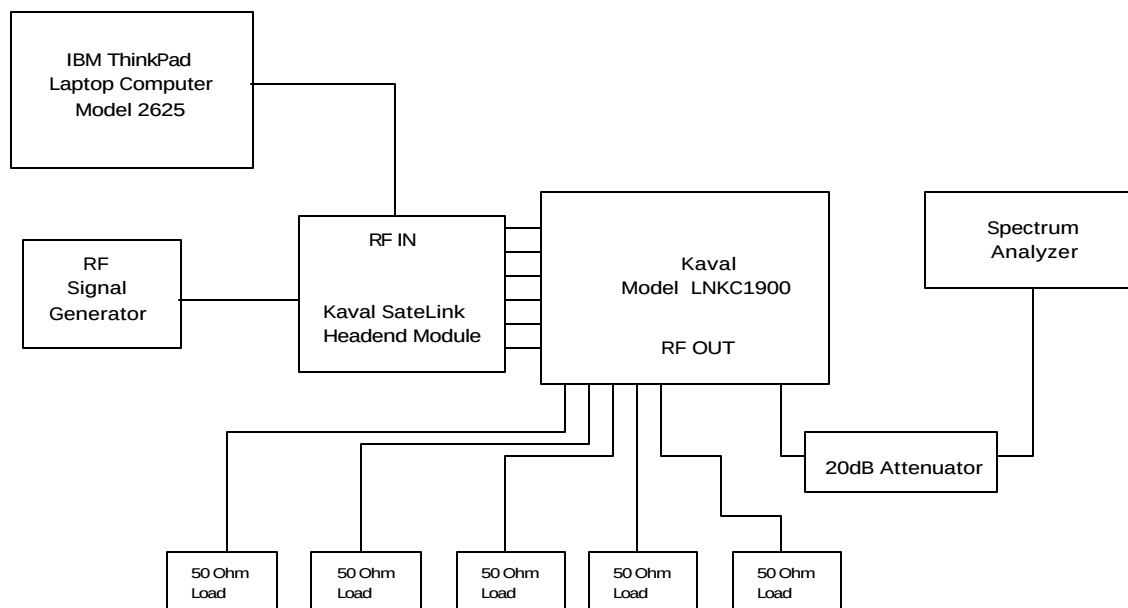


6.5. RF OUTPUT PORT SUBJECT TO TESTS

6.5.1. Test Equipment List

Test Instruments	Manufacturer	Model No.	Serial No.	Frequency Range
Power Meter	Hewlett Packard	436A	1725A02249	10 kHz – 50 GHz, sensor dependent
Power Sensor	Hewlett Packard	8481A	2702A68983	10 MHz – 18 GHz
Attenuator(s)	Bird	...	...	DC – 22 GHz
Synthesized RF Signal Generator	Gigatronic	6061A	5130408	10kHz – 1050 MHz

6.5.2. Test Arrangement



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6.5.3. Test Data

Remarks: The equipment under test is equipped with 6 RF output ports> These ports are split out from a single, internal output port using an internal 1-to-6 combining network pad. These 6 output ports are essentially identical with some tolerance. The following tests were conducted to determine the worst RF output ports which will be used for carrying tests in the entire report.

6.5.3.1. 1930 –1990 MHz (PCS)

Frequency (MHz)	RF Output Port Label #	Un-modulated Input Signal (dBm)	Un-modulated Output Signal (dBm)	Gain (dB)
1960	1	-5.0	16.7	21.7
	2	-5.0	16.8	21.8
	3	-5.0	16.9	21.9
	4	-5.0	17.2	22.2
	5 + 6	-5.0	18.5	23.5
	7 + 8	-5.0	19.5	24.5
PORT # 7+8 WOULD BE USED THROUGH OUT THE REMAINING TESTS FOR THE WORST CASE				

6.5.3.2. 869 – 894 (Base Cellular)

