	10	75	1918	1654	0	11922304	11368422	12000000

Total number of pulses in waveform = 41

Type 5 Radar Waveform_4

Num of Bursts = 15
Burst Interval (us)= 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	268186	1	8	50	1191	0	0	268186	0	799999
2	1214818	2	8	80	1926	1438	0	1484195	800000	1599999
3	868505	2	8	75	1965	1511	0	2356064	1600000	2399999
4	718684	2	8	60	1452	1608	0	3078224	2400000	3199999
5	217964	3	8	70	1017	1712	1016	3299248	3200000	3999999
6	804441	1	8	70	1746	0	0	4107434	4000000	4799999
7	1252206	2	8	100	1687	1551	0	5361386	4800000	5599999
8	250590	1	8	100	1980	0	0	5615214	5600000	6399999
9	1090072	1	8	95	1635	0	0	6707266	6400000	7199999
10	1043072	3	8	90	1699	1213	1628	7751973	7200000	7999999
11	645299	1	8	100	1636	0	0	8401812	8000000	8799999
12	545435	1	8	65	1946	0	0	9481428	8800000	9599999
13	913847	1	8	55	1902	0	0	10028809	9600000	10399999
14	261850	1	8	95	1092	0	0	10944558	10400000	11199999
15	261850	1	8	95	1936	0	0	11207500	11200000	11999999

Total number of pulses in waveform = 23

**Type 5 Radar Waveform_5**

Num of Bursts = 10
Burst Interval (us)= 1200000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	92065	2	18	90	1756	1417	0	92065	0	1199999
2	1438245	2	18	85	1293	1807	0	1533483	1200000	2399999
3	1815616	3	18	85	1626	1748	1006	3352199	2400000	3599999
4	910367	2	18	70	1471	1941	0	4266946	3600000	4799999
5	669315	3	18	80	1912	1955	1383	4939673	4800000	5999999
6	1854758	3	18	80	1939	1128	1166	6799681	6000000	7199999
7	486270	3	18	50	1985	1637	1012	7290184	7200000	8399999
8	1665269	3	18	65	1089	1481	1566	8960087	8400000	9599999
9	943587	2	18	85	1462	1609	0	9907810	9600000	10799999
10	1139086	3	18	70	1013	1148	1932	11049967	10800000	11999999

Total number of pulses in waveform = 26

Type 5 Radar Waveform_6

Num of Bursts = 14
Burst Interval (us)= 857143

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	144497	2	5	60	1578	1679	0	144497	0	857142
2	1024226	2	5	50	1468	1290	0	1171980	857143	1714285
3	606063	1	5	70	1603	0	0	1780801	1714286	2571428
4	1349433	1	5	100	1263	0	0	3131837	2571429	3428571
5	811256	1	5	80	1317	0	0	3944356	3428572	4285714
6	1092310	3	5	70	1494	1242	1355	5037983	4285715	5142857
7	272456	3	5	65	1764	1095	1615	5314530	5142858	6000000
8	1238670	3	5	75	1640	1753	1856	6557674	6000001	6857143
9	802391	2	5	75	1980	1172	0	7365314	6857144	7714286
10	742489	2	5	60	1268	1906	0	8110955	7714287	8571429
11	783124	1	5	65	1344	0	0	8897253	8571430	9428572
12	898281	3	5	55	1348	1495	1530	9796878	9428573	10285715
13	657696	2	5	85	1233	1441	0	10458947	10285716	11142858
14	1239766	3	5	65	1489	1246	1939	11701387	11142859	12000001

Total number of pulses in waveform = 29

Type 5 Radar Waveform_7

Num of Bursts = 15
Burst Interval (us)= 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	135613	2	14	65	1484	1966	0	135613	0	799999
2	1374206	1	14	80	1173	0	0	1513269	800000	1599999
3	616219	1	14	55	1466	0	0	2130661	1600000	2399999
4	922567	2	14	60	1393	1159	0	3054694	2400000	3199999
5	939282	2	14	65	1872	1558	0	3996528	3200000	3999999
6	766109	2	14	60	1052	1439	0	4766067	4000000	4799999
7	762636	1	14	80	1271	0	0	5531194	4800000	5599999
8	602994	1	14	80	1597	0	0	6135459	5600000	6399999
9	480855	3	14	70	1087	1304	1458	6617911	6400000	7199999
10	1341992	3	14	100	1775	1642	1305	7963752	7200000	7999999
11	227246	3	14	60	1736	1909	1367	8195720	8000000	8799999
12	1065229	1	14	55	1595	0	0	9265961	8800000	9599999
13	1128240	1	14	50	1109	0	0	10395796	9600000	10399999
14	593765	1	14	80	1719	0	0	10990670	10400000	11199999
15	382345	3	14	95	1077	1924	1079	11374734	11200000	11999999

Total number of pulses in waveform = 27

**Type 5 Radar Waveform_8**

Num of Bursts = 11
Burst Interval (us)= 1090909

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	742774	3	6	100	1679	1682	1614	742774	0	1090908
2	526845	3	6	65	1879	1804	1152	1274594	1090909	2181817
3	1212998	2	6	60	1700	1101	0	2492427	2181818	3272726
4	1092322	3	6	70	1652	1287	1480	3587550	3272727	4363635
5	1658204	2	6	95	1654	1072	0	5250173	4363636	5454544
6	1251925	1	6	70	1970	0	0	6504824	5454545	6545453
7	371697	3	6	95	1701	1916	1889	6878491	6545454	7636362
8	1711871	2	6	75	1953	1299	0	8595868	7636363	8727271
9	276870	1	6	85	1567	0	0	8875990	8727272	9818180
10	1894157	3	6	95	1217	1742	1908	10771714	9818181	10909089
11	847375	2	6	90	1747	1835	0	11623956	10909090	11999998

Total number of pulses in waveform = 25

Type 5 Radar Waveform_9

Burst Interval (us)= 705882

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	638159	1	19	60	1455	0	0	638159	0	705881
2	646818	1	19	65	1168	0	0	1286432	705882	1411763
3	374131	3	19	75	1198	1817	1133	1661731	1411764	2117645
4	626624	1	19	70	1316	0	0	2292503	2117646	2823527
5	1092962	2	19	55	1595	1236	0	3386781	2823528	3529409
6	652242	1	19	65	1872	0	0	4041854	3529410	4235291
7	775960	1	19	95	1583	0	0	4819686	4235292	4941173
8	384378	2	19	85	1784	1355	0	5205647	4941174	5647055
9	733874	3	19	50	1262	1454	1353	5942660	5647056	6352937
10	1056762	2	19	80	1118	1503	0	7003491	6352938	7058819
11	665409	3	19	55	1136	1480	1270	7671521	7058820	7764701
12	223756	3	19	85	1891	1384	1371	7899163	7764702	8470583
13	1214423	3	19	80	1842	1474	1834	9118232	8470584	9176465
14	333770	1	19	70	1237	0	0	9457152	9176466	9882347
15	811132	2	19	70	1399	1311	0	10269521	9882348	10588229
16	502401	3	19	60	1627	1143	1877	10774632	10588230	11294111
17	668299	1	19	90	1702	0	0	11447578	11294112	11999993

Total number of pulses in waveform = 33

Type 5 Radar Waveform_10

Num of Bursts = 16
Burst Interval (us)= 750000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	27484	2	9	95	1363	1043	0	27484	0	749999
2	1240808	2	9	85	1898	1945	0	1270698	750000	1499999
3	775096	3	9	70	1966	1537	1405	2049637	1500000	2249999
4	311864	3	9	50	1287	1782	1104	2366409	2250000	2999999
5	747603	2	9	70	1227	1582	0	3118185	3000000	3749999
6	759828	3	9	70	1065	1250	1471	3880822	3750000	4499999
7	1083465	3	9	70	1663	1836	1653	4968073	4500000	5249999
8	652734	1	9	75	1667	0	0	5625959	5250000	5999999
9	899401	3	9	100	1049	1129	1158	6527027	6000000	6749999
10	759844	3	9	95	1734	1828	1117	7290207	6750000	7499999
11	571866	3	9	85	1980	1590	1899	7866752	7500000	8249999
12	507228	2	9	60	1703	1428	0	8379449	8250000	8999999
13	1103219	3	9	70	1406	1083	1788	9485799	9000000	9749999
14	332883	2	9	65	1051	1992	0	9822959	9750000	10499999
15	926752	3	9	95	1574	1826	1758	10752754	10500000	11249999
16	1034315	1	9	95	1424	0	0	11792227	11250000	11999999

Total number of pulses in waveform = 39

**Type 5 Radar Waveform_11**

Num of Bursts = 16
Burst Interval (us)= 750000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	319551	3	10	65	1599	1101	1068	319551	0	749999
2	940931	2	10	90	1494	1333	0	1264250	750000	1499999
3	426555	2	10	85	1353	1344	0	1693632	1500000	2249999
4	958407	3	10	80	1158	1444	1797	2654736	2250000	2999999
5	1059760	2	10	65	1321	1723	0	3718895	3000000	3749999
6	363989	1	10	65	1776	0	0	4085928	3750000	4499999
7	869883	2	10	50	1289	1799	0	4957587	4500000	5249999
8	828522	1	10	50	1878	0	0	5789197	5250000	5999999
9	558985	1	10	85	1655	0	0	6350060	6000000	6749999
10	424419	2	10	65	1754	1697	0	6776134	6750000	7499999
11	1400636	2	10	50	1375	1516	0	8180221	7500000	8249999
12	345493	3	10	90	1576	1634	1770	8528605	8250000	8999999
13	1176560	3	10	75	1720	1156	1149	9710145	9000000	9749999
14	585870	1	10	75	1138	0	0	10300040	9750000	10499999
15	932254	3	10	75	1587	1933	1439	11233432	10500000	11249999
16	466504	1	10	65	1598	0	0	11704895	11250000	11999999

Total number of pulses in waveform = 32

Type 5 Radar Waveform_12

Num of Bursts = 9
Burst Interval (us)= 1333333

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	675012	2	17	75	1991	1555	0	675012	0	1333332
2	1824669	2	17	50	1948	1454	0	2503227	1333333	2666665
3	507220	1	17	90	1943	0	0	3013849	2666666	3999998
4	1168883	2	17	65	1941	1514	0	4184675	3999999	5333331
5	1807960	2	17	100	1361	1469	0	5996090	5333332	6666664
6	1265803	1	17	60	1103	0	0	7264723	6666665	7999997
7	1121598	3	17	80	1090	1976	1207	8387424	7999998	9333330
8	998579	2	17	90	1319	1713	0	9390276	9333331	10666663
9	1408068	3	17	50	1422	1405	1835	10801376	10666664	11999996

Total number of pulses in waveform = 18

Type 5 Radar Waveform_13

Num of Bursts = 13
Burst Interval (us)= 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	13714	3	19	100	1628	1751	1414	13714	0	923076
2	1801030	2	19	75	1727	1853	0	1819537	923077	1846153
3	688070	2	19	75	1424	1243	0	2511187	1846154	2769230
4	319384	2	19	100	1061	1960	0	2833238	2769231	3692307
5	1294432	3	19	85	1615	1151	1309	4130691	3692308	4615384
6	729873	1	19	65	1893	0	0	4864639	4615385	5538461
7	1180376	3	19	95	1001	1038	1257	6046908	5538462	6461538
8	1056425	1	19	60	1506	0	0	7106629	6461539	7384615
9	861741	2	19	50	1216	1946	0	7969876	7384616	8307692
10	997540	3	19	70	1343	1033	1340	8970578	8307693	9230769
11	317913	2	19	80	1845	1713	0	9292207	9230770	10153846
12	1105350	1	19	95	1014	0	0	10401115	10153847	11076923
13	1312248	1	19	100	1088	0	0	11714377	11076924	12000000

Total number of pulses in waveform = 26

**Type 5 Radar Waveform_14**

Num of Bursts = 10
Burst Interval (us)= 1200000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	508321	3	8	55	1981	1580	1820	508321	0	1199999
2	700639	1	8	95	1577	0	0	1214341	1200000	2399999
3	1573618	1	8	85	1319	0	0	2789536	2400000	3599999
4	1225848	1	8	60	1342	0	0	4016703	3600000	4799999
5	1740974	2	8	65	1196	1989	0	5759019	4800000	5999999
6	242621	3	8	70	1166	1852	1274	6004825	6000000	7199999
7	1894667	2	8	75	1190	1982	0	7903784	7200000	8399999
8	1409604	1	8	95	1493	0	0	9316560	8400000	9599999
9	1143039	1	8	85	1426	0	0	10461092	9600000	10799999
10	642055	3	8	75	1795	1115	1348	11104573	10800000	11999999

Total number of pulses in waveform = 18

Type 5 Radar Waveform_15

Num of Bursts = 14
Burst Interval (us)= 857143

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	607692	1	9	75	1549	0	0	607692	0	857142
2	802451	2	9	90	1847	1143	0	1411692	857143	1714285
3	1109507	2	9	100	1388	1845	0	2524189	1714286	2571428
4	681163	1	9	80	1378	0	0	3208585	2571429	3428571
5	422684	1	9	70	1969	0	0	3632647	3428572	4285714
6	878566	2	9	95	1696	1496	0	4513182	4285715	5142857
7	666106	2	9	95	1039	1080	0	5182480	5142858	6000000
8	1116692	1	9	100	1052	0	0	6301291	6000001	6857143
9	671587	3	9	70	1485	1888	1750	6973930	6857144	7714286
10	1127715	2	9	100	1412	1640	0	8106768	7714287	8571429
11	830470	2	9	55	1394	1233	0	8940290	8571430	9428572
12	728392	1	9	55	1112	0	0	9671309	9428573	10285715
13	1434899	1	9	55	1491	0	0	11107320	10285716	11142858
14	873517	3	9	55	1985	1938	1900	11982328	11142859	12000001

Total number of pulses in waveform = 24

Type 5 Radar Waveform_16

Num of Bursts = 10
Burst Interval (us)= 1200000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	455184	2	18	50	1927	1027	0	455184	0	1199999
2	1492177	3	18	90	1736	1823	1693	1950315	1200000	2399999
3	1376067	2	18	85	1367	1665	0	3331634	2400000	3599999
4	273651	1	18	80	1294	0	0	3608317	3600000	4799999
5	1983483	1	18	50	1214	0	0	5593094	4800000	5999999
6	1209397	2	18	60	1043	1168	0	6803705	6000000	7199999
7	460793	1	18	90	1275	0	0	7266709	7200000	8399999
8	1288380	1	18	60	1946	0	0	8556364	8400000	9599999
9	2169358	1	18	50	1234	0	0	10727668	9600000	10799999
10	883078	1	18	80	1087	0	0	11611980	10800000	11999999

Total number of pulses in waveform = 15

**Type 5 Radar Waveform_17**

Num of Bursts = 9
Burst Interval (us)= 1333333

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	891208	3	5	100	1718	1162	1949	891208	0	1333332
2	856245	3	5	90	1109	1543	1446	1752282	1333333	2666665
3	1528166	2	5	50	1481	1077	0	3284546	2666666	3999998
4	970209	3	5	90	1508	1721	1731	4257313	3999999	5333331
5	2313829	1	5	85	1643	0	0	6576102	5333332	6666664
6	276904	2	5	60	1385	1796	0	6854649	6666665	7999997
7	1314615	3	5	90	1373	1920	1881	8172445	7999998	9333330
8	1328576	1	5	90	1372	0	0	9506195	9333331	10666663
9	2075889	2	5	75	1417	1176	0	11583456	10666664	11999996

Total number of pulses in waveform = 20

Type 5 Radar Waveform_18

Num of Bursts = 19
Burst Interval (us)= 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	364359	2	14	95	1811	1241	0	364359	0	631578
2	383762	2	14	75	1593	1444	0	751173	631579	1263157
3	690280	1	14	70	1109	0	0	1444490	1263158	1894736
4	910642	2	14	65	1645	1411	0	2356241	1894737	2526315
5	330248	3	14	55	1124	1185	1148	2689545	2526316	3157894
6	620040	2	14	80	1888	1409	0	3313042	3157895	3789473
7	586990	3	14	85	1353	1664	1999	3903329	3789474	4421052
8	790344	1	14	70	1605	0	0	4698589	4421053	5052631
9	647803	2	14	95	1950	1217	0	5347997	5052632	5684210
10	714010	1	14	50	1173	0	0	6065174	5684211	6315789
11	249991	1	14	65	1435	0	0	6316338	6315790	6947368
12	913550	3	14	80	1104	1174	1331	7231323	6947369	7578947
13	438735	1	14	100	1631	0	0	7673667	7578948	8210526
14	1042827	3	14	70	1204	1756	1690	8718125	8210527	8842105
15	684058	2	14	80	1808	1827	0	9406833	8842106	9473684
16	314037	3	14	50	1149	1183	1065	9724505	9473685	10105263
17	800492	2	14	60	1665	1777	0	10528394	10105264	10736842
18	675482	3	14	55	1380	1697	1586	11107318	10736843	11368421
19	657311	3	14	60	1574	1982	1703	11769292	11368422	12000000