Frequency (MHz)	RF Output Port Label #	Un-modulated Input Signal (dBm)	Un-modulated Output Signal (dBm)	Gain (dB)
881.5	1	-5.0	16.9	21.9
	2	-5.0	15.5	20.5
	3	-5.0	16.9	21.9
	4	-5.0	17.9	22.9
	5 + 6	-5.0	20.0	25.0
	7 + 8	-5.0	20.7	25.7
PORT # 7+8 WOULD BE USED THROUGH OUT THE REMAINING TESTS FOR THE WORST CASE				

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6.5.3.3. 928 – 941 MHz (Paging)

Frequency (MHz)	RF Output Port Label #	Un-modulated Input Signal (dBm)	Un-modulated Output Signal (dBm)	Gain (dB)
934.5	1	-5.0	18.7	23.7
	2	-5.0	17.6	22.6
	3	-5.0	17.3	22.3
	4	-5.0	18.2	23.2
	5 + 6	-5.0	20.4	25.4
	7 + 8	-5.0	21.1	26.1
PORT # 7+8 WOULD BE USED THROUGH OUT THE REMAINING TESTS FOR THE WORST CASE				

6.5.3.4. 851 – 866 MHz (Trunking)

Frequency (MHz)	RF Output Port Label #	Un-modulated Input Signal (dBm)	Un-modulated Output Signal (dBm)	Gain (dB)
858.475	1	-5.0	18.5	23.5
	2	-5.0	17.0	22.0
	3	-5.0	18.9	23.5
	4	-5.0	20.3	25.3
	5 + 6	-5.0	23.0	28.0
	7 + 8	-5.0	23.9	28.9
PORT # 7+8 WOULD BE USED THROUGH OUT THE REMAINING TESTS FOR THE WORST CASE				

6.5.4. RF Output port Port used for Worst Case Test

According to the above tests, RF Output Port labeled 7+8 will be used for the rest of rest of the remaining tests in this test report. Other ports from 1 through 5+6 are terminated by 50-ohm RF loads.

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6.6. RF POWER OUTPUTS & INTERMODULATION @ FCC 2.1046, 22.913, 24.232 & 90.205

6.6.1. Limits

Please refer to FCC CFR 47, Paragraphs 22.913, 24.232 and 90.205 for power limits in different frequency bands:

EUT's Operating Frequency Band (MHz)	FCC Allowable Frequency band (MHz)	FCC Rules	FCC Maximum Power Limits (Watts)
1930-1990 MHz (PCS Base)	1930-1990	24.232	1640 Watts peak EIRP
869-894 MHz (Cellular Base)	869-894	22.913	500 Watts ERP
928-941 MHz (Paging Base)	929-930 & 935-940	90.494	1 kilo-Watts ERP
851-866 MHz (Trunking)	851 – 866 MHz	90.635	1 kilo-Watts ERP

6.6.2. Limits @ FCC 24.232

The effective radiated power (EIRP) of transmitters in the Personal Communications Services must not exceed the limits in this section:

	Maximum Average ERP (Watts)	Antenna Height
Base Transmitters (1930-1975 MHz)	1640 Watts 	300 meters

6.6.3. Limits @ FCC 90.205

Please refer to FCC CFR 47, Part 90, Subpart I, Para. 90.205 for specification details.

6.6.4. Method of Measurements

Refer to Exhibit 8, § 8.1 of this report for measurement details

- The transmitter terminal was coupled to the power meter through a 20 dB attenuator*
- Power of the transmitter channel near the lowest, middle and highest of each frequency block/band were measured using the power meter, and the reading was corrected by added the calibrated attenuator's attenuation value and cable loss.*
- The RF Output was turned on with standard modulation applied.*