Total number of pulses in waveform = 40

Type 5 Radar Waveform_19

Num of Bursts = 18
Burst Interval (us)= 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	501631	3	6	65	1857	1920	1026	501631	0	666666
2	725888	2	6	75	1287	1105	0	1232322	666667	1333333
3	530673	3	6	75	1685	1488	1847	1765387	1333334	2000000
4	425540	1	6	85	1395	0	0	2195947	2000001	2666667
5	934556	1	6	90	1238	0	0	3131898	2666668	3333334
6	271172	2	6	60	1247	1467	0	3404308	3333335	4000001
7	606117	3	6	50	1728	1122	1219	4013139	4000002	4666668
8	1219031	2	6	95	1507	1315	0	5236239	4666669	5333335
9	724574	1	6	65	1767	0	0	5963635	5333336	6000002
10	503217	2	6	100	1454	1807	0	6468619	6000003	6666669
11	678029	2	6	90	1729	1286	0	7149909	6666670	7333336
12	457229	1	6	55	1230	0	0	7610153	7333337	8000003
13	527602	3	6	100	1920	1711	1525	8138985	8000004	8666670
14	617655	3	6	70	1552	1612	1486	8761796	8666671	9333337
15	1204710	1	6	80	1359	0	0	9971156	9333338	10000004
16	462627	2	6	70	1925	1317	0	10435142	10000005	10666671
17	767873	2	6	85	1891	1237	0	11206257	10666672	11333338
18	635491	1	6	60	1080	0	0	11844876	11333339	12000005

Total number of pulses in waveform = 35



Type 5 Radar Waveform_20

Num of Bursts = 9
Burst Interval (us)= 1333333

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	449992	2	12	65	1850	1336	0	449992	0	1333332
2	1689035	3	12	50	1133	1848	1097	2142213	1333333	2666665
3	814096	3	12	60	1726	1195	1984	2960387	2666666	3999998
4	1142116	1	12	85	1556	0	0	4107408	3999999	5333331
5	2074891	3	12	65	1030	1112	1497	6183855	5333332	6666664
6	762545	3	12	55	1906	1571	1431	6950039	6666665	7999997
7	1869101	3	12	75	1651	1032	1765	8824048	7999998	9333330
8	1588461	3	12	70	1266	1719	1171	10416957	9333331	10666663
9	1289988	2	12	95	1849	1794	0	11711101	10666664	11999996

Total number of pulses in waveform = 23

Type 5 Radar Waveform_21

Num of Bursts = 19
Burst Interval (us)= 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	226963	2	8	100	1163	1320	0	226963	0	631578
2	808509	2	8	95	1781	1409	0	1037955	631579	1263157
3	620117	1	8	85	1737	0	0	1661262	1263158	1894736
4	650466	1	8	65	1649	0	0	2313465	1894737	2526315
5	253395	3	8	55	1373	1153	1854	2568509	2526316	3157894
6	894819	1	8	75	1713	0	0	3467708	3157895	3789473
7	655259	1	8	50	1172	0	0	4124680	3789474	4421052
8	331249	1	8	85	1836	0	0	4457101	4421053	5052631
9	938791	3	8	85	1374	1183	1040	5397728	5052632	5684210
10	350125	3	8	60	1566	1276	1669	5751450	5684211	6315789
11	974049	1	8	70	1974	0	0	6729910	6315790	6947368
12	528674	3	8	65	1009	1059	1620	7260558	6947369	7578947
13	412937	1	8	65	1351	0	0	7677183	7578948	8210526
14	574706	1	8	60	1177	0	0	8253240	8210527	8842105
15	972751	3	8	50	1195	1367	1795	9227168	8842106	9473684
16	384147	1	8	65	1989	0	0	9615672	9473685	10105263
17	712420	1	8	65	1454	0	0	10330081	10105264	10736842
18	561561	1	8	95	1167	0	0	10893096	10736843	11368421
19	955126	3	8	65	1220	1151	1240	11849389	11368422	12000000

Total number of pulses in waveform = 33

Type 5 Radar Waveform_22

Num of Bursts = 19
Burst Interval (us)= 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	9631	1	5	95	1219	0	0	9631	0	631578
2	737045	2	5	65	1557	1353	0	747895	631579	1263157
3	810103	3	5	90	1956	1357	1449	1560908	1263158	1894736
4	475905	3	5	55	1007	1061	1317	2041575	1894737	2526315
5	495889	2	5	75	1629	1981	0	2540849	2526316	3157894
6	923018	1	5	60	1931	0	0	3467477	3157895	3789473
7	585981	1	5	100	1465	0	0	4055389	3789474	4421052
8	946647	1	5	70	1961	0	0	5003501	4421053	5052631
9	519419	2	5	90	1821	1227	0	5524881	5052632	5684210
10	296215	3	5	95	1909	1782	1009	5824144	5684211	6315789
11	612293	2	5	60	1265	1768	0	6441137	6315790	6947368
12	1003639	1	5	90	1523	0	0	7447809	6947369	7578947
13	447941	2	5	60	1419	1788	0	7897273	7578948	8210526
14	445778	3	5	60	1041	1164	1020	8346258	8210527	8842105
15	739011	1	5	60	1382	0	0	9088494	8842106	9473684
16	964908	3	5	85	1836	1037	1384	10054784	9473685	10105263
17	288233	1	5	85	1791	0	0	10347274	10105264	10736842
18	541133	1	5	80	1906	0	0	10890198	10736843	11368421
19	908741	1	5	75	1333	0	0	11800845	11368422	12000000

Total number of pulses in waveform = 34



Type 5 Radar Waveform_23

Num of Bursts = 20										
Burst Interval (us)= 600000										
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	445511	2	17	65	1346	1930	0	445511	0	599999
2	334910	3	17	90	1180	1944	1034	783697	600000	1199999
3	719081	3	17	85	1586	1828	1142	1506936	1200000	1799999
4	870120	1	17	70	1479	0	0	2381612	1800000	2399999
5	413405	2	17	75	1797	1716	0	2796496	2400000	2999999
6	425208	1	17	65	1630	0	0	3225217	3000000	3599999
7	708645	2	17	95	1576	1659	0	3935492	3600000	4199999
8	374073	2	17	55	1138	1022	0	4312800	4200000	4799999
9	623396	3	17	70	1996	1055	1149	4938356	4800000	5399999
10	793546	1	17	80	1041	0	0	5736102	5400000	5999999
11	276806	1	17	50	1805	0	0	6013949	6000000	6599999
12	805250	3	17	85	1625	1495	1040	6821004	6600000	7199999
13	586946	1	17	60	1802	0	0	7412110	7200000	7799999
14	703170	2	17	60	1976	1178	0	8117082	7800000	8399999
15	624924	1	17	90	1982	0	0	8745160	8400000	8999999
16	754912	2	17	65	1684	1824	0	9502054	9000000	9599999
17	581115	2	17	60	1583	1459	0	10086677	9600000	10199999
18	630779	2	17	50	1077	1187	0	10720498	10200000	10799999
19	459916	3	17	65	1964	1177	1836	11182678	10800000	11399999
20	362154	3	17	55	1122	1532	1338	11549809	11400000	11999999
Total number of pulses in waveform = 40										

Type 5 Radar Waveform_24

Num of Bursts = 19										
Burst Interval (us)= 631579										
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	133269	3	9	50	1627	1613	1806	133269	0	631578
2	1028918	3	9	65	1758	1405	1188	1167233	631579	1263157
3	261601	1	9	100	1925	0	0	1433185	1263158	1894736
4	1048877	1	9	85	1979	0	0	2483987	1894737	2526315
5	477956	3	9	95	1345	1733	1130	2963922	2526316	3157894
6	213437	2	9	60	1949	1395	0	3181567	3157895	3789473
7	1059946	2	9	60	1350	1991	0	4244857	3789474	4421052
8	746217	1	9	80	1020	0	0	4994415	4421053	5052631
9	226542	1	9	75	1304	0	0	5221977	5052632	5684210
10	1021659	3	9	70	1456	1677	1453	6244940	5684211	6315789
11	525655	3	9	80	1977	1480	1210	6775361	6315790	6947368
12	728619	3	9	65	1953	1417	1122	7508667	6947369	7578947
13	515910	2	9	55	1416	1049	0	8029069	7578948	8210526
14	710136	3	9	75	1801	1882	1631	8741670	8210527	8842105
15	142508	2	9	60	1980	1925	0	8889492	8842106	9473684
16	1201489	3	9	75	1387	1146	1949	10094866	9473685	10105263
17	102422	2	9	85	1118	1526	0	10201770	10105264	10736842
18	761973	1	9	50	1851	0	0	10966387	10736843	11368421
19	979811	3	9	50	1603	1959	1763	11948049	11368422	12000000
Total number of pulses in waveform = 42										

Type 5 Radar Waveform_25

Num of Bursts = 12										
Burst Interval (us)= 1000000										
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	163106	2	19	75	1783	1706	0	163106	0	999999
2	1108084	1	19	55	1382	0	0	1274679	1000000	1999999
3	943083	1	19	100	1927	0	0	2219144	2000000	2999999
4	1044879	2	19	65	1282	1606	0	3265950	3000000	3999999
5	968008	2	19	70	1498	1099	0	4236846	4000000	4999999
6	1429529	3	19	90	1810	1843	1854	5668972	5000000	5999999
7	456661	1	19	65	1858	0	0	6131140	6000000	6999999
8	951140	1	19	75	1059	0	0	7084138	7000000	7999999
9	951878	3	19	85	1659	1442	1801	8037075	8000000	8999999
10	1195676	1	19	50	1794	0	0	9237653	9000000	9999999
11	1281470	1	19	55	1029	0	0	10520917	10000000	10999999
12	479877	3	19	90	1149	1384	1175	11001823	11000000	11999999
Total number of pulses in waveform = 21										

**Type 5 Radar Waveform_26**Num of Bursts = 15
Burst Interval (us) = 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	563078	3	12	50	1148	1652	1071	563078	0	799999
2	493536	1	12	75	1383	0	0	1060485	800000	1599999
3	836488	3	12	80	1613	1404	1123	1898356	1600000	2399999
4	521381	1	12	55	1244	0	0	2423877	2400000	3199999
5	1342912	3	12	95	1059	1108	1636	3768033	3200000	3999999
6	834424	2	12	80	1904	1998	0	4606260	4000000	4799999
7	750264	3	12	90	1542	1214	1093	5360426	4800000	5599999
8	432203	1	12	55	1375	0	0	5796478	5600000	6399999
9	869941	1	12	65	1858	0	0	6667794	6400000	7199999
10	1139004	1	12	95	1619	0	0	7808656	7200000	7999999
11	211631	1	12	100	1655	0	0	8021906	8000000	8799999
12	1217095	2	12	60	1691	1592	0	9240656	8800000	9599999
13	451596	2	12	50	1981	1875	0	9695535	9600000	10399999
14	717487	3	12	65	1241	1023	1754	10416878	10400000	11199999
15	1217757	3	12	65	1987	1759	1697	11638653	11200000	11999999

Total number of pulses in waveform = 30

Type 5 Radar Waveform_27Num of Bursts = 14
Burst Interval (us) = 857143

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	345184	1	18	65	1590	0	0	345184	0	857142
2	730640	3	18	70	2000	1525	1171	1077414	857143	1714285
3	651567	3	18	90	1298	1126	1944	1733677	1714286	2571428
4	1588312	3	18	100	1774	1680	1646	3326357	2571429	3428571
5	178337	1	18	100	1457	0	0	3509794	3428572	4285714
6	1150726	2	18	95	1745	1550	0	4661977	4285715	5142857
7	926922	1	18	55	1803	0	0	5592194	5142858	6000000
8	708684	3	18	90	1995	1666	1308	6302681	6000001	6857143
9	1385001	2	18	85	1682	1658	0	7692651	6857144	7714286
10	763530	3	18	75	1365	1655	1728	8459521	7714287	8571429
11	777386	3	18	90	1022	1635	1490	9241655	8571430	9428572
12	736088	2	18	70	1542	1966	0	9981890	9428573	10285715
13	911966	2	18	100	1926	1357	0	10897364	10285716	11142858
14	351987	3	18	80	1099	1534	1970	11252634	11142859	12000001

Total number of pulses in waveform = 32

Type 5 Radar Waveform_28Num of Bursts = 10
Burst Interval (us) = 1200000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	156374	3	6	50	1280	1264	1457	156374	0	1199999
2	2109408	1	6	75	1525	0	0	2269783	1200000	2399999
3	1032072	2	6	65	1176	1329	0	3303380	2400000	3599999
4	1464738	2	6	50	1442	1873	0	4770623	3600000	4799999
5	184404	2	6	60	1664	1827	0	4958342	4800000	5999999
6	1453317	2	6	95	1711	1199	0	6415150	6000000	7199999
7	822338	1	6	70	1213	0	0	7240398	7200000	8399999
8	2089849	3	6	55	1851	1841	1058	9331460	8400000	9599999
9	691708	3	6	75	1831	1617	1390	10027918	9600000	10799999
10	1452788	2	6	60	1479	1624	0	11485544	10800000	11999999

Total number of pulses in waveform = 21



Type 5 Radar Waveform_29

Num of Bursts = 17										
Burst Interval (us)= 705882										
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	555848	2	10	70	1734	1758	0	555848	0	705881
2	786072	2	10	90	1825	1248	0	1345412	705882	1411763
3	356687	3	10	50	1409	1950	1320	1705172	1411764	2117645
4	1001591	3	10	80	1618	1586	1178	2711442	2117646	2823527
5	605772	3	10	55	1382	1879	1356	3321596	2823528	3529409
6	604134	1	10	80	1533	0	0	3930347	3529410	4235291
7	935862	3	10	70	1370	1456	1751	4867742	4235292	4941173
8	598306	1	10	75	1288	0	0	5470625	4941174	5647055
9	867150	3	10	90	1463	1301	1594	6339063	5647056	6352937
10	622904	3	10	100	1582	1413	1913	6966325	6352938	7058819
11	153416	1	10	100	1238	0	0	7124649	7058820	7764701
12	860073	1	10	65	1642	0	0	7985960	7764702	8470583
13	900435	3	10	50	1388	1270	1955	8888037	8470584	9176465
14	903213	2	10	70	1389	1124	0	9795863	9176466	9882347
15	247560	1	10	80	1766	0	0	10045936	9882348	10588229
16	753212	1	10	70	1337	0	0	10800914	10588230	11294111
17	716125	3	10	60	1846	1588	1994	11518376	11294112	11999993
Total number of pulses in waveform = 36										

Type 5 Radar Waveform_30

Num of Bursts = 17										
Burst Interval (us)= 705882										
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	64730	1	14	75	1011	0	0	64730	0	705881
2	922793	3	14	80	1570	1204	1962	988534	705882	1411763
3	976877	3	14	55	1083	1472	1795	1970147	1411764	2117645
4	518014	2	14	75	1717	1118	0	2492511	2117646	2823527
5	885549	2	14	70	1697	1917	0	3380895	2823528	3529409
6	731306	1	14	85	1656	0	0	4115815	3529410	4235291
7	197200	2	14	100	1149	1070	0	4314671	4235292	4941173
8	834851	1	14	60	1143	0	0	5151741	4941174	5647055
9	1082817	1	14	50	1371	0	0	6235701	5647056	6352937
10	708139	1	14	90	1790	0	0	6945211	6352938	7058819
11	192088	3	14	50	1058	1524	1905	7139089	7058820	7764701
12	855847	2	14	75	1885	1556	0	7999423	7764702	8470583
13	636205	1	14	90	1712	0	0	8639069	8470584	9176465
14	925636	1	14	95	1115	0	0	9566417	9176466	9882347
15	946735	3	14	95	1530	1296	1083	10514267	9882348	10588229
16	377669	2	14	80	1932	1020	0	10895845	10588230	11294111
17	671767	1	14	60	1655	0	0	11570564	11294112	11999993
Total number of pulses in waveform = 30										

Radar Type 6 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5491	1	16	5500	1
2	5491	1	17	5500	1
3	5491	1	18	5500	1
4	5491	1	19	5500	1
5	5491	1	20	5500	1
6	5491	1	21	5509	1
7	5491	1	22	5509	1
8	5491	1	23	5509	1
9	5491	1	24	5509	1
10	5491	1	25	5509	1
11	5500	1	26	5509	1
12	5500	1	27	5509	1
13	5500	1	28	5509	1
14	5500	1	29	5509	1
15	5500	1	30	5509	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5506	3	6	5498	18
19	5502	57	9	5469	27
20	5510	60	21	5511	63
32	5470	96	25	5502	75
41	5521	123	27	5478	81
62	5517	186	38	5470	114
66	5481	198	47	5521	141
75	5505	225	76	5477	228
78	5501	234	80	5473	240
79	5488	237	83	5474	249
--	--	--	86	5486	258
--	--	--	97	5483	291
--	--	--	99	5520	297

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5501	12	4	5499	12
14	5470	42	27	5515	81
18	5517	54	38	5492	114
24	5469	72	53	5470	159
25	5475	75	54	5472	162
28	5486	84	67	5494	201
42	5507	126	77	5464	231
51	5493	153	90	5491	270
54	5521	162	--	--	--
57	5490	171	--	--	--
59	5485	177	--	--	--
62	5487	186	--	--	--
91	5466	273	--	--	--
94	5462	282	--	--	--

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5484	15	0	5491	0
7	5507	21	3	5461	9
11	5519	33	7	5480	21
13	5497	39	15	5484	45
18	5463	54	32	5520	96
22	5515	66	33	5474	99
31	5508	93	41	5492	123
40	5521	120	46	5514	138
46	5505	138	48	5511	144
51	5509	153	72	5513	216
53	5506	159	75	5496	225
58	5464	174	77	5477	231
77	5492	231	80	5490	240
78	5493	234	87	5468	261
81	5500	243	90	5519	270
94	5516	282	93	5478	279
98	5491	294	--	--	--

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5462	12	4	5488	12
7	5518	21	5	5506	15
9	5492	27	6	5499	18
15	5498	45	33	5505	99
29	5477	87	41	5503	123
30	5482	90	48	5517	144
43	5505	129	62	5484	186
58	5491	174	72	5502	216
62	5467	186	77	5479	231
90	5519	270	85	5461	255
92	5516	276	94	5491	282
99	5483	297	--	--	--

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5490	0	4	5478	12
7	5480	21	12	5498	36
22	5463	66	21	5496	63
28	5509	84	22	5517	66
33	5488	99	27	5518	81
46	5496	138	31	5505	93
61	5502	183	37	5486	111
72	5515	216	40	5502	120
77	5487	231	45	5462	135
81	5464	243	47	5474	141
89	5461	267	50	5519	150
90	5506	270	51	5508	153
92	5479	276	54	5465	162
94	5516	282	68	5480	204
98	5508	294	92	5506	276

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Frequency (MHz)	Hopping Number	Pulse Start (ms)
0	5499	0	2	5474	6
10	5504	30	3	5499	9
11	5510	33	11	5470	33
22	5521	66	35	5491	105
24	5518	72	37	5502	111
30	5471	90	39	5528	117
33	5470	99	41	5521	123
36	5487	108	51	5511	153
45	5514	135	61	5471	183
53	5494	159	62	5489	186
64	5506	192	75	5485	225
74	5476	222	76	5496	228
82	5511	246	--	--	--
93	5528	279	--	--	--

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5474	24	0	5490	0
9	5525	27	1	5520	3
11	5520	33	3	5498	9
27	5513	81	9	5529	27
39	5490	117	11	5507	33
42	5528	126	16	5479	48
45	5516	135	39	5494	117
51	5510	153	56	5518	168
76	5509	228	68	5472	204
84	5471	252	72	5501	216
91	5485	273	84	5486	252
93	5522	279	--	--	--

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5475	0	1	5496	3
24	5498	72	6	5488	18
33	5487	99	10	5528	30
44	5474	132	19	5483	57
49	5527	147	22	5512	66
51	5504	153	33	5473	99
56	5513	168	36	5480	108
63	5517	189	37	5518	111
66	5519	198	39	5523	117
67	5493	201	43	5475	129
78	5512	234	48	5482	144
83	5497	249	50	5500	150
92	5500	276	55	5495	165
97	5501	291	61	5526	183
--	--	--	67	5513	201
--	--	--	78	5507	234
--	--	--	88	5520	264
--	--	--	94	5503	282
--	--	--	96	5474	288

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5526	24	2	5524	6
39	5472	117	4	5504	12
42	5500	126	22	5500	66
55	5476	165	34	5529	102
72	5504	216	35	5510	105
78	5510	234	36	5496	108
80	5519	240	40	5508	120
84	5525	252	45	5527	135
85	5492	255	46	5505	138
86	5470	258	52	5519	156
91	5480	273	53	5503	159
--	--	--	66	5525	198
--	--	--	71	5484	213
--	--	--	98	5528	294

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
18	5502	54	4	5520	12
21	5503	63	9	5470	27
24	5477	72	16	5475	48
26	5490	78	21	5514	63
27	5506	81	26	5479	78
59	5528	177	34	5527	102
65	5495	195	43	5483	129
66	5515	198	44	5530	132
67	5516	201	62	5517	186
80	5525	240	71	5482	213
--	--	--	74	5511	222
--	--	--	91	5472	273
--	--	--	92	5473	276

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5518	0	17	5487	51
4	5479	12	19	5539	57
5	5494	15	23	5500	69
9	5507	27	30	5521	90
13	5532	39	42	5503	126
18	5486	54	48	5506	144
19	5526	57	49	5529	147
25	5534	75	52	5525	156
35	5488	105	56	5491	168
37	5500	111	59	5526	177
64	5525	192	65	5508	195
65	5481	195	67	5523	201
66	5492	198	75	5520	225
67	5529	201	83	5482	249
70	5537	210	93	5481	279
73	5502	219	--	--	--
78	5505	234	--	--	--
79	5538	237	--	--	--

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5501	0	8	5504	24
8	5510	24	9	5493	27
13	5500	39	13	5499	39
14	5519	42	16	5479	48
18	5512	54	20	5522	60
28	5508	84	22	5514	66
47	5483	141	30	5521	90
64	5502	192	39	5505	117
67	5518	201	41	5502	123
90	5522	270	42	5496	126
95	5529	285	55	5503	165
98	5516	294	65	5497	195
--	--	--	70	5494	210
--	--	--	77	5519	231
--	--	--	89	5534	267
--	--	--	90	5501	270
--	--	--	93	5500	279

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5538	0	0	5496	0
1	5496	3	7	5494	21
16	5516	48	9	5514	27
20	5509	60	11	5489	33
21	5488	63	16	5526	48
26	5500	78	21	5507	63
48	5481	144	36	5484	108
57	5502	171	49	5536	147
69	5529	207	55	5519	165
77	5518	231	56	5506	168
93	5503	279	58	5510	174
94	5493	282	66	5495	198
--	--	--	70	5487	210
--	--	--	90	5518	270
--	--	--	91	5532	273
--	--	--	94	5485	282

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5486	0	0	5518	0
10	5538	30	5	5499	15
16	5495	48	13	5533	39
20	5487	60	14	5498	42
24	5536	72	20	5526	60
30	5516	90	23	5489	69
32	5523	96	32	5481	96
47	5491	141	34	5514	102
49	5502	147	46	5490	138
54	5527	162	54	5516	162
67	5493	201	60	5493	180
68	5500	204	68	5505	204
69	5489	207	69	5532	207
74	5524	222	70	5529	210
84	5488	252	75	5517	225
91	5480	273	94	5524	282
96	5508	288	98	5503	294
99	5526	297	--	--	--

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5508	0	0	5491	0
22	5504	66	8	5527	24
23	5529	69	25	5512	75
28	5520	84	26	5511	78
66	5489	198	29	5513	87
72	5503	216	32	5505	96
76	5505	228	35	5488	105
80	5524	240	38	5498	114
83	5500	249	45	5508	135
90	5533	270	57	5523	171
96	5487	288	61	5506	183
97	5497	291	62	5494	186
98	5486	294	76	5518	228
--	--	--	98	5535	294

Test Site	SR2	Test Date	2018/11/21
Test Engineer	Kevin Ker	Test Channel	802.11ac-VHT40 5510MHz
Test Item	Radar Statistical Performance		

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	1	918	58	1
2	5491	1	758	70	1
3	5491	1	898	59	1
4	5491	1	538	98	1
5	5500	1	738	72	1
6	5500	1	558	95	1
7	5500	1	878	61	1
8	5500	1	698	76	1
9	5509	1	618	86	1
10	5509	1	578	92	1
11	5509	1	638	83	1
12	5509	1	798	67	1
13	5510	1	938	57	1
14	5510	1	858	62	1
15	5510	1	818	65	1
16	5510	1	2371	23	1
17	5510	1	2370	23	1
18	5510	1	1819	29	1
19	5511	1	816	65	1
20	5511	1	752	71	1
21	5511	1	1064	50	1
22	5511	1	2259	24	1
23	5520	1	826	64	1
24	5520	1	939	57	1
25	5520	1	2079	26	1
26	5520	1	2095	26	1

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
27	5529	1	2190	25	1
28	5529	1	2540	21	1
29	5529	1	864	61	1
30	5529	1	2676	20	1
Detection Percentage (%)					100%

Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	4.8	159	24	1
2	5491	2.2	180	26	1
3	5491	4.9	213	28	1
4	5491	2.3	190	26	1
5	5500	1.6	190	24	1
6	5500	2.2	160	24	1
7	5500	3.3	201	27	1
8	5500	4.9	165	28	1
9	5509	1.2	156	25	1
10	5509	3.4	226	25	1
11	5509	1.6	167	25	1
12	5509	3.6	158	26	1
13	5510	4.2	193	26	1
14	5510	4.2	193	28	1
15	5510	3.3	193	26	1
16	5510	4.5	193	27	1
17	5510	1.0	162	28	1
18	5510	2.0	196	27	1
19	5511	3.6	171	26	1
20	5511	1.7	181	23	1
21	5511	1.4	183	28	1
22	5511	3.4	152	29	1
23	5520	2.2	221	28	1
24	5520	4.2	225	29	1
25	5520	3.9	164	23	1
26	5520	4.2	182	26	1
27	5529	1.0	229	24	1
28	5529	2.6	186	26	1
29	5529	4.8	159	24	1
30	5529	2.7	162	29	1
Detection Percentage (%)					100%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	6.2	406	18	1
2	5491	8.3	423	17	1
3	5491	8.0	222	17	1
4	5491	9.1	365	18	1
5	5500	6.6	265	18	1
6	5500	9.7	444	18	1
7	5500	9.6	474	16	1
8	5500	8.3	319	18	1
9	5509	6.4	293	17	1
10	5509	7.5	200	17	1
11	5509	8.9	355	16	1
12	5509	7.0	323	17	1
13	5510	9.7	313	18	1
14	5510	7.0	303	16	1
15	5510	7.1	318	17	1
16	5510	6.5	491	17	1
17	5510	8.5	328	16	1
18	5510	6.6	378	16	1
19	5511	9.5	423	16	1
20	5511	9.8	240	16	1
21	5511	7.4	420	17	1
22	5511	7.9	245	16	1
23	5520	7.6	223	16	1
24	5520	6.8	331	16	1
25	5520	8.8	389	17	1
26	5520	7.5	423	17	1
27	5529	7.8	329	17	1
28	5529	7.1	487	16	1
29	5529	7.5	278	18	1
30	5529	7.9	382	16	1
Detection Percentage (%)					100%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	13.2	394	14	1
2	5491	11.2	375	14	1
3	5491	17.3	354	15	1
4	5491	17.0	465	15	1
5	5500	17.5	347	15	1
6	5500	15.6	413	14	1
7	5500	16.8	365	13	1
8	5500	13.8	471	13	1
9	5509	14.0	242	12	1
10	5509	19.8	423	14	1
11	5509	17.9	390	15	1
12	5509	19.7	333	15	1
13	5510	16.4	328	15	1
14	5510	17.7	311	16	1
15	5510	19.9	265	13	1
16	5510	11.3	305	15	1
17	5510	13.3	421	15	1
18	5510	19.6	349	15	1
19	5511	18.2	337	12	1
20	5511	11.7	293	13	1
21	5511	16.9	324	15	1
22	5511	18.7	432	13	1
23	5520	18.3	471	13	1
24	5520	15.7	333	15	1
25	5520	18.6	351	13	1
26	5520	16.0	246	14	1
27	5529	13.6	457	15	1
28	5529	16.5	229	14	1
29	5529	16.1	291	12	1
30	5529	14.8	245	15	1
Detection Percentage (%)					100%

Note: In addition an average minimum percentage of successful detection across all four Short pulse radar test

waveforms is as follows: $\frac{P_d1 + P_d2 + P_d3 + P_d4}{4} = (100\% + 100\% + 100\% + 100\%) / 4 = 100\% (>80\%)$

Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5498.2	1	16	5510.0	1
2	5493.0	1	17	5510.0	1
3	5493.4	1	18	5510.0	1
4	5494.6	1	19	5510.0	1
5	5498.6	1	20	5510.0	1
6	5495.8	1	21	5525.4	1
7	5495.0	1	22	5527.0	1
8	5494.2	1	23	5524.2	1
9	5497.8	1	24	5522.2	1
10	5496.6	1	25	5526.6	1
11	5510.0	1	26	5521.4	1
12	5510.0	1	27	5525.8	1
13	5510.0	1	28	5521.8	1
14	5510.0	1	29	5523.4	1
15	5510.0	1	30	5525.0	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_1										
Num of Bursts = 10 Burst Interval (us)= 1200000										
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	561568	1	18	75	1793	0	0	561568	0	1199999
2	1816527	3	18	50	1694	1667	1137	2379888	1200000	2399999
3	1032864	2	18	75	1378	1740	0	3417250	2400000	3599999
4	716172	1	18	60	1887	0	0	4136540	3600000	4799999
5	1852524	3	18	60	1616	1753	1446	5990951	4800000	5999999
6	860649	2	18	75	1607	1023	0	6856415	6000000	7199999
7	1128215	2	18	80	1510	1992	0	7987260	7200000	8399999
8	1264532	2	18	100	1430	1747	0	9255294	8400000	9599999
9	518512	3	18	75	1303	1604	1591	9776983	9600000	10799999
10	1406587	2	18	70	1216	1038	0	11188068	10800000	11999999
Total number of pulses in waveform = 21 *****										



Type 5 Radar Waveform_2

Num of Bursts = 18
Burst Interval (us) = 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	528548	3	5	90	1105	1185	1257	528548	0	666666
2	569734	3	5	85	1433	1842	1431	1101829	666667	1333333
3	855051	3	5	90	1137	1623	1721	1961586	1333334	2000000
4	335372	1	5	90	1511	0	0	2301439	2000001	2666667
5	406629	3	5	100	1408	1075	1315	2709579	2666668	3333334
6	850038	3	5	75	1103	1401	1664	3563415	3333335	4000001
7	804250	1	5	75	1080	0	0	4371833	4000002	4666668
8	481607	3	5	75	1137	1656	1584	4854520	4666669	5333335
9	842556	3	5	60	1260	1395	1857	5701453	5333336	6000002
10	549072	1	5	75	1149	0	0	6255037	6000003	6666669
11	454522	3	5	85	1301	1916	1116	6710708	6666670	7333336
12	945244	2	5	85	1898	1468	0	7660285	7333337	8000003
13	512102	2	5	75	1820	1351	0	8175753	8000004	8666670
14	865627	3	5	85	1064	1271	1927	9044551	8666671	9333337
15	819787	2	5	70	1612	1188	0	9868800	9333338	10000004
16	644564	1	5	70	1859	0	0	10515964	10000005	10666671
17	337000	3	5	50	1045	1710	1587	10854823	10666672	11333338
18	643772	2	5	75	1301	1517	0	11502937	11333339	12000005

Total number of pulses in waveform = 42

Type 5 Radar Waveform_3

Num of Bursts = 8
Burst Interval (us) = 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	751252	3	6	60	1515	1960	1739	751252	0	1499999
2	2150235	2	6	65	1715	1178	0	2906701	1500000	2999999
3	1456106	2	6	70	1197	1605	0	4365700	3000000	4499999
4	1184900	1	6	55	1844	0	0	5553402	4500000	5999999
5	1767564	2	6	95	1560	1284	0	7322810	6000000	7499999
6	1437378	1	6	80	1517	0	0	8763032	7500000	8999999
7	1394491	1	6	95	1969	0	0	10159040	9000000	10499999
8	1268050	3	6	90	1875	1893	1402	11429059	10500000	11999999

Total number of pulses in waveform = 15

Type 5 Radar Waveform_4

Num of Bursts = 15
Burst Interval (us) = 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	545918	3	9	75	1793	1485	1086	545918	0	799999
2	621542	2	9	55	1673	1487	0	1171824	800000	1599999
3	1063282	2	9	80	1381	1180	0	2238266	1600000	2399999
4	323485	2	9	60	1442	1168	0	2564312	2400000	3199999
5	843951	2	9	85	1455	1452	0	3410873	3200000	3999999
6	1346476	1	9	90	1319	0	0	4760256	4000000	4799999
7	658015	2	9	100	1083	1308	0	5419590	4800000	5599999
8	918412	2	9	85	1535	1669	0	6340393	5600000	6399999
9	819543	1	9	90	1844	0	0	7163140	6400000	7199999
10	70048	3	9	55	1174	1446	1574	7235032	7200000	7999999
11	957138	1	9	50	1193	0	0	8196364	8000000	8799999
12	962260	3	9	70	1537	1060	1377	9159817	8800000	9599999
13	859062	1	9	65	1493	0	0	10022853	9600000	10399999
14	551763	1	9	60	1057	0	0	10576109	10400000	11199999
15	1126596	2	9	95	1008	1090	0	11703762	11200000	11999999

Total number of pulses in waveform = 28



Type 5 Radar Waveform_5

Num of Bursts = 17 Burst Interval (us)= 705882											
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)	
1	105483	3	19	55	1628	1515	1328	105483	0	705881	
2	987695	3	19	90	1990	1346	1148	1097649	705882	1411763	
3	510967	2	19	85	1956	1927	0	1613100	1411764	2117645	
4	685518	2	19	60	1746	1390	0	2302501	2117646	2823527	
5	861733	3	19	65	1659	1210	2000	3167370	2823528	3529409	
6	608628	3	19	90	1050	1092	1751	3780867	3529410	4235291	
7	948192	3	19	90	1030	1786	1579	4732952	4235292	4941173	
8	402505	3	19	70	1047	1089	1663	5139852	4941174	5647055	
9	546957	1	19	75	1855	0	0	5690608	5647056	6352937	
10	995795	3	19	95	1550	1490	1488	6688258	6352938	7058819	
11	976172	1	19	70	1768	0	0	7668958	7058820	7764701	
12	790912	2	19	80	1387	1608	0	8461638	7764702	8470583	
13	25695	1	19	50	1684	0	0	8490328	8470584	9176465	
14	1340851	1	19	65	1926	0	0	9832863	9176466	9882347	
15	430406	3	19	50	1699	1445	1169	10265195	9882348	10588229	
16	474221	2	19	55	1418	1910	0	10743729	10588230	11294111	
17	896303	1	19	70	1791	0	0	11643360	11294112	11999993	
Total number of pulses in waveform = 37 *****											