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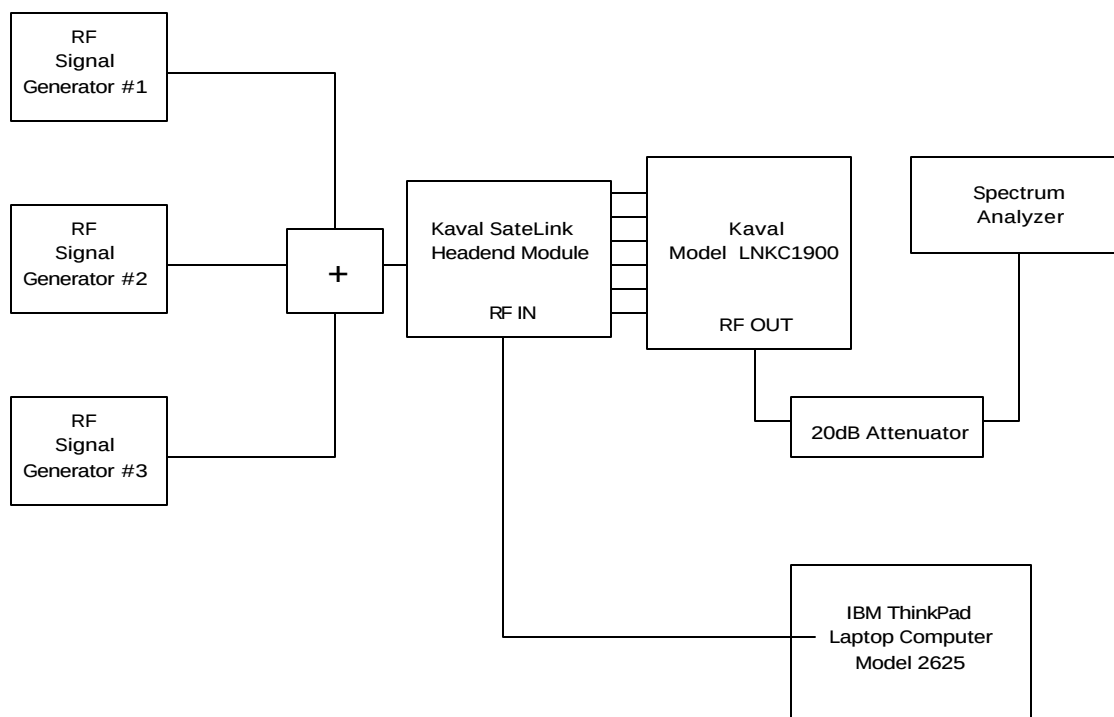
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6.6.5. Test Equipment List

Test Instruments	Manufacturer	Model No.	Serial No.	Frequency Range
Power Meter	Hewlett Packard	436A	1725A02249	10 kHz – 50 GHz, sensor dependent
Power Sensor	Hewlett Packard	8481A	2702A68983	10 MHz – 18 GHz
Attenuator(s)	Bird	...	...	DC – 22 GHz
Synthesized RF Signal Generator	Gigatronic	6061A	5130408	10kHz – 1050 MHz

6.6.6. Test Arrangement



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6.6.7. Test Data

Remark:

- Unmodulated output power is measured through out the power measurement since this power amplifier's rf output power characteristics are independent on modulation.
- Please refer to Page 12 of the Users' Manual for per-channel power ratings of number of from 2 to 30.

6.6.7.1. 1930 –1990 MHz (PCS)

Fundamental Frequency (MHz)	Modulation *	Number of Channels	Measured Peak Power (dBm)	Manufacturer's Recommended Power (dBm)
1930	Un-modulated	1	+20.5	+20.4
1930 & 1930.05	Un-modulated	2	+19.5	+20.4
1930 1930.05 & 1930.1	Un-modulated	3	+17.0	+19.5

Fundamental Frequency (MHz)	Modulation *	Number of Channels	Measured Peak Power (dBm)	Manufacturer's Recommended Power (dBm)
1960	Un-modulated	1	+20.5	+20.4
1960 & 1960.05	Un-modulated	2	+19.9	+20.4
1959.95, 1960 & 1960.05	Un-modulated	3	+17.1	+19.5

Fundamental Frequency (MHz)	Modulation *	Number of Channels	Measured Peak Power (dBm)	Manufacturer's Recommended Power (dBm)
1990	Un-modulated	1	+20.5	+20.4
1989.95 & 1990	Un-modulated	2	+19.7	+20.4
1989.9, 1989.95 & 1990	Un-modulated	3	+16.6	+19.5