Type 5 Radar Waveform_6

Num of Bursts = 20 Burst Interval (us)= 600000											
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)	
1	501726	2	12	70	1452	1548	0	501726	0	599999	
2	363393	2	12	50	1114	1785	0	868119	600000	1199999	
3	591221	1	12	90	1444	0	0	1462219	1200000	1799999	
4	612714	1	12	100	1853	0	0	2076377	1800000	2399999	
5	908612	3	12	90	1174	1304	1673	2986842	2400000	2999999	
6	451263	3	12	100	1552	1931	1574	3442256	3000000	3599999	
7	243157	2	12	65	1268	1980	0	3690470	3600000	4199999	
8	978188	3	12	100	1388	1768	1217	4671906	4200000	4799999	
9	537107	1	12	90	1863	0	0	5213386	4800000	5399999	
10	708397	2	12	80	1893	1025	0	5923646	5400000	5999999	
11	273587	1	12	60	1138	0	0	6200151	6000000	6599999	
12	493070	3	12	70	1795	1619	1515	6694369	6600000	7199999	
13	624707	3	12	70	1366	1212	1127	7323995	7200000	7799999	
14	503425	3	12	50	1544	1074	1913	7831125	7800000	8399999	
15	822212	3	12	75	1310	1902	1868	8657868	8400000	8999999	
16	465526	1	12	50	1276	0	0	9128474	9000000	9599999	
17	472190	2	12	100	1777	1137	0	9601940	9600000	10199999	
18	1068854	1	12	95	1762	0	0	10673708	10200000	10799999	
19	411226	1	12	50	1279	0	0	11086696	10800000	11399999	
20	364997	3	12	95	1827	1253	1856	11452972	11400000	11999999	
Total number of pulses in waveform = 41 *****											

Type 5 Radar Waveform_7

Num of Bursts = 19 Burst Interval (us)= 631579											
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)	
1	245872	1	10	65	1411	0	0	245872	0	631578	
2	551030	1	10	65	1379	0	0	798313	631579	1263157	
3	863288	1	10	75	1604	0	0	1662980	1263158	1894736	
4	679341	1	10	100	1570	0	0	2343925	1894737	2526315	
5	406910	2	10	65	1334	1200	0	2752405	2526316	3157894	
6	850337	1	10	80	1587	0	0	3605276	3157895	3789473	
7	342474	3	10	100	1594	1710	1279	3949337	3789474	4421052	
8	956903	3	10	55	1579	1271	1360	4910823	4421053	5052631	
9	646683	3	10	738	1738	1140	1269	5561716	5052632	5684210	
10	700564	2	10	85	1217	1614	0	6266427	5684211	6315789	
11	653490	1	10	100	1831	0	0	6922748	6315790	6947368	
12	450254	1	10	60	1712	0	0	7374833	6947369	7578947	
13	614514	2	10	85	1800	1119	0	7991059	7578948	8210526	
14	527302	1	10	60	1976	0	0	8521280	8210527	8842105	
15	476874	3	10	100	1282	1221	1012	9000130	8842106	9473684	
16	1057564	2	10	75	1271	1970	0	10061209	9473685	10105263	
17	634348	1	10	65	1534	0	0	10698798	10105264	10736842	
18	323114	2	10	80	1924	1372	0	11023446	10736843	11368421	
19	585885	3	10	75	1086	1933	1006	11612627	11368422	12000000	
Total number of pulses in waveform = 34 *****											

**Type 5 Radar Waveform_8**

Num of Bursts = 10
Burst Interval (us) = 1200000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	686200	1	8	85	1726	0	0	686200	0	1199999
2	1503974	3	8	85	1647	1001	1735	2191900	1200000	2399999
3	1373091	2	8	75	1575	1413	0	3569374	2400000	3599999
4	259726	2	8	50	1068	1200	0	3832088	3600000	4799999
5	1569336	3	8	90	1340	1540	1075	5403692	4800000	5999999
6	1218440	3	8	90	1265	1870	1088	6626087	6000000	7199999
7	1044000	2	8	70	1658	1323	0	7674310	7200000	8399999
8	845790	3	8	75	1417	1677	1812	8523081	8400000	9599999
9	1734772	3	8	90	1654	1880	1776	10262759	9600000	10799999
10	1109150	1	8	75	1821	0	0	11377219	10800000	11999999

Total number of pulses in waveform = 23

Type 5 Radar Waveform_9

Num of Bursts = 16
Burst Interval (us) = 750000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	649572	1	17	55	1483	0	0	649572	0	749999
2	170461	1	17	95	1070	0	0	821516	750000	1499999
3	1409799	2	17	85	1624	1318	0	2232385	1500000	2249999
4	678934	3	17	55	1458	1634	1954	2914261	2250000	2999999
5	704081	1	17	85	1410	0	0	3623388	3000000	3749999
6	227318	2	17	55	1004	1242	0	3852116	3750000	4499999
7	729551	1	17	75	1144	0	0	4583913	4500000	5249999
8	1142355	1	17	70	1499	0	0	5727412	5250000	5999999
9	279666	3	17	80	1313	1993	1854	6008577	6000000	6749999
10	1030283	1	17	70	1636	0	0	7044020	6750000	7499999
11	1087746	3	17	70	1367	1537	1856	8133402	7500000	8249999
12	526656	3	17	100	1343	1048	1314	8664818	8250000	8999999
13	383005	1	17	50	1982	0	0	9051528	9000000	9749999
14	873580	1	17	55	1140	0	0	9927090	9750000	10499999
15	1024458	3	17	85	1344	1369	1565	10952688	10500000	11249999
16	891217	1	17	90	1808	0	0	11848183	11250000	11999999

Total number of pulses in waveform = 28

Type 5 Radar Waveform_10

Num of Bursts = 19
Burst Interval (us) = 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	221374	3	14	85	1154	1248	1195	221374	0	631578
2	715291	3	14	60	1764	1721	1932	940262	631579	1263157
3	616376	3	14	70	1718	1583	1484	1562055	1263158	1894736
4	913320	3	14	95	1541	1548	1846	2480160	1894737	2526315
5	111278	3	14	50	1020	1942	1988	2596373	2526316	3157894
6	901722	3	14	65	1351	1020	1697	3503045	3157895	3789473
7	334989	2	14	60	1522	1401	0	3842002	3789474	4421052
8	684564	1	14	65	1211	0	0	4529489	4421053	5052631
9	602472	1	14	50	1982	0	0	5133172	5052632	5684210
10	1035593	2	14	65	1327	1245	0	6170747	5684211	6315789
11	312445	2	14	80	1554	1802	0	6485764	6315790	6947368
12	577700	3	14	100	1474	1486	1761	7066820	6947369	7578947
13	780674	2	14	80	1113	1508	0	7852215	7578948	8210526
14	628880	1	14	95	1468	0	0	8483716	8210527	8842105
15	879739	1	14	60	1172	0	0	9364923	8842106	9473684
16	721193	1	14	70	1671	0	0	10087288	9473685	10105263
17	262098	2	14	70	1183	1943	0	10351057	10105264	10736842
18	752218	1	14	80	1817	0	0	11106401	10736843	11368421
19	522428	3	14	60	1093	1405	1229	11630646	11368422	12000000

Total number of pulses in waveform = 40

**Type 5 Radar Waveform_11**

Num of Bursts = 13
Burst Interval (us)= 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	299778	3	18	55	1905	1502	1850	299778	0	923076
2	1024471	2	18	85	1797	1367	0	1329506	923077	1846153
3	596080	2	18	85	1418	1974	0	1928750	1846154	2769230
4	1714735	2	18	85	1701	1719	0	3646877	2769231	3692307
5	776565	1	18	75	1868	0	0	4426862	3692308	4615384
6	985709	3	18	65	1879	1940	1332	5414439	4615385	5538461
7	171872	3	18	95	1030	1970	1098	5591462	5538462	6461538
8	894627	2	18	60	1644	1822	0	6490187	6461539	7384615
9	1345748	1	18	90	1085	0	0	7839401	7384616	8307692
10	1298468	2	18	70	1479	1935	0	9138954	8307693	9230769
11	429209	3	18	50	1685	1543	1271	9571577	9230770	10153846
12	1114948	2	18	80	1812	1227	0	10691024	10153847	11076923
13	536730	2	18	70	1658	1925	0	11230793	11076924	12000000

Total number of pulses in waveform = 28

Type 5 Radar Waveform_12

Num of Bursts = 8
Burst Interval (us)= 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	444707	2	12	80	1629	1998	0	444707	0	1499999
2	1603432	2	12	95	1886	1246	0	2051766	1500000	2999999
3	1149751	1	12	50	1055	0	0	3204649	3000000	4499999
4	2403573	2	12	75	1288	1632	0	5609277	4500000	5999999
5	1226833	2	12	70	1169	1237	0	6839030	6000000	7499999
6	2072098	3	12	50	1222	1997	1902	8913534	7500000	8999999
7	559213	1	12	75	1554	0	0	9477868	9000000	10499999
8	2458492	1	12	90	1489	0	0	11937914	10500000	11999999

Total number of pulses in waveform = 14

Type 5 Radar Waveform_13

Num of Bursts = 16
Burst Interval (us)= 750000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	423961	1	10	55	1276	0	0	423961	0	749999
2	929351	1	10	60	1878	0	0	1354588	750000	1499999
3	541218	2	10	55	1777	1851	0	1897684	1500000	2249999
4	568557	1	10	90	1382	0	0	2469869	2250000	2999999
5	1088659	3	10	50	1040	1643	1974	3559910	3000000	3749999
6	481063	2	10	85	1285	1298	0	4045630	3750000	4499999
7	674935	2	10	75	1471	1932	0	4723148	4500000	5249999
8	779828	2	10	65	1439	1368	0	5506379	5250000	5999999
9	628667	1	10	85	1588	0	0	6137853	6000000	6749999
10	1304496	2	10	50	1729	1347	0	7443937	6750000	7499999
11	713528	2	10	70	1892	1422	0	8160541	7500000	8249999
12	201047	2	10	65	1064	1264	0	8364902	8250000	8999999
13	1244915	3	10	90	1914	1862	1801	9612145	9000000	9749999
14	268366	3	10	60	1181	1009	1071	9886088	9750000	10499999
15	905236	1	10	95	1484	0	0	10794585	10500000	11249999
16	766950	3	10	90	1056	1554	1674	11563019	11250000	11999999

Total number of pulses in waveform = 31



Type 5 Radar Waveform_14

Num of Bursts = 16
Burst Interval (us) = 750000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	730932	1	19	60	1394	0	0	730932	0	749999
2	570178	2	19	65	1530	1281	0	1302504	750000	1499999
3	593705	2	19	85	1209	1275	0	1899020	1500000	2249999
4	593785	1	19	85	1647	0	0	2495289	2250000	2999999
5	609176	1	19	80	1284	0	0	3106112	3000000	3749999
6	829784	3	19	75	1001	1994	1093	3937180	3750000	4499999
7	1063015	2	19	100	1595	1183	0	5004283	4500000	5249999
8	580329	3	19	80	1292	1008	1819	5587390	5250000	5999999
9	1122493	2	19	80	1897	1383	0	6714002	6000000	6749999
10	604419	3	19	70	1858	1824	1534	7321701	6750000	7499999
11	654473	2	19	100	1895	1510	0	7981390	7500000	8249999
12	824946	1	19	60	1692	0	0	8809741	8250000	8999999
13	916231	2	19	80	1844	1041	0	9727664	9000000	9749999
14	275154	1	19	60	1874	0	0	10005703	9750000	10499999
15	674145	3	19	70	1121	1477	1172	10681722	10500000	11249999
16	786767	1	19	50	1019	0	0	11472259	11250000	11999999

Total number of pulses in waveform = 30

Type 5 Radar Waveform_15

Num of Bursts = 20
Burst Interval (us) = 600000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	41366	2	6	75	1869	1404	0	41366	0	599999
2	821133	3	6	95	1925	1196	1694	865772	600000	1199999
3	645985	3	6	85	1462	1126	1838	1516572	1200000	1799999
4	675619	1	6	100	1872	0	0	2196517	1800000	2399999
5	332440	3	6	85	1094	1026	1498	2530829	2400000	2999999
6	710652	3	6	80	1061	1111	1098	3245099	3000000	3599999
7	833707	2	6	100	1438	1605	0	4082076	3600000	4199999
8	487891	2	6	60	1713	1119	0	4573010	4200000	4799999
9	621542	3	6	60	1360	1018	1793	5197384	4800000	5399999
10	761355	1	6	75	1707	0	0	5962908	5400000	5999999
11	628476	2	6	90	1024	1612	0	6593091	6000000	6599999
12	344981	3	6	80	1008	1017	1077	6940708	6600000	7199999
13	317048	1	6	65	1056	0	0	7260858	7200000	7799999
14	598703	3	6	60	1204	1266	1574	7860617	7800000	8399999
15	917232	2	6	90	1443	1532	0	8781893	8400000	8999999
16	336995	3	6	60	1776	1651	1803	9121563	9000000	9599999
17	992682	3	6	75	1901	1020	1022	10119475	9600000	10199999
18	288559	3	6	65	1079	1286	1638	10411977	10200000	10799999
19	640497	3	6	65	1965	1910	1993	11056477	10800000	11399999
20	694692	3	6	70	1364	1722	1923	11757037	11400000	11999999

Total number of pulses in waveform = 49

Type 5 Radar Waveform_16

Num of Bursts = 16
Burst Interval (us) = 750000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	118414	2	5	70	1964	1852	0	118414	0	749999
2	1001047	2	5	60	1304	1763	0	1123277	750000	1499999
3	924112	2	5	60	1846	1892	0	2050456	1500000	2249999
4	239108	2	5	80	1532	1453	0	2293302	2250000	2999999
5	1013833	3	5	85	1247	1669	1198	3310120	3000000	3749999
6	977983	3	5	95	1170	1726	1113	4292217	3750000	4499999
7	299731	3	5	60	1864	1181	1957	4595957	4500000	5249999
8	697691	1	5	95	1681	0	0	5298650	5250000	5999999
9	1123868	2	5	65	1966	1719	0	6424199	6000000	6749999
10	728076	2	5	50	1944	1067	0	7155960	6750000	7499999
11	577741	3	5	55	1070	1015	1591	7736712	7500000	8249999
12	1086526	3	5	65	1523	1852	1564	8826914	8250000	8999999
13	475353	3	5	50	1038	1096	1767	9307206	9000000	9749999
14	812206	3	5	85	1287	1420	1152	10123313	9750000	10499999
15	1078415	1	5	95	1024	0	0	11205587	10500000	11249999
16	110950	1	5	65	1066	0	0	11317561	11250000	11999999

Total number of pulses in waveform = 36

**Type 5 Radar Waveform_17**

Num of Bursts = 8
Burst Interval (us)= 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	991027	2	9	65	1395	1027	0	991027	0	1499999
2	2003049	2	9	65	1137	1420	0	2996498	1500000	2999999
3	392911	3	9	80	1573	1983	1077	3391966	3000000	4499999
4	2326679	3	9	50	1464	1511	1202	5723278	4500000	5999999
5	1401217	2	9	80	1258	1322	0	7128672	6000000	7499999
6	1358368	2	9	80	1651	1643	0	8489620	7500000	8999999
7	546222	1	9	95	1099	0	0	9039136	9000000	10499999
8	2776475	3	9	50	1767	1036	1820	11816710	10500000	11999999

Total number of pulses in waveform = 18

Type 5 Radar Waveform_18

Num of Bursts = 20

Burst Interval (us)= 600000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	130417	2	14	50	1067	1936	0	130417	0	599999
2	675408	3	14	65	1237	1647	1306	808828	600000	1199999
3	869431	1	14	50	1809	0	0	1682449	1200000	1799999
4	190757	1	14	65	1796	0	0	1875015	1800000	2399999
5	633317	3	14	85	1747	1924	1741	2510068	2400000	2999999
6	954753	2	14	60	1409	1724	0	3470233	3000000	3599999
7	272732	1	14	80	1552	0	0	3746098	3600000	4199999
8	875259	1	14	65	1011	0	0	4622909	4200000	4799999
9	766678	3	14	60	1499	1536	1115	5390598	4800000	5399999
10	583917	2	14	60	1010	1969	0	5978665	5400000	5999999
11	381084	3	14	70	1601	1611	1181	6362728	6000000	6599999
12	369405	1	14	50	1108	0	0	6736526	6600000	7199999
13	555538	3	14	100	1880	1657	1146	7293172	7200000	7799999
14	703759	3	14	95	1526	1049	1787	8001614	7800000	8399999
15	730179	1	14	75	1212	0	0	8736155	8400000	8999999
16	504846	2	14	80	1281	1939	0	9242213	9000000	9599999
17	937326	2	14	65	1513	1808	0	10182759	9600000	10199999
18	462864	2	14	80	1520	1148	0	10648944	10200000	10799999
19	640494	1	14	70	1343	0	0	11292106	10800000	11399999
20	189008	1	14	75	1792	0	0	11483357	11400000	11999999

Total number of pulses in waveform = 38

Type 5 Radar Waveform_19

Num of Bursts = 17

Burst Interval (us)= 705882

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	457802	2	17	50	1715	1486	0	457802	0	705881
2	944900	2	17	85	1249	1691	0	1405903	705882	1411763
3	292667	2	17	55	1929	1497	0	1701510	1411764	2117645
4	845190	3	17	65	1547	1678	1141	2550126	2117646	2823527
5	362058	1	17	60	1039	0	0	2916550	2823528	3529409
6	994606	1	17	75	1939	0	0	3912195	3529410	4235291
7	764799	1	17	55	1745	0	0	4678933	4235292	4941173
8	773622	1	17	100	1908	0	0	5454300	4941174	5647055
9	257583	3	17	65	1246	1558	1127	5713791	5647056	6352937
10	1244291	2	17	65	1382	1325	0	6962013	6352938	7058819
11	549140	1	17	60	1572	0	0	7513860	7058820	7764701
12	363117	2	17	80	1402	1757	0	7878549	7764702	8470583
13	684520	1	17	60	1842	0	0	8566228	8470584	9176465
14	1113020	3	17	75	1513	1249	1518	9681090	9176466	9882347
15	375427	3	17	85	1508	1864	1183	10060797	9882348	10588229
16	935092	2	17	100	1183	1378	0	11000444	10588230	11294111
17	729665	2	17	100	1863	1916	0	11732670	11294112	11999993

Total number of pulses in waveform = 32



Type 5 Radar Waveform_20

Num of Bursts = 18
Burst Interval (us) = 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	299784	3	8	65	1047	1507	1728	299784	0	666666
2	614402	2	8	90	1073	1953	0	918468	666667	1333333
3	1030859	3	8	55	1080	1919	1894	1952353	1333334	2000000
4	674972	2	8	100	1550	1591	0	2632218	2000001	2666667
5	538239	2	8	100	1951	1833	0	3173598	2666668	3333334
6	574989	3	8	80	1241	1756	1491	3752371	3333335	4000001
7	657202	2	8	90	1179	1252	0	4414061	4000002	4666668
8	725892	3	8	50	1034	1410	1360	5142384	4666669	5333335
9	205085	3	8	55	1766	1805	1727	5351273	5333336	6000002
10	878976	2	8	70	1287	1677	0	6235547	6000003	6666669
11	670610	3	8	70	1450	1168	1323	6909121	6666670	7333336
12	1003113	2	8	80	1870	1164	0	7916175	7333337	8000003
13	696524	1	8	50	1951	0	0	8615733	8000004	8666670
14	255853	2	8	95	1377	1967	0	8873537	8666671	9333337
15	511266	3	8	85	1486	1919	1995	9388147	9333338	10000004
16	632706	2	8	55	1464	1496	0	10026253	10000005	10666671
17	1238536	3	8	50	1483	1982	1836	11267749	10666672	11333338
18	169466	3	8	75	1549	1323	1248	11442516	11333339	12000005

Total number of pulses in waveform = 44

Type 5 Radar Waveform_21

Num of Bursts = 17
Burst Interval (us) = 705882

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	594473	2	9	90	1582	1757	0	594473	0	705881
2	677301	1	9	80	1521	0	0	1275113	705882	1411763
3	139053	2	9	85	1562	1688	0	1415687	1411764	2117645
4	1333485	1	9	55	1020	0	0	2752422	2117646	2823527
5	740340	2	9	85	1619	1247	0	3493782	2823528	3529409
6	190939	3	9	55	1229	1604	1693	3687587	3529410	4235291
7	851427	3	9	95	1696	1041	1178	4543540	4235292	4941173
8	943700	1	9	90	1301	0	0	5491155	4941174	5647055
9	584617	3	9	85	1842	1340	1826	6077073	5647056	6352937
10	404202	3	9	55	1502	1746	1006	6486283	6352938	7058819
11	749060	3	9	65	1946	1762	1732	7239597	7058820	7764701
12	590916	1	9	85	1967	0	0	7835953	7764702	8470583
13	1025128	2	9	55	1461	1811	0	8863048	8470584	9176465
14	475129	2	9	95	1211	1718	0	9341449	9176466	9882347
15	713675	3	9	80	1623	1686	1598	10058053	9882348	10588229
16	1206070	1	9	100	1949	0	0	11269030	10588230	11294111
17	233646	1	9	50	1692	0	0	11504625	11294112	11999993

Total number of pulses in waveform = 34

Type 5 Radar Waveform_22

Num of Bursts = 13
Burst Interval (us) = 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	675788	3	5	90	1817	1821	1668	675788	0	923076
2	613419	1	5	50	1650	0	0	1294513	923077	1846153
3	1241129	1	5	55	1584	0	0	2537292	1846154	2769230
4	1047394	3	5	90	1528	1503	1359	3586270	2769231	3692307
5	204342	3	5	95	1094	1002	1583	3795002	3692308	4615384
6	1302898	1	5	65	1497	0	0	5101579	4615385	5538461
7	1101411	2	5	90	1929	1018	0	6204487	5538462	6461538
8	452781	3	5	60	1543	1576	1726	6660215	6461539	7384615
9	1184593	3	5	100	1498	1698	1464	7849653	7384616	8307692
10	573346	1	5	90	1922	0	0	8427659	8307693	9230769
11	1376785	2	5	60	1258	1488	0	9806366	9230770	10153846
12	461179	1	5	60	1360	0	0	10270291	10153847	11076923
13	1123341	1	5	100	1442	0	0	11394992	11076924	12000000

Total number of pulses in waveform = 25

**Type 5 Radar Waveform_23**

Num of Bursts = 8
Burst Interval (us)= 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	443372	1	12	70	1182	0	0	443372	0	1499999
2	2064088	3	12	65	1979	1785	1743	2508642	1500000	2999999
3	1283706	2	12	75	1763	1778	0	3797855	3000000	4499999
4	1989869	2	12	75	1127	1489	0	5791265	4500000	5999999
5	1359331	2	12	65	1953	1078	0	7153212	6000000	7499999
6	1147845	1	12	60	1324	0	0	8304088	7500000	8999999
7	1226510	2	12	55	1134	1261	0	9531922	9000000	10499999
8	1128275	1	12	55	1554	0	0	10662592	10500000	11999999

Total number of pulses in waveform = 14

Type 5 Radar Waveform_24

Num of Bursts = 16
Burst Interval (us)= 750000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	496722	2	17	90	1331	1539	0	496722	0	749999
2	400908	2	17	85	1569	1990	0	900500	750000	1499999
3	801226	1	17	80	1372	0	0	1705285	1500000	2249999
4	1250343	2	17	70	1456	1711	0	2957000	2250000	2999999
5	222071	3	17	90	1544	1173	1263	3182238	3000000	3749999
6	1060755	3	17	55	1978	1656	1021	4246973	3750000	4499999
7	255598	3	17	90	1942	1863	1914	4507226	4500000	5249999
8	793176	3	17	90	1772	1114	1994	5306121	5250000	5999999
9	1056155	2	17	80	1108	1746	0	6367156	6000000	6749999
10	674840	2	17	100	1317	1929	0	7044850	6750000	7499999
11	1032446	3	17	70	1911	1774	1857	8080542	7500000	8249999
12	168946	3	17	60	1397	1366	1482	8255030	8250000	8999999
13	836549	1	17	100	1779	0	0	9095824	9000000	9749999
14	720665	1	17	95	1679	0	0	9818268	9750000	10499999
15	1254149	2	17	90	1707	1344	0	11074096	10500000	11249999
16	542083	3	17	55	1445	1412	1593	11619230	11250000	11999999

Total number of pulses in waveform = 36

Type 5 Radar Waveform_25

Num of Bursts = 13
Burst Interval (us)= 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	316167	1	6	50	1226	0	0	316167	0	923076
2	714939	2	6	50	1279	1645	0	1032332	923077	1846153
3	1209647	3	6	80	1901	1880	1495	2244903	1846154	2769230
4	849534	3	6	70	1798	1855	1888	3099713	2769231	3692307
5	1323571	2	6	95	1202	1356	0	4428825	3692308	4615384
6	202047	3	6	90	1238	1385	1681	4633430	4615385	5538461
7	1708580	1	6	75	1972	0	0	6346314	5538462	6461538
8	115500	2	6	75	1895	1972	0	6463786	6461539	7384615
9	1385547	2	6	60	1262	1898	0	7853200	7384616	8307692
10	760247	1	6	80	1741	0	0	8616607	8307693	9230769
11	1511818	3	6	50	1141	1601	1437	10130166	9230770	10153846
12	219604	1	6	70	1343	0	0	10353949	10153847	11076923
13	1064003	3	6	100	1372	1183	1622	11419295	11076924	12000000

Total number of pulses in waveform = 27



Type 5 Radar Waveform_26

Num of Bursts = 19
Burst Interval (us) = 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	396642	3	19	70	1135	1870	1133	396642	0	631578
2	832022	1	19	50	1632	0	0	1232802	631579	1263157
3	389422	1	19	90	1579	0	0	1623856	1263158	1894736
4	484035	3	19	100	1952	1196	1513	2109470	1894737	2526315
5	683267	3	19	55	1195	1464	1525	2797398	2526316	3157894
6	773875	2	19	80	1040	1517	0	3575457	3157895	3789473
7	286189	3	19	85	1233	1559	1048	3864203	3789474	4421052
8	772822	2	19	80	1704	1105	0	4640865	4421053	5052631
9	1019865	3	19	65	1341	1161	1160	5663339	5052632	5684210
10	284989	2	19	80	1710	1658	0	5951990	5684211	6315789
11	957945	1	19	100	1765	0	0	6913303	6315790	6947368
12	48589	2	19	55	1155	1065	0	6963657	6947369	7578947
13	1170515	3	19	95	1947	1224	1829	8136392	7578948	8210526
14	169827	2	19	50	1154	1451	0	8311219	8210527	8842105
15	976245	1	19	95	1382	0	0	9290069	8842106	9473684
16	785165	3	19	80	1698	1081	1552	10076616	9473685	10105263
17	650902	1	19	70	1919	0	0	10731849	10105264	10736842
18	43741	1	19	55	1341	0	0	10777509	10736843	11368421
19	1191753	2	19	60	1082	1717	0	11970603	11368422	12000000

Total number of pulses in waveform = 39

Type 5 Radar Waveform_27

Num of Bursts = 15
Burst Interval (us) = 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	564070	3	8	50	1798	1297	1854	564070	0	799999
2	925610	2	8	60	1360	1294	0	1494629	800000	1599999
3	698605	2	8	95	1106	1759	0	2195888	1600000	2399999
4	551516	3	8	80	1446	1409	1157	2750269	2400000	3199999
5	837518	3	8	70	1139	1537	1467	3591799	3200000	3999999
6	950942	2	8	65	1242	1607	0	4546884	4000000	4799999
7	832950	3	8	90	1033	1849	1491	5382683	4800000	5599999
8	714321	1	8	55	1951	0	0	6101377	5600000	6399999
9	712307	3	8	100	1229	1475	1711	6815635	6400000	7199999
10	688826	1	8	95	1914	0	0	7508876	7200000	7999999
11	546617	2	8	70	1521	1603	0	8057407	8000000	8799999
12	1245613	3	8	50	1984	1421	1378	9306144	8800000	9599999
13	1059912	2	8	65	1462	1574	0	10370839	9600000	10399999
14	570245	1	8	50	1174	0	0	10944120	10400000	11199999
15	299946	3	8	65	1867	1675	1031	11245240	11200000	11999999

Total number of pulses in waveform = 34

Type 5 Radar Waveform_28

Num of Bursts = 10
Burst Interval (us) = 1200000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	127258	1	18	55	1435	0	0	127258	0	1199999
2	1331753	3	18	90	1911	1173	1829	1460446	1200000	2399999
3	2044224	3	18	85	1241	1003	1935	3509583	2400000	3599999
4	572477	1	18	95	1277	0	0	4086239	3600000	4799999
5	1202093	2	18	50	1307	1284	0	5289609	4800000	5999999
6	1053426	1	18	65	1876	0	0	6345626	6000000	7199999
7	1682972	2	18	55	1285	1530	0	8030474	7200000	8399999
8	443898	3	18	90	1629	1296	1880	8477187	8400000	9599999
9	2216347	2	18	75	1767	1094	0	10698339	9600000	10799999
10	1210280	2	18	80	1295	1361	0	11911480	10800000	11999999

Total number of pulses in waveform = 20



Type 5 Radar Waveform_29

Num of Bursts = 18
Burst Interval (us) = 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	109660	3	14	100	1238	1201	1213	109660	0	666666
2	862137	1	14	100	1734	0	0	975449	666667	1333333
3	706731	1	14	90	1720	0	0	1683914	1333334	2000000
4	713594	3	14	90	1098	1394	1006	2399228	2000001	2666667
5	700390	3	14	60	1733	1213	1197	3103116	2666668	3333334
6	598734	3	14	90	1187	1988	1520	3705993	3333335	4000001
7	481002	1	14	100	1597	0	0	4191690	4000002	4666668
8	849768	2	14	55	1223	1217	0	5043055	4666669	5333335
9	669810	3	14	75	1049	1973	1977	5715305	5333336	6000002
10	431969	1	14	60	1395	0	0	6152273	6000003	6666669
11	831955	1	14	70	1075	0	0	6985623	6666670	7333336
12	378528	2	14	75	1128	1832	0	7365226	7333337	8000003
13	880914	2	14	80	1233	1932	0	8249100	8000004	8666670
14	953150	1	14	60	1753	0	0	9205415	8666671	9333337
15	217809	1	14	90	1501	0	0	9424977	9333338	10000004
16	766522	1	14	55	1458	0	0	10193000	10000005	10666671
17	787484	1	14	65	1669	0	0	10981942	10666672	11333338
18	996961	1	14	95	1941	0	0	11980572	11333339	12000005

Total number of pulses in waveform = 31

Type 5 Radar Waveform_30

Num of Bursts = 14
Burst Interval (us) = 857143

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	359389	2	10	85	1080	1988	0	359389	0	857142
2	974026	2	10	85	1404	1124	0	1336483	857143	1714285
3	810547	2	10	80	1757	1249	0	2149558	1714286	2571428
4	1244340	1	10	100	1519	0	0	3396904	2571429	3428571
5	693963	1	10	75	1935	0	0	4092386	3428572	4285714
6	735014	1	10	75	1342	0	0	4829335	4285715	5142857
7	919584	3	10	90	1093	1723	1579	5750261	5142858	6000000
8	790624	2	10	70	1187	1707	0	6545280	6000001	6857143
9	778147	1	10	70	1682	0	0	7326321	6857144	7714286
10	972272	1	10	70	1047	0	0	8300275	7714287	8571429
11	1106499	2	10	65	1017	1905	0	9407821	8571430	9428572
12	212844	1	10	75	1088	0	0	9623587	9428573	10285715
13	1356481	1	10	60	1486	0	0	10981156	10285716	11142858
14	559714	2	10	50	1740	1241	0	11542356	11142859	12000001

Total number of pulses in waveform = 22

Radar Type 6 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5491	1	16	5510	1
2	5491	1	17	5510	1
3	5491	1	18	5510	1
4	5491	1	19	5511	1
5	5500	1	20	5511	1
6	5500	1	21	5511	1
7	5500	1	22	5511	1
8	5500	1	23	5520	1
9	5509	1	24	5520	1
10	5509	1	25	5520	1
11	5509	1	26	5520	1
12	5509	1	27	5529	1
13	5510	1	28	5529	1
14	5510	1	29	5529	1
15	5510	1	30	5529	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5481	0	0	5462	0
23	5480	69	6	5508	18
27	5469	81	17	5521	51
36	5519	108	19	5502	57
37	5520	111	20	5509	60
40	5468	120	21	5473	63
43	5464	129	22	5481	66
53	5488	159	33	5496	99
63	5498	189	39	5484	117
73	5484	219	48	5507	144
93	5477	279	50	5477	150
--	--	--	71	5516	213
--	--	--	72	5519	216
--	--	--	74	5493	222

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5489	6	10	5505	30
17	5491	51	22	5462	66
19	5501	57	30	5479	90
21	5468	63	37	5499	111
28	5504	84	38	5483	114
31	5516	93	48	5482	144
49	5461	147	66	5478	198
59	5510	177	80	5481	240
70	5508	210	84	5468	252
--	--	--	93	5464	279

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
20	5476	60	24	5515	72
25	5511	75	35	5517	105
59	5470	177	38	5487	114
62	5479	186	52	5470	156
68	5510	204	60	5482	180
75	5492	225	62	5518	186
76	5478	228	71	5521	213
87	5497	261	74	5509	222
--	--	--	76	5496	228
--	--	--	79	5483	237
--	--	--	82	5516	246
--	--	--	89	5512	267
--	--	--	93	5527	279
--	--	--	97	5522	291

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5510	0	6	5511	18
14	5508	42	9	5484	27
30	5503	90	12	5473	36
48	5527	144	15	5487	45
55	5528	165	24	5488	72
62	5516	186	27	5470	81
66	5521	198	28	5474	84
67	5496	201	33	5528	99
69	5526	207	43	5522	129
72	5494	216	69	5515	207
79	5471	237	82	5527	246
80	5513	240	84	5516	252
82	5490	246	90	5477	270
--	--	--	97	5510	291

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5511	15	13	5497	39
26	5529	78	34	5508	102
46	5516	138	41	5516	123
62	5489	186	51	5518	153
71	5483	213	54	5510	162
73	5490	219	60	5490	180
74	5531	222	78	5495	234
82	5479	246	86	5480	258
97	5491	291	88	5500	264