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6.6.7.2. 869 – 894 (Base Cellular)

Fundamental Frequency (MHz)	Modulation *	Number of Channels	Measured Peak Power (dBm)	Manufacturer's Recommended Power (dBm)
869	Un-modulated	1	+24.8	+21.7
869 & 869.05	Un-modulated	2	+23.7	+21.7
869, 869.05 & 869.1	Un-modulated	3	+20.8	+20.7
869, 869.05, 869.1 & 869.15	Un-modulated	4	+20.3	+20.0

Fundamental Frequency (MHz)	Modulation *	Number of Channels	Measured Peak Power (dBm)	Manufacturer's Recommended Power (dBm)
881.475	Un-modulated	1	+24.8	+21.7
881.475 & 881.525	Un-modulated	2	+23.2	+21.7
881.45, 881.5 & 881.55	Un-modulated	3	+20.3	+20.7
811.4, 881.45, 881.5 & 881.55	Un-modulated	4	19.4	+20.0

Fundamental Frequency (MHz)	Modulation *	Number of Channels	Measured Peak Power (dBm)	Manufacturer's Power Rating (dBm)
894	Un-modulated	1	+24.8	+21.7
893.95 & 894	Un-modulated	2	+23.3	+21.7
893.9, 893.95 & 894	Un-modulated	3	+20.3	+20.7
893.85, 893.9, 893.95 & 894	Un-modulated	4	+19.0	+20.0

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6.6.7.3. 928 – 941 MHz (Paging)

Fundamental Frequency (MHz)	Modulation *	Number of Channels	Measured Peak Power (dBm)	Manufacturer's Recommended Power (dBm)
928	Un-modulated	1	+23.8	+21.7
928 & 928.05	Un-modulated	2	+22.3	+21.7
928, 928.05 & 928.10	Un-modulated	3	+19.8	+20.7
928, 928.05, 928.10 & 928.15	Un-modulated	4	+19.0	+20.0

Fundamental Frequency (MHz)	Modulation *	Number of Channels	Measured Peak Power (dBm)	Manufacturer's Recommended Power (dBm)
934.75	Un-modulated	1	+23.9	+21.7
934.75 & 934.525	Un-modulated	2	+22.3	+21.7
934.45, 934.5 & 934.55	Un-modulated	3	+19.8	+20.7
934.40, 934.45, 934.5 & 934.55	Un-modulated	4	+18.8	+20.0

Fundamental Frequency (MHz)	Modulation *	Number of Channels	Measured Peak Power (dBm)	Manufacturer's Recommended Power (dBm)
941.0	Un-modulated	1	+23.1	+21.7
941 & 940.95	Un-modulated	2	+22.7	+21.7
941, 940.95 & 940.9	Un-modulated	3	+19.9	+20.7
941, 940.95, 940.9 & 940.85	Un-modulated	4	+19.1	+20.0

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6.6.7.4. 851 – 866 MHz (Trunking)

Fundamental Frequency (MHz)	Modulation *	Number of Channels	Measured Peak Power (dBm)	Manufacturer's Recommended Power (dBm)
851	Un-modulated	1	+25.3	+21.7
851 & 851.05	Un-modulated	2	+23.9	+21.7
851, 851.05 & 851.10	Un-modulated	3	+21.7	+20.7
851, 851.05, 851.10 & 851.15	Un-modulated	4	+20.8	+20.0

Fundamental Frequency (MHz)	Modulation *	Number of Channels	Measured Peak Power (dBm)	Manufacturer's Recommended Power (dBm)
858.475	Un-modulated	1	+25.4	+21.7
858.475 & 858.525	Un-modulated	2	+24.0	+21.7
858.475, 858.525 & 858.55	Un-modulated	3	+22.1	+20.7
858.40, 858.475, 858.525 & 858.55	Un-modulated	4	+20.9	+20.0