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5479	0	11	5528	33
2	5481	6	25	5521	75
15	5535	45	30	5512	90
22	5486	66	47	5484	141
30	5485	90	55	5524	165
43	5504	129	62	5482	186
44	5497	132	68	5510	204
57	5499	171	83	5532	249
64	5518	192	89	5539	267
74	5501	222	92	5490	276
75	5508	225	95	5492	285
97	5529	291	--	--	--

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5503	0	9	5480	27
5	5521	15	17	5518	51
13	5533	39	21	5500	63
21	5509	63	24	5527	72
34	5512	102	57	5487	171
45	5496	135	71	5511	213
49	5513	147	76	5504	228
58	5536	174	82	5532	246
59	5540	177	85	5522	255
67	5525	201	88	5488	264
77	5527	231	96	5484	288
87	5491	261	99	5525	297
93	5528	279	--	--	--
99	5502	297	--	--	--

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5481	9	7	5521	21
4	5536	12	17	5508	51
9	5523	27	36	5484	108
19	5498	57	45	5516	135
31	5493	93	56	5533	168
36	5526	108	63	5502	189
37	5517	111	69	5514	207
41	5528	123	74	5515	222
43	5538	129	84	5523	252
45	5531	135	85	5504	255
77	5539	231	89	5520	267
82	5497	246	--	--	--
87	5540	261	--	--	--
88	5510	264	--	--	--
95	5511	285	--	--	--

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5517	9	1	5509	3
4	5507	12	10	5534	30
13	5540	39	29	5494	87
48	5508	144	38	5487	114
50	5512	150	60	5533	180
52	5536	156	62	5511	186
73	5488	219	66	5520	198
75	5497	225	71	5540	213
76	5499	228	81	5483	243
91	5530	273	82	5508	246
--	--	--	84	5502	252

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5494	3	2	5499	6
6	5528	18	9	5510	27
8	5510	24	25	5490	75
17	5481	51	27	5532	81
22	5537	66	30	5493	90
26	5519	78	33	5522	99
31	5529	93	50	5515	150
38	5520	114	52	5535	156
39	5522	117	53	5497	159
45	5487	135	55	5529	165
81	5503	243	62	5507	186
85	5505	255	68	5509	204
86	5530	258	91	5503	273
90	5496	270	97	5483	291
96	5493	288	--	--	--

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
15	5536	45	3	5504	9
17	5515	51	17	5518	51
30	5522	90	18	5500	54
55	5526	165	19	5493	57
58	5503	174	25	5482	75
79	5519	237	35	5533	105
86	5490	258	37	5527	111
--	--	--	39	5525	117
--	--	--	46	5509	138
--	--	--	60	5537	180
--	--	--	65	5512	195
--	--	--	71	5483	213
--	--	--	86	5510	258

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5491	0	17	5513	51
16	5532	48	24	5500	72
25	5510	75	33	5512	99
29	5537	87	35	5531	105
30	5516	90	55	5544	165
32	5504	96	59	5541	177
41	5500	123	65	5526	195
46	5533	138	74	5524	222
62	5525	186	79	5509	237
92	5536	276	83	5540	249
--	--	--	88	5493	264
--	--	--	98	5511	294

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5515	12	9	5512	27
11	5533	33	20	5546	60
17	5498	51	24	5541	72
20	5506	60	30	5535	90
25	5491	75	36	5527	108
27	5536	81	47	5502	141
29	5550	87	70	5494	210
35	5541	105	75	5522	225
39	5525	117	83	5509	249
40	5499	120	87	5514	261
45	5532	135	88	5548	264
51	5524	153	92	5547	276
57	5518	171	99	5545	297
62	5517	186	--	--	--
83	5496	249	--	--	--
94	5492	282	--	--	--

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5547	12	32	5545	96
6	5518	18	36	5522	108
9	5554	27	40	5516	120
14	5502	42	58	5536	174
19	5507	57	59	5510	177
22	5542	66	71	5519	213
42	5529	126	79	5524	237
47	5515	141	84	5513	252
59	5499	177	89	5559	267
81	5551	243	92	5511	276
82	5504	246	98	5550	294
89	5508	267	--	--	--
97	5548	291	--	--	--

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
13	5520	39	0	5546	0
22	5499	66	2	5499	6
31	5543	93	20	5510	60
38	5539	114	29	5531	87
47	5530	141	37	5505	111
71	5516	213	43	5550	129
75	5503	225	49	5552	147
76	5537	228	50	5502	150
79	5506	237	55	5519	165
81	5556	243	64	5542	192
92	5515	276	76	5511	228
95	5548	285	84	5556	252
99	5523	297	87	5522	261

Test Site	SR2	Test Date	2018/11/21
Test Engineer	Kevin Ker	Test Channel	802.11ac-VHT80 5530MHz
Test Item	Radar Statistical Performance		

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	1	618	86	1
2	5491	1	898	59	1
3	5500	1	558	95	1
4	5500	1	638	83	1
5	5509	1	578	92	1
6	5509	1	858	62	1
7	5510	1	918	58	1
8	5510	1	698	76	1
9	5511	1	818	65	1
10	5511	1	598	89	1
11	5520	1	938	57	1
12	5520	1	738	72	1
13	5529	1	838	63	1
14	5529	1	798	67	1
15	5530	1	658	81	1
16	5530	1	1046	51	1
17	5531	1	1529	35	1
18	5531	1	1206	44	1
19	5540	1	1464	36	1
20	5540	1	2048	26	1
21	5549	1	876	61	1
22	5549	1	2370	23	1
23	5550	1	2928	18	1
24	5550	1	1591	34	1
25	5551	1	2913	19	1
26	5551	1	2413	22	1

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
27	5560	1	1965	27	1
28	5560	1	1859	29	1
29	5569	1	751	71	1
30	5569	1	1427	37	1
Detection Percentage (%)					100%

Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	4.3	184	26	1
2	5491	4.5	150	25	1
3	5500	1.2	166	26	1
4	5500	1.9	162	26	1
5	5509	2.8	223	24	1
6	5509	3.1	152	27	1
7	5510	4.9	206	27	1
8	5510	3.1	224	28	1
9	5511	4.2	205	28	1
10	5511	2.5	215	25	1
11	5520	4.8	212	25	1
12	5520	4.0	195	24	1
13	5529	2.9	175	27	1
14	5529	1.1	206	24	1
15	5530	1.7	227	28	1
16	5530	2.9	228	26	1
17	5531	4.6	163	25	1
18	5531	3.6	156	23	1
19	5540	1.3	190	26	1
20	5540	2.4	207	24	1
21	5549	2.4	153	25	1
22	5549	1.8	173	23	1
23	5550	1.1	205	24	1
24	5550	1.5	170	29	1
25	5551	2.9	160	26	1
26	5551	4.0	182	26	1
27	5560	1.9	215	23	1
28	5560	2.6	202	25	1
29	5569	4.3	213	23	1
30	5569	2.0	180	27	1
Detection Percentage (%)					100%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	9.7	263	17	1
2	5491	6.0	243	18	1
3	5500	6.2	250	16	1
4	5500	9.3	499	16	1
5	5509	7.5	219	17	1
6	5509	9.1	313	18	1
7	5510	6.4	216	17	1
8	5510	6.7	362	18	1
9	5511	6.0	454	16	1
10	5511	6.2	389	16	1
11	5520	10.0	228	16	1
12	5520	6.7	377	18	1
13	5529	7.5	442	17	1
14	5529	8.7	270	17	1
15	5530	6.0	488	17	1
16	5530	6.3	368	17	1
17	5531	8.2	234	16	1
18	5531	8.8	252	17	1
19	5540	6.5	466	16	1
20	5540	9.9	232	17	1
21	5549	7.2	428	17	1
22	5549	6.0	427	16	1
23	5550	8.2	272	18	1
24	5550	8.1	433	18	1
25	5551	9.2	393	17	1
26	5551	6.2	334	17	1
27	5560	9.3	378	16	1
28	5560	9.8	310	18	1
29	5569	8.5	286	16	1
30	5569	8.5	221	17	1
Detection Percentage (%)					100%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	12.6	432	15	1
2	5491	19.6	326	13	1
3	5500	19.0	279	15	1
4	5500	13.1	431	14	1
5	5509	16.5	257	16	1
6	5509	14.5	338	14	1
7	5510	14.1	430	14	1
8	5510	15.8	396	13	1
9	5511	13.5	249	13	1
10	5511	12.2	473	15	1
11	5520	16.4	394	14	1
12	5520	11.0	211	13	1
13	5529	18.7	229	13	1
14	5529	19.3	221	16	1
15	5530	18.5	334	15	1
16	5530	16.1	314	15	1
17	5531	17.7	410	16	1
18	5531	17.8	238	13	1
19	5540	14.7	457	16	1
20	5540	12.4	455	14	1
21	5549	15.4	334	14	1
22	5549	19.6	467	16	1
23	5550	19.1	376	16	1
24	5550	14.2	430	14	1
25	5551	14.7	372	16	1
26	5551	18.5	338	14	1
27	5560	17.7	209	15	1
28	5560	13.1	378	15	1
29	5569	19.0	454	14	1
30	5569	12.5	231	14	1
Detection Percentage (%)					100%

Note: In addition an average minimum percentage of successful detection across all four Short pulse radar test

waveforms is as follows: $\frac{P_d1 + P_d2 + P_d3 + P_d4}{4} = (100\% + 100\% + 100\% + 100\%) / 4 = 100\% (>80\%)$

Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5494.6	1	16	5530.0	1
2	5495.0	1	17	5530.0	1
3	5495.8	1	18	5530.0	1
4	5494.2	1	19	5530.0	1
5	5498.6	1	20	5530.0	1
6	5493.0	1	21	5562.2	1
7	5498.2	1	22	5565.8	1
8	5496.6	1	23	5561.4	1
9	5493.4	1	24	5567.0	1
10	5497.8	1	25	5566.6	1
11	5530.0	1	26	5565.4	1
12	5530.0	1	27	5561.8	1
13	5530.0	1	28	5565.0	1
14	5530.0	1	29	5563.4	1
15	5530.0	1	30	5564.2	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_1										
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	9428	3	9	95	1589	1784	1874	9428	0	599999
2	762176	1	9	75	1765	0	0	776851	600000	1199999
3	523865	2	9	100	1357	1041	0	1302481	1200000	1799999
4	513499	2	9	70	1458	1810	0	1818378	1800000	2399999
5	666636	2	9	60	1612	1120	0	2488282	2400000	2999999
6	1047011	3	9	60	1253	1261	1907	3538025	3000000	3599999
7	477299	1	9	100	1618	0	0	4019745	3600000	4199999
8	257929	3	9	55	1392	1502	1965	4279292	4200000	4799999
9	617157	1	9	75	1650	0	0	4901308	4800000	5399999
10	1031614	2	9	60	1908	1365	0	5934572	5400000	5999999
11	247994	2	9	60	1017	1527	0	6185839	6000000	6599999
12	799411	2	9	65	1086	1930	0	6987794	6600000	7199999
13	512890	3	9	60	1089	1672	1544	7503700	7200000	7799999
14	781152	2	9	70	1568	1294	0	8289157	7800000	8399999
15	362538	1	9	100	1794	0	0	8654557	8400000	8999999
16	640695	3	9	50	1991	1244	1123	9297046	9000000	9599999
17	397412	2	9	70	1311	1391	0	9698816	9600000	10199999
18	802893	2	9	85	1061	1022	0	10504411	10200000	10799999
19	734254	1	9	75	1021	0	0	11240748	10800000	11399999
20	198155	2	9	60	1068	1054	0	11439924	11400000	11999999
Total number of pulses in waveform = 40										

**Type 5 Radar Waveform_2**

Num of Bursts = 9
Burst Interval (us)= 1333333

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	632380	2	10	55	1934	1823	0	632380	0	1333332
2	824485	1	10	65	1200	0	0	1460622	1333333	2666665
3	2012931	1	10	90	1165	0	0	3474753	2666666	3999998
4	603284	1	10	90	1882	0	0	4079202	3999999	5333331
5	1977305	2	10	95	1064	1605	0	6058389	5333332	6666664
6	1005455	3	10	90	1033	1397	1449	7066513	6666665	7999997
7	1282993	2	10	75	1586	1651	0	8353385	7999998	9333330
8	1790946	1	10	75	1078	0	0	10147568	9333331	10666663
9	767640	3	10	75	1788	1407	1724	10916286	10666664	11999996

Total number of pulses in waveform = 16

Type 5 Radar Waveform_3

Num of Bursts = 8
Burst Interval (us)= 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	154768	3	12	100	1805	1426	1959	154768	0	1499999
2	2562708	2	12	85	1320	1979	0	2722666	1500000	2999999
3	742846	2	12	55	1933	1456	0	3468811	3000000	4499999
4	1483787	2	12	90	1908	1641	0	4955987	4500000	5999999
5	1174757	2	12	95	1272	1442	0	6134293	6000000	7499999
6	2286133	3	12	85	1791	1874	1713	8423140	7500000	8999999
7	824790	2	12	95	1755	1361	0	9253308	9000000	10499999
8	1952417	1	12	100	1511	0	0	11208841	10500000	11999999

Total number of pulses in waveform = 17

Type 5 Radar Waveform_4

Num of Bursts = 16
Burst Interval (us)= 750000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	525933	3	8	95	1553	1290	1167	525933	0	749999
2	424172	1	8	95	1736	0	0	954115	750000	1499999
3	1239049	3	8	80	1437	1855	1574	2194900	1500000	2249999
4	242415	3	8	95	1136	1719	1400	2442181	2250000	2999999
5	990408	2	8	100	1122	1803	0	3436844	3000000	3749999
6	382876	3	8	50	1397	1578	1837	3822645	3750000	4499999
7	961397	3	8	90	1252	1427	1358	4788854	4500000	5249999
8	624269	1	8	85	1142	0	0	5417160	5250000	5999999
9	741540	1	8	75	1780	0	0	6159842	6000000	6749999
10	957085	2	8	90	1797	1787	0	7118707	6750000	7499999
11	661376	3	8	50	1668	1488	1821	7783667	7500000	8249999
12	1146771	1	8	65	1161	0	0	8935415	8250000	8999999
13	373044	2	8	100	1087	1384	0	9309620	9000000	9749999
14	1086449	2	8	60	1313	1532	0	10398540	9750000	10499999
15	790646	1	8	75	1878	0	0	11192031	10500000	11249999
16	232572	3	8	50	1409	1488	1833	11426481	11250000	11999999

Total number of pulses in waveform = 34

**Type 5 Radar Waveform_5**

Num of Bursts = 9
Burst Interval (us)= 1333333

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	491292	1	19	50	1732	0	0	491292	0	1333332
2	2161413	1	19	85	1858	0	0	2654437	1333333	2666665
3	512978	3	19	65	1989	1210	1915	3169273	2666666	3999998
4	1308516	1	19	80	1345	0	0	4482903	3999999	5333331
5	1819047	3	19	60	1617	1474	1417	6303295	5333332	6666664
6	571009	1	19	100	1995	0	0	6878812	6666665	7999997
7	2189748	3	19	100	1681	1266	1842	9070555	7999998	9333330
8	1095850	3	19	60	1518	1680	1886	10171194	9333331	10666663
9	1188874	3	19	85	1724	1184	1324	11365152	10666664	11999996

Total number of pulses in waveform = 19

Type 5 Radar Waveform_6

Num of Bursts = 13
Burst Interval (us)= 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	821065	3	5	60	1954	1609	1209	821065	0	923076
2	655735	3	5	80	1079	1125	1534	1481572	923077	1846153
3	734684	3	5	95	1392	1951	1591	2219994	1846154	2769230
4	593943	3	5	80	1080	1728	1785	2818871	2769231	3692307
5	1400754	2	5	50	1503	1848	0	4224218	3692308	4615384
6	986441	1	5	70	1499	0	0	5214010	4615385	5538461
7	688269	3	5	70	1405	1802	1555	5903778	5538462	6461538
8	1026984	3	5	70	1947	1882	1008	6935524	6461539	7384615
9	649755	1	5	70	1982	0	0	7590116	7384616	8307692
10	1282299	3	5	65	1755	1110	1106	8874397	8307693	9230769
11	838221	2	5	55	1679	1833	0	9716589	9230770	10153846
12	1312561	2	5	85	1716	1768	0	11032662	10153847	11076923
13	609717	1	5	75	1662	0	0	11645863	11076924	12000000

Total number of pulses in waveform = 30

Type 5 Radar Waveform_7

Num of Bursts = 11
Burst Interval (us)= 1090909

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	272467	2	18	50	1399	1152	0	272467	0	1090908
2	1014388	3	18	80	1817	1567	1380	1289406	1090909	2181817
3	1677279	3	18	100	1981	1252	1105	2971449	2181818	3272726
4	608761	3	18	100	1482	1198	1479	3584548	3272727	4363635
5	1576853	1	18	100	1856	0	0	5165560	4363636	5454544
6	566815	3	18	50	1163	1602	1669	5734231	5454545	6545453
7	935903	1	18	70	1175	0	0	6674568	6545454	7636362
8	1854648	1	18	75	1596	0	0	8530391	7636363	8727271
9	631362	1	18	55	1309	0	0	9163349	8727272	9818180
10	684908	2	18	65	1874	1706	0	9849566	9818181	10909089
11	2048595	1	18	65	1653	0	0	11901741	10909090	11999998

Total number of pulses in waveform = 21



Type 5 Radar Waveform_8

Num of Bursts = 20										
Burst Interval (us)= 600000										
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	981641	2	14	90	1218	1650	0	7511	0	599999
2	520555	2	14	60	1955	1668	0	992020	600000	1199999
3	306843	1	14	70	1753	0	0	1516198	1200000	1799999
4	1019926	3	14	60	1150	1808	1115	1824794	1800000	2399999
5	692401	2	14	80	1022	1738	0	2848793	2400000	2999999
6	379151	3	14	55	1277	1845	1196	3543954	3000000	3599999
7	468647	2	14	70	1493	1263	0	3927423	3600000	4199999
8	698022	2	14	100	1013	1832	0	4398826	4200000	4799999
9	496877	1	14	60	1597	0	0	5099693	4800000	5399999
10	761471	3	14	60	1764	1794	1619	5598167	5400000	5999999
11	603806	3	14	70	1104	1986	1211	6364815	6000000	6599999
12	650059	1	14	55	1801	0	0	6972922	6600000	7199999
13	203108	1	14	80	1247	0	0	7624782	7200000	7799999
14	935057	2	14	95	1762	1976	0	7829137	7800000	8399999
15	574120	2	14	70	1876	1606	0	8767932	8400000	8999999
16	570176	2	14	60	1299	1205	0	9345534	9000000	9599999
17	609038	1	14	95	1372	0	0	9918214	9600000	10199999
18	766542	2	14	50	1413	1383	0	10528624	10200000	10799999
19	465511	2	14	75	1882	1948	0	11287962	10800000	11399999
20		1	14	85	1504	0	0	11757303	11400000	11999999
Total number of pulses in waveform = 38										

Type 5 Radar Waveform_9

Num of Bursts = 19										
Burst Interval (us)= 631579										
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	565668	3	6	60	1810	1295	1137	565668	0	631578
2	413037	1	6	90	1721	0	0	982947	631579	1263157
3	329709	3	6	85	1666	1468	1139	1314377	1263158	1894736
4	1098822	3	6	65	1151	1750	1644	2417472	1894737	2526315
5	445790	3	6	95	1272	1139	1034	2867807	2526316	3157894
6	550420	2	6	55	1220	1496	0	3421672	3157895	3789473
7	485908	3	6	80	1667	1964	1971	3910296	3789474	4421052
8	653611	3	6	55	1067	1360	1796	4569509	4421053	5052631
9	902382	2	6	90	1653	1846	0	5476114	5052632	5684210
10	498444	2	6	80	1287	1493	0	5978057	5684211	6315789
11	360743	3	6	50	1857	1973	1838	6341580	6315790	6947368
12	794911	3	6	80	1766	1082	1304	7142159	6947369	7578947
13	508633	3	6	100	1880	1295	1568	7655944	7578948	8210526
14	655879	2	6	75	1682	1293	0	8316566	8210527	8842105
15	633643	1	6	80	1773	0	0	8953184	8842106	9473684
16	724655	3	6	70	1110	1846	1313	9679612	9473685	10105263
17	957567	3	6	50	1995	1163	1759	10641448	10105264	10736842
18	386531	2	6	85	1295	1355	0	11032896	10736843	11368421
19	410148	1	6	85	1505	0	0	11445694	11368422	12000000
Total number of pulses in waveform = 46										

Type 5 Radar Waveform_10

Num of Bursts = 18										
Burst Interval (us)= 666667										
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	554100	2	17	55	1573	1997	0	573888	0	666666
2	351224	3	17	75	1998	1381	1113	1131558	666667	1333333
3	875997	1	17	55	1499	0	0	1487274	1333334	2000000
4	952200	3	17	75	1612	1433	1019	2364770	2000001	2666667
5	248358	3	17	95	1169	1423	1473	3321034	2666668	3333334
6	1023812	3	17	70	1313	1428	1622	3573447	3333335	4000001
7	130454	2	17	50	1245	1116	0	4601622	4000002	4666668
8	608783	1	17	70	1965	0	0	4734437	4666669	5333335
9	726256	2	17	65	1820	1789	0	5345185	5333336	6000002
10	1030127	2	17	70	1650	1258	0	6075050	6000003	6666669
11	500522	2	17	65	1019	1339	0	7108085	6666670	7333336
12	647380	1	17	60	1582	0	0	7610965	7333337	8000003
13	1002644	2	17	85	1783	1001	0	8259927	8000004	8666670
14	302323	1	17	85	1173	0	0	9265355	8666671	9333337
15	642217	2	17	60	1882	1828	0	9568851	9333338	10000004
16	465824	2	17	65	1237	1362	0	10214778	10000005	10666671
17	105538	3	17	50	1784	1066	1553	10683201	10666672	11333338
18		3	17	60	1980	1856	1864	11743142	11333339	12000005
Total number of pulses in waveform = 38										

**Type 5 Radar Waveform_11**Num of Bursts = 15
Burst Interval (us)= 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	370687	1	19	55	1673	0	0	370687	0	799999
2	1189446	2	19	90	1507	1289	0	1561806	800000	1599999
3	196476	3	19	60	1436	1088	1178	1761078	1600000	2399999
4	1158074	3	19	95	1877	1327	1087	2922854	2400000	3199999
5	915494	3	19	85	1133	1526	1151	3842639	3200000	3999999
6	427391	2	19	75	1542	1016	0	4273840	4000000	4799999
7	1057599	3	19	75	1879	1519	1172	5333997	4800000	5599999
8	440991	1	19	50	1878	0	0	5779558	5600000	6399999
9	1217588	2	19	80	1316	1057	0	6999024	6400000	7199999
10	928667	1	19	65	1993	0	0	7930064	7200000	7999999
11	688303	2	19	75	1732	1564	0	8620360	8000000	8799999
12	744837	3	19	75	1039	1326	1820	9368493	8800000	9599999
13	890651	2	19	90	1313	1799	0	10263329	9600000	10399999
14	768745	2	19	70	1146	1034	0	11035186	10400000	11199999
15	438578	3	19	60	1766	1695	1130	11475944	11200000	11999999

Total number of pulses in waveform = 33

Type 5 Radar Waveform_12Num of Bursts = 9
Burst Interval (us)= 1333333

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	372739	3	5	95	1157	1298	1486	372739	0	1333332
2	1115591	1	5	50	1506	0	0	1492271	1333333	2666665
3	1643151	3	5	65	1093	1975	1751	3136928	2666666	3999998
4	1306540	1	5	70	1540	0	0	4448287	3999999	5333331
5	1610441	1	5	50	1895	0	0	6060268	5333332	6666664
6	1546599	3	5	70	1565	1218	1232	7608762	6666665	7999997
7	1310343	2	5	55	1002	1872	0	8923120	7999998	9333330
8	1077725	1	5	90	1710	0	0	10003719	9333331	10666663
9	1147846	2	5	85	1927	1342	0	11153275	10666664	11999996

Total number of pulses in waveform = 17

Type 5 Radar Waveform_13Num of Bursts = 12
Burst Interval (us)= 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	53678	3	17	65	1284	1810	1152	53678	0	999999
2	1184191	2	17	90	1465	1700	0	1242115	1000000	1999999
3	1260900	1	17	85	1428	0	0	2506180	2000000	2999999
4	1177443	1	17	90	1216	0	0	3685051	3000000	3999999
5	576233	1	17	60	1753	0	0	4262500	4000000	4999999
6	813341	1	17	100	1576	0	0	5077594	5000000	5999999
7	1893620	2	17	50	1922	1497	0	6972790	6000000	6999999
8	148326	3	17	75	1611	1180	1053	7124535	7000000	7999999
9	1389189	2	17	85	1489	1837	0	8517568	8000000	8999999
10	547193	2	17	100	1713	1890	0	9068087	9000000	9999999
11	1537955	1	17	50	1131	0	0	10609645	10000000	10999999
12	1364179	3	17	100	1847	1573	1071	11974955	11000000	11999999

Total number of pulses in waveform = 22

**Type 5 Radar Waveform_14**Num of Bursts = 18
Burst Interval (us) = 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	61986	3	12	85	1609	1960	1390	61986	0	666666
2	1212435	3	12	65	1990	1556	1700	1279380	666667	1333333
3	282492	3	12	95	1432	1763	1037	1567118	1333334	2000000
4	701353	1	12	60	1879	0	0	2272703	2000001	2666667
5	956876	3	12	90	1056	1189	1606	3231458	2666668	3333334
6	141611	3	12	85	1178	1484	1556	3376920	3333335	4000001
7	994059	1	12	75	1094	0	0	4375197	4000002	4666668
8	670139	3	12	80	1826	1161	1413	5046430	4666669	5333335
9	713423	1	12	100	1262	0	0	5764253	5333336	6000002
10	686202	2	12	60	1518	1037	0	6451717	6000003	6666669
11	686812	3	12	80	1831	1033	1769	7141084	6666670	7333336
12	431531	3	12	95	1018	1573	1402	7577248	7333337	8000003
13	789569	1	12	95	1017	0	0	8370810	8000004	8666670
14	571105	1	12	100	1309	0	0	8942932	8666671	9333337
15	446102	2	12	60	1663	1315	0	9390343	9333338	10000004
16	667440	3	12	70	1556	1647	1932	10060761	10000005	10666671
17	1212106	2	12	50	1985	1683	0	11278002	10666672	11333338
18	308968	2	12	95	1787	1798	0	11590638	11333339	12000005

Total number of pulses in waveform = 40

Type 5 Radar Waveform_15Num of Bursts = 9
Burst Interval (us) = 1333333

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	1251820	2	6	100	1329	1194	0	1251820	0	1333332
2	912451	2	6	65	1074	1941	0	2166794	1333333	2666665
3	1786930	3	6	50	1135	1818	1696	3956739	2666666	3999998
4	184079	2	6	60	1512	1861	0	4145467	3999999	5333331
5	2236684	3	6	75	1467	1627	1293	6385524	5333332	6666664
6	564075	3	6	50	1239	1591	1370	6953986	6666665	7999997
7	2110185	1	6	75	1333	0	0	9068371	7999998	9333330
8	1105820	1	6	85	1896	0	0	10175524	9333331	10666663
9	591553	3	6	80	1818	1843	1339	10768973	10666664	11999996

Total number of pulses in waveform = 20

Type 5 Radar Waveform_16Num of Bursts = 8
Burst Interval (us) = 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	1244539	1	8	85	1553	0	0	1244539	0	1499999
2	446295	1	8	100	1241	0	0	1692387	1500000	2999999
3	1374150	2	8	90	1869	1336	0	3067778	3000000	4499999
4	1431638	1	8	95	1662	0	0	4502621	4500000	5999999
5	2375655	1	8	55	1158	0	0	6879938	6000000	7499999
6	1158172	2	8	60	1685	1393	0	8039268	7500000	8999999
7	2197934	2	8	50	1428	1762	0	10240280	9000000	10499999
8	1022228	2	8	50	1439	1361	0	11265698	10500000	11999999

Total number of pulses in waveform = 12

**Type 5 Radar Waveform_17**

Num of Bursts = 10
Burst Interval (us)= 1200000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	611088	1	14	70	1408	0	0	611088	0	1199999
2	948105	1	14	55	1324	0	0	1560601	1200000	2399999
3	2032169	2	14	75	1698	1799	0	3594094	2400000	3599999
4	386619	2	14	60	1637	1815	0	3984210	3600000	4799999
5	2003182	3	14	90	1596	1786	1740	5990844	4800000	5999999
6	794522	3	14	100	1901	1963	1999	6790488	6000000	7199999
7	1071867	1	14	75	1429	0	0	7868218	7200000	8399999
8	1559338	3	14	65	1836	1906	1676	9428985	8400000	9599999
9	289431	2	14	100	1674	1630	0	9723834	9600000	10799999
10	1770989	3	14	55	1007	1020	1623	11498127	10800000	11999999

Total number of pulses in waveform = 21

Type 5 Radar Waveform_18

Num of Bursts = 12
Burst Interval (us)= 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	98059	1	18	100	1096	0	0	98059	0	999999
2	1717125	3	18	65	1156	1360	1689	1816280	1000000	1999999
3	749308	1	18	95	1431	0	0	2569793	2000000	2999999
4	1006414	3	18	80	1935	1266	1995	3577638	3000000	3999999
5	604233	3	18	95	1073	1765	1573	4187067	4000000	4999999
6	1232716	1	18	90	1409	0	0	5424194	5000000	5999999
7	639253	2	18	75	1346	1398	0	6064856	6000000	6999999
8	1912615	1	18	60	1879	0	0	7980215	7000000	7999999
9	521266	2	18	85	1397	1467	0	8503360	8000000	8999999
10	995871	1	18	70	1105	0	0	9502095	9000000	9999999
11	1259148	1	18	55	1626	0	0	10762348	10000000	10999999
12	1127278	1	18	80	1611	0	0	11891252	11000000	11999999

Total number of pulses in waveform = 20

Type 5 Radar Waveform_19

Num of Bursts = 10
Burst Interval (us)= 1200000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	663243	2	10	65	1012	1766	0	663243	0	1199999
2	1577451	3	10	95	1448	1644	1734	2243472	1200000	2399999
3	1023660	3	10	80	1738	1349	1210	3271958	2400000	3599999
4	1367430	1	10	55	1677	0	0	4643685	3600000	4799999
5	439633	1	10	50	1300	0	0	5084995	4800000	5999999
6	1370273	2	10	60	1699	1744	0	6456568	6000000	7199999
7	1344071	2	10	55	1832	1419	0	7804082	7200000	8399999
8	1477279	2	10	95	1564	1844	0	9284612	8400000	9599999
9	479287	1	10	80	1801	0	0	9767307	9600000	10799999
10	2169153	1	10	70	1362	0	0	11938261	10800000	11999999

Total number of pulses in waveform = 18



Type 5 Radar Waveform_20

Num of Bursts = 18
Burst Interval (us) = 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	605000	3	9	50	1334	1065	1918	605000	0	666666
2	666301	1	9	80	1499	0	0	1275618	666667	1333333
3	113401	2	9	95	1781	1325	0	1390518	1333334	2000000
4	1139897	1	9	90	1202	0	0	2533521	2000001	2666667
5	206281	1	9	70	1237	0	0	2741004	2666668	3333334
6	877817	2	9	60	1883	1115	0	3620058	3333335	4000001
7	402721	1	9	75	1142	0	0	4025777	4000002	4666668
8	1189651	2	9	75	1469	1888	0	5216570	4666669	5333335
9	270106	3	9	60	1053	1897	1898	5490033	5333336	6000002
10	748946	2	9	50	1291	1930	0	6243827	6000003	6666669
11	483393	3	9	80	1524	1438	1098	6730441	6666670	7333336
12	939081	2	9	90	1054	1000	0	7673582	7333337	8000003
13	603517	3	9	90	1620	1570	1377	8279153	8000004	8666670
14	434933	2	9	70	1946	1016	0	8718653	8666671	9333337
15	1113356	1	9	65	1371	0	0	9834971	9333338	10000004
16	316321	3	9	65	1213	1863	1408	10152663	10000005	10666671
17	525824	2	9	65	1802	1013	0	10682971	10666672	11333338
18	780457	3	9	90	1423	1857	1244	11466243	11333339	12000005

Total number of pulses in waveform = 37

Type 5 Radar Waveform_21

Num of Bursts = 11
Burst Interval (us) = 1090909

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	687469	1	17	75	1971	0	0	687469	0	1090908
2	756841	1	17	80	1519	0	0	1446281	1090909	2181817
3	1373810	2	17	100	1612	1788	0	2821610	2181818	3272726
4	1494581	3	17	90	1226	1594	1095	4319591	3272727	4363635
5	128254	3	17	70	1652	1044	1117	4451760	4363636	5454544
6	1413073	3	17	75	1787	1613	1310	5868646	5454545	6545453
7	1300528	2	17	60	1958	1489	0	7173884	6545454	7636362
8	844351	3	17	90	1902	1084	1889	8021682	7636363	8727271
9	774922	2	17	55	1382	1635	0	8801479	8727272	9818180
10	1161450	3	17	95	1850	1408	1095	9965946	9818181	10909089
11	1737205	1	17	80	1136	0	0	11707504	10909090	11999998

Total number of pulses in waveform = 24

Type 5 Radar Waveform_22

Num of Bursts = 19
Burst Interval (us) = 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	242975	2	8	65	1912	1590	0	242975	0	631578
2	897099	3	8	100	1498	1240	1577	1143576	631579	1263157
3	441247	2	8	50	1986	1155	0	1589138	1263158	1894736
4	444927	2	8	95	1505	1070	0	2037206	1894737	2526315
5	749423	2	8	60	1833	1526	0	2789204	2526316	3157894
6	418439	2	8	60	1602	1740	0	3211002	3157895	3789473
7	1112522	3	8	75	1090	1310	1143	4326866	3789474	4421052
8	585169	1	8	50	1264	0	0	4915578	4421053	5052631
9	552302	3	8	90	1441	1148	1709	5469144	5052632	5684210
10	331823	3	8	95	1742	1476	1098	5805265	5684211	6315789
11	685838	3	8	60	1440	1149	1082	6495419	6315790	6947368
12	674809	1	8	100	1100	0	0	7173899	6947369	7578947
13	898525	2	8	65	1019	1455	0	8073524	7578948	8210526
14	424148	1	8	70	1984	0	0	8500146	8210527	8842105
15	862127	3	8	65	1005	1783	1762	9364257	8842106	9473684
16	449115	3	8	70	1419	1029	1365	9817922	9473685	10105263
17	299994	2	8	60	1651	1916	0	10121729	10105264	10736842
18	967934	2	8	55	1835	1446	0	11093230	10736843	11368421
19	713587	1	8	100	1714	0	0	11810098	11368422	12000000

Total number of pulses in waveform = 41

**Type 5 Radar Waveform_23**

Num of Bursts = 8
Burst Interval (us)= 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	377751	3	19	60	1635	1577	1333	377751	0	1499999
2	1511310	1	19	55	1092	0	0	1893606	1500000	2999999
3	2504874	3	19	85	1518	1493	1637	4399572	3000000	4499999
4	1558348	1	19	100	1873	0	0	5962568	4500000	5999999
5	807333	2	19	80	1148	1359	0	6771774	6000000	7499999
6	1621850	2	19	65	1210	1815	0	8396131	7500000	8999999
7	762162	3	19	100	1211	1056	1512	9161318	9000000	10499999
8	2153007	2	19	90	1823	1102	0	11318104	10500000	11999999

Total number of pulses in waveform = 17

Type 5 Radar Waveform_24

Num of Bursts = 12
Burst Interval (us)= 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	275729	2	5	55	1284	1632	0	275729	0	999999
2	1227676	3	5	75	1416	1598	1676	1506321	1000000	1999999
3	1479179	3	5	65	1437	1030	1707	2990190	2000000	2999999
4	734415	1	5	55	1125	0	0	3728779	3000000	3999999
5	778050	2	5	75	1164	1597	0	4507954	4000000	4999999
6	730541	3	5	50	1842	1363	1686	5241256	5000000	5999999
7	867385	2	5	55	1787	1635	0	6113532	6000000	6999999
8	1187400	2	5	85	1646	1043	0	7304354	7000000	7999999
9	956696	2	5	100	1269	1010	0	8263739	8000000	8999999
10	1611937	1	5	80	1426	0	0	9877955	9000000	9999999
11	929048	1	5	90	1631	0	0	10808429	10000000	10999999
12	667239	1	5	85	1519	0	0	11477299	11000000	11999999

Total number of pulses in waveform = 23

Type 5 Radar Waveform_25

Num of Bursts = 11
Burst Interval (us)= 1090909

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	509329	2	6	95	1942	1698	0	509329	0	1090908
2	1364813	2	6	100	1416	1006	0	1877782	1090909	2181817
3	919251	1	6	75	1906	0	0	2799455	2181818	3272726
4	1011570	1	6	85	1960	0	0	3812931	3272727	4363635
5	660759	3	6	65	1220	1919	1012	4475650	4363636	5454544
6	1486289	3	6	60	1594	1048	1684	5966090	5454545	6545453
7	1485766	3	6	60	1818	1080	1543	7456182	6545454	7636362
8	1169614	2	6	55	1850	1188	0	8630237	7636363	8727271
9	583639	3	6	65	1935	1634	1349	9216914	8727272	9818180
10	705553	2	6	50	1506	1663	0	9927385	9818181	10909089
11	1390605	2	6	60	1304	1814	0	11321159	10909090	11999998

Total number of pulses in waveform = 24



Type 5 Radar Waveform_26

Num of Bursts = 10
Burst Interval (us)= 1200000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	793103	1	9	60	1406	0	0	793103	0	1199999
2	1237843	1	9	70	1797	0	0	2032352	1200000	2399999
3	1405601	2	9	80	1451	1836	0	3439750	2400000	3599999
4	1342482	2	9	75	1033	1922	0	4785519	3600000	4799999
5	248697	1	9	85	1512	0	0	5037171	4800000	5999999
6	1136786	3	9	50	1478	1651	1928	6175469	6000000	7199999
7	1196383	1	9	90	1560	0	0	7376909	7200000	8399999
8	1372002	2	9	60	1518	1321	0	8750471	8400000	9599999
9	1491186	3	9	90	1203	1256	1892	10244496	9600000	10799999
10	1350231	1	9	50	1058	0	0	11599078	10800000	11999999

Total number of pulses in waveform = 17

Type 5 Radar Waveform_27

Num of Bursts = 20

Burst Interval (us)= 600000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	7218	1	18	75	1297	0	0	7218	0	599999
2	1074664	1	18	90	1058	0	0	1083179	600000	1199999
3	386230	1	18	70	1385	0	0	1470467	1200000	1799999
4	519368	3	18	75	1415	1000	1269	1991220	1800000	2399999
5	739572	3	18	60	1898	1130	1962	2734476	2400000	2999999
6	780599	2	18	95	1011	1150	0	3520065	3000000	3599999
7	457542	3	18	95	1151	1510	1827	3979768	3600000	4199999
8	682484	1	18	50	1360	0	0	4666740	4200000	4799999
9	258257	1	18	65	1603	0	0	4926357	4800000	5399999
10	1013971	1	18	65	1300	0	0	5941931	5400000	5999999
11	98889	1	18	55	1023	0	0	6042120	6000000	6599999
12	674166	3	18	100	1574	1634	1351	6717309	6600000	7199999
13	771154	2	18	80	1681	1460	0	7493022	7200000	7799999
14	871139	3	18	85	1434	1680	1770	8367302	7800000	8399999
15	268926	1	18	90	1906	0	0	8641112	8400000	8999999
16	610113	3	18	65	1426	1000	1670	9253131	9000000	9599999
17	890223	1	18	95	1575	0	0	10147450	9600000	10199999
18	366132	2	18	50	1305	1163	0	10515157	10200000	10799999
19	324693	2	18	50	1719	1014	0	10842318	10800000	11399999
20	658036	2	18	95	1455	1957	0	11603087	11400000	11999999

Total number of pulses in waveform = 37

Type 5 Radar Waveform_28

Num of Bursts = 20

Burst Interval (us)= 600000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	71865	1	10	60	1986	0	0	71865	0	599999
2	777539	1	10	100	1163	0	0	851390	600000	1199999
3	776089	3	10	50	1183	1644	1437	1628642	1200000	1799999
4	445903	1	10	55	1627	0	0	2078809	1800000	2399999
5	567390	1	10	95	1091	0	0	2647826	2400000	2999999
6	413478	2	10	90	1728	1580	0	3062395	3000000	3599999
7	678160	3	10	95	1383	1524	1914	3743863	3600000	4199999
8	626256	3	10	55	1199	1202	1316	4374940	4200000	4799999
9	440275	2	10	90	1323	1907	0	4818932	4800000	5399999
10	1104093	2	10	85	1636	1025	0	5926255	5400000	5999999
11	634883	1	10	75	1266	0	0	6563799	6000000	6599999
12	315253	1	10	100	1267	0	0	6880318	6600000	7199999
13	721761	2	10	50	1368	1294	0	7603346	7200000	7799999
14	387272	3	10	60	1823	1857	1589	7993280	7800000	8399999
15	937470	1	10	95	1513	0	0	8936019	8400000	8999999
16	332709	2	10	95	1911	1538	0	9270241	9000000	9599999
17	566040	3	10	90	1801	1500	1048	9839730	9600000	10199999
18	854030	2	10	85	1207	1061	0	10698109	10200000	10799999
19	480897	1	10	55	1484	0	0	11181274	10800000	11399999
20	300544	3	10	95	1799	1498	1199	11483302	11400000	11999999

Total number of pulses in waveform = 38

**Type 5 Radar Waveform_29**

Num of Bursts = 10
Burst Interval (us)= 1200000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	886755	3	14	70	1816	1802	1727	886755	0	1199999
2	904748	1	14	95	1679	0	0	1796848	1200000	2399999
3	1174381	1	14	100	1720	0	0	2972908	2400000	3599999
4	1568989	1	14	90	1339	0	0	4543617	3600000	4799999
5	1051076	2	14	50	1759	1459	0	5596032	4800000	5999999
6	1240697	1	14	60	1100	0	0	6839947	6000000	7199999
7	359655	2	14	60	1380	1149	0	7200702	7200000	8399999
8	1754448	2	14	65	1830	1377	0	8957679	8400000	9599999
9	1752411	1	14	95	1805	0	0	10713297	9600000	10799999
10	754851	1	14	50	1332	0	0	11469953	10800000	11999999

Total number of pulses in waveform = 15

Type 5 Radar Waveform_30

Num of Bursts = 16
Burst Interval (us)= 750000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	658085	2	12	60	1005	1741	0	658085	0	749999
2	436831	3	12	65	1307	1583	1497	1097662	750000	1499999
3	949984	2	12	90	1108	1309	0	2052033	1500000	2249999
4	899994	1	12	60	1732	0	0	2954444	2250000	2999999
5	265462	1	12	90	1117	0	0	3221638	3000000	3749999
6	864904	1	12	65	1645	0	0	4087659	3750000	4499999
7	988727	1	12	80	1065	0	0	5078031	4500000	5249999
8	516331	1	12	65	1100	0	0	5595427	5250000	5999999
9	1056853	1	12	75	1618	0	0	6653380	6000000	6749999
10	654932	1	12	95	1281	0	0	7309930	6750000	7499999
11	784202	3	12	70	1435	1783	1141	8095413	7500000	8249999
12	831456	3	12	70	1767	1025	1519	8931228	8250000	8999999
13	542867	1	12	95	1808	0	0	9478406	9000000	9749999
14	442403	2	12	50	1041	1452	0	9922617	9750000	10499999
15	1271182	2	12	95	1416	1919	0	11196292	10500000	11249999
16	716227	2	12	95	1338	1022	0	11915854	11250000	11999999

Total number of pulses in waveform = 27

Radar Type 6 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5491	1	16	5530	1
2	5491	1	17	5531	1
3	5500	1	18	5531	1
4	5500	1	19	5540	1
5	5509	1	20	5540	1
6	5509	1	21	5549	1
7	5510	1	22	5549	1
8	5510	1	23	5550	1
9	5511	1	24	5550	1
10	5511	1	25	5551	1
11	5520	1	26	5551	1
12	5520	1	27	5560	1
13	5529	1	28	5560	1
14	5529	1	29	5569	1
15	5530	1	30	5569	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5477	15	0	5470	0
19	5470	57	5	5498	15
30	5507	90	25	5504	75
33	5514	99	28	5464	84
41	5494	123	30	5502	90
57	5519	171	31	5517	93
61	5469	183	47	5481	141
81	5487	243	50	5471	150
83	5478	249	51	5467	153
86	5490	258	52	5494	156
96	5480	288	53	5505	159
--	--	--	57	5506	171
--	--	--	59	5489	177
--	--	--	62	5465	186
--	--	--	63	5490	189
--	--	--	64	5474	192
--	--	--	71	5468	213
--	--	--	74	5473	222
--	--	--	79	5472	237
--	--	--	93	5482	279
--	--	--	99	5503	297

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
12	5505	36	12	5508	36
15	5472	45	18	5513	54
20	5529	60	22	5499	66
32	5525	96	28	5529	84
39	5507	117	32	5474	96
40	5527	120	35	5522	105
44	5526	132	41	5471	123
46	5486	138	42	5483	126
48	5497	144	43	5486	129
51	5528	153	46	5514	138
56	5512	168	50	5516	150
60	5518	180	62	5476	186
78	5508	234	66	5478	198
90	5504	270	91	5521	273
97	5475	291	--	--	--
99	5495	297	--	--	--

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5524	24	8	5507	24
10	5527	30	9	5539	27
22	5539	66	11	5510	33
23	5512	69	12	5504	36
25	5499	75	13	5515	39
30	5497	90	19	5480	57
42	5488	126	21	5491	63
48	5503	144	23	5508	69
51	5484	153	29	5514	87
73	5479	219	44	5533	132
75	5522	225	52	5529	156
96	5507	288	59	5492	177
--	--	--	60	5523	180
--	--	--	61	5522	183
--	--	--	67	5498	201
--	--	--	84	5496	252
--	--	--	87	5524	261
--	--	--	96	5530	288

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
16	5485	48	3	5489	9
31	5524	93	22	5534	66
48	5496	144	28	5492	84
55	5498	165	33	5520	99
62	5531	186	37	5523	111
74	5504	222	38	5490	114
95	5486	285	41	5516	123
--	--	--	42	5484	126
--	--	--	47	5522	141
--	--	--	55	5529	165
--	--	--	61	5491	183
--	--	--	69	5481	207
--	--	--	71	5527	213
--	--	--	85	5488	255
--	--	--	88	5509	264
--	--	--	98	5524	294
--	--	--	99	5510	297

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5482	6	8	5526	24
3	5506	9	12	5490	36
5	5493	15	25	5503	75
8	5517	24	26	5521	78
11	5529	33	34	5508	102
19	5525	57	50	5527	150
22	5518	66	61	5486	183
25	5528	75	70	5539	210
26	5532	78	77	5524	231
28	5494	84	78	5497	234
38	5484	114	81	5487	243
54	5521	162	93	5525	279
62	5490	186	95	5485	285
75	5508	225	98	5541	294
87	5504	261	--	--	--
99	5486	297	--	--	--

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5529	15	2	5511	6
9	5536	27	6	5516	18
18	5539	54	23	5500	69
25	5530	75	24	5505	72
35	5518	105	62	5529	186
49	5492	147	66	5514	198
57	5511	171	72	5517	216
61	5506	183	74	5525	222
77	5524	231	92	5549	276
81	5521	243	96	5492	288
85	5533	255	--	--	--
96	5528	288	--	--	--

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5537	15	15	5515	45
18	5507	54	27	5522	81
31	5553	93	48	5511	144
44	5534	132	50	5536	150
60	5513	180	61	5535	183
68	5530	204	62	5503	186
76	5514	228	69	5508	207
85	5548	255	73	5525	219
--	--	--	84	5527	252
--	--	--	96	5543	288

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
10	5523	30	4	5505	12
15	5548	45	7	5537	21
37	5514	111	25	5552	75
39	5559	117	29	5551	87
44	5511	132	32	5512	96
49	5507	147	36	5513	108
57	5551	171	45	5504	135
58	5560	174	47	5522	141
61	5512	183	56	5532	168
69	5502	207	60	5556	180
79	5520	237	61	5506	183
--	--	--	62	5503	186
--	--	--	97	5542	291

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5541	18	1	5512	3
10	5513	30	3	5521	9
17	5560	51	20	5530	60
19	5544	57	33	5525	99
22	5509	66	37	5555	111
33	5525	99	40	5524	120
52	5537	156	44	5516	132
53	5502	159	51	5520	153
60	5558	180	60	5510	180
62	5540	186	66	5515	198
75	5555	225	79	5505	237
82	5533	246	97	5502	291
85	5553	255	--	--	--
93	5512	279	--	--	--
95	5505	285	--	--	--
98	5548	294	--	--	--
99	5535	297	--	--	--

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
10	5555	30	13	5536	39
23	5525	69	16	5559	48
24	5559	72	25	5558	75
28	5545	84	32	5525	96
44	5549	132	39	5542	117
46	5536	138	40	5511	120
47	5570	141	47	5549	141
50	5522	150	57	5551	171
56	5530	168	71	5563	213
69	5512	207	80	5564	240
76	5560	228	88	5537	264
84	5537	252	99	5530	297
90	5517	270	--	--	--
95	5569	285	--	--	--
98	5563	294	--	--	--

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5575	0	13	5553	39
18	5567	54	29	5539	87
28	5556	84	30	5565	90
41	5579	123	38	5570	114
43	5524	129	62	5550	186
60	5554	180	64	5530	192
69	5571	207	65	5532	195
80	5560	240	67	5523	201
84	5564	252	80	5526	240
85	5570	255	91	5566	273
--	--	--	98	5538	294

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5574	3	1	5566	3
26	5573	78	3	5541	9
28	5579	84	4	5531	12
36	5565	108	23	5545	69
40	5572	120	46	5538	138
43	5521	129	52	5570	156
45	5520	135	67	5578	201
48	5540	144	74	5571	222
51	5548	153	95	5547	285
59	5557	177	98	5540	294
75	5538	225	--	--	--

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5537	6	21	5558	63
22	5563	66	26	5562	78
23	5556	69	34	5580	102
24	5531	72	51	5530	153
25	5528	75	65	5521	195
28	5534	84	67	5539	201
41	5547	123	79	5559	237
57	5546	171	94	5578	282
64	5554	192	96	5550	288
67	5581	201	--	--	--
68	5549	204	--	--	--
97	5529	291	--	--	--

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5589	15	1	5552	3
6	5535	18	10	5532	30
7	5568	21	13	5584	39
24	5573	72	19	5588	57
27	5547	81	21	5543	63
52	5552	156	25	5544	75
58	5536	174	36	5538	108
66	5563	198	48	5572	144
69	5566	207	52	5553	156
74	5564	222	65	5582	195
76	5583	228	70	5569	210
79	5586	237	78	5574	234
81	5582	243	80	5556	240
84	5550	252	92	5535	276
92	5530	276	99	5560	297
94	5574	282	--	--	--
95	5579	285	--	--	--
96	5549	288	--	--	--

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5596	3	14	5568	42
7	5586	21	19	5569	57
13	5566	39	24	5548	72
29	5588	87	27	5584	81
34	5550	102	39	5547	117
37	5573	111	50	5555	150
43	5568	129	75	5550	225
44	5579	132	80	5579	240
46	5561	138	85	5583	255
57	5567	171	89	5565	267
58	5540	174	91	5597	273
72	5576	216	93	5589	279
75	5584	225	94	5567	282
93	5553	279	--	--	--
94	5578	282	--	--	--

End