Fundamental Frequency (MHz)	Modulation *	Number of Channels	Measured Peak Power (dBm)	Manufacturer's Power Rating (dBm)
866	Un-modulated	1	+24.8	+21.7
865.95 & 866	Un-modulated	2	+23.8	+21.7
865.9, 865.95 & 866	Un-modulated	3	+21.9	+20.7
865.85, 865.9, 865.95 & 866	Un-modulated	4	+20.6	+20.0

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6.7. EMISSION MASK @ FCC 2.1049, 22.217, 24.238 & 90.210

6.7.1. Limits

Emissions shall be attenuated below the mean output power of the transmitter as follows:

Frequency Range (MHz)	FCC Rules	FCC Applicable Mask
1930-1990 MHz (PCS)	Part 24	24.238 - Block A (1930-1945 MHz) - Block (1945-1950 MHz) - Block B (1950-1965 MHz) - Block E (1965-1970 MHz) - Block C (1975-1990)
869-894 MHz (Base Cellular)	Part 22	22.217(b) for Analog Voice 22.217(d) for Digital
929-930 MHz 935-940 MHz (Paging-928-941 MHz)	Part 90	90.210(b)&(g) - Mask B for Voice & G for Data 90.210(i)&(j) – Mask I for Voice and J for Data
851-866 MHz (Trunking)	Part 90	90.210(b) – Mask B for Voice 90.210(g) – Mask G for Data

6.7.2. Method of Measurements

Refer to FCC Rules 2.1049, 24.238, 22.217 and 90.210

6.7.3. Test Equipment List

Test Instruments	Manufacturer	Model No.	Serial No.	Frequency Range
Spectrum Analyzer/EMI Receiver	Hewlett Packard	HP 8593EM	3412A00103	9 kHz – 26.5 GHz
Attenuator(s)	Bird	..	...	DC – 22 GHz
Audio Oscillator	Hewlett Packard	HP 204C	0989A08798	DC to 1.2 MHz

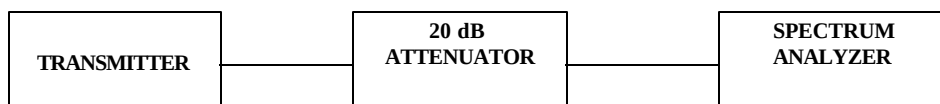
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6.7.4. Test Arrangement



6.7.5. Test Data

Note: Since the output signal tracks input signal exactly, only comparison tests were conducted for proof

Conform. Please refer to Plot # 1 through # 30 in Annex 1 for Details of measurements

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6.8. TRANSMITTER ANTENNA POWER SPURIOUS/HARMONIC CONDUCTED EMISSIONS @ FCC 2.1049, 22.217, 24.238 & 90.210

6.8.1. Limits

Emissions outside the permitted band shall be attenuated below the mean output power of the transmitter as follows:

Frequency Range (MHz)	FCC Rules	FCC Applicable Mask
1930-1990 MHz (PCS)	24.238 (a)	43+10*log(P) dBc, P is power in watts or -13 dBm,
869-894 MHz (Base Cellular)	22.217(e)	43+10*log(P) dBc, P is power in watts or -13 dBm
929-930 MHz 935-940 MHz (Paging-928-941 MHz)	90.210(b),(g),(I) 90.210(j)	43+10*log(P) dBc, P is power in watts or -13 dBm 50+10*log(P) dBc, P is power in watts or -20 dBm
851-866 MHz (Trunking)	90.210(g) &(g)	43+10*log(P) dBc, P is power in watts or -13 dBm

6.8.2. Method of Measurements

Refer to Exhibit 8 § 8.1 of this report for measurement details

6.8.3. Test Equipment List

Test Instruments	Manufacturer	Model No.	Serial No.	Frequency Range
Spectrum Analyzer/ EMI Receiver	Hewlett Packard	HP 8593EM	3412A00103	9 kHz – 26.5 GHz
Attenuator(s)	Bird	..	...	DC – 22 GHz
Audio Oscillator	Hewlett Packard	HP 204C	0989A08798	DC to 1.2 MHz
Highpass Filter, Microphase	Microphase	CR220HID	IITI11000AC	Cut-off Frequency at 600 MHz, 1.3 GHz or 4 GHz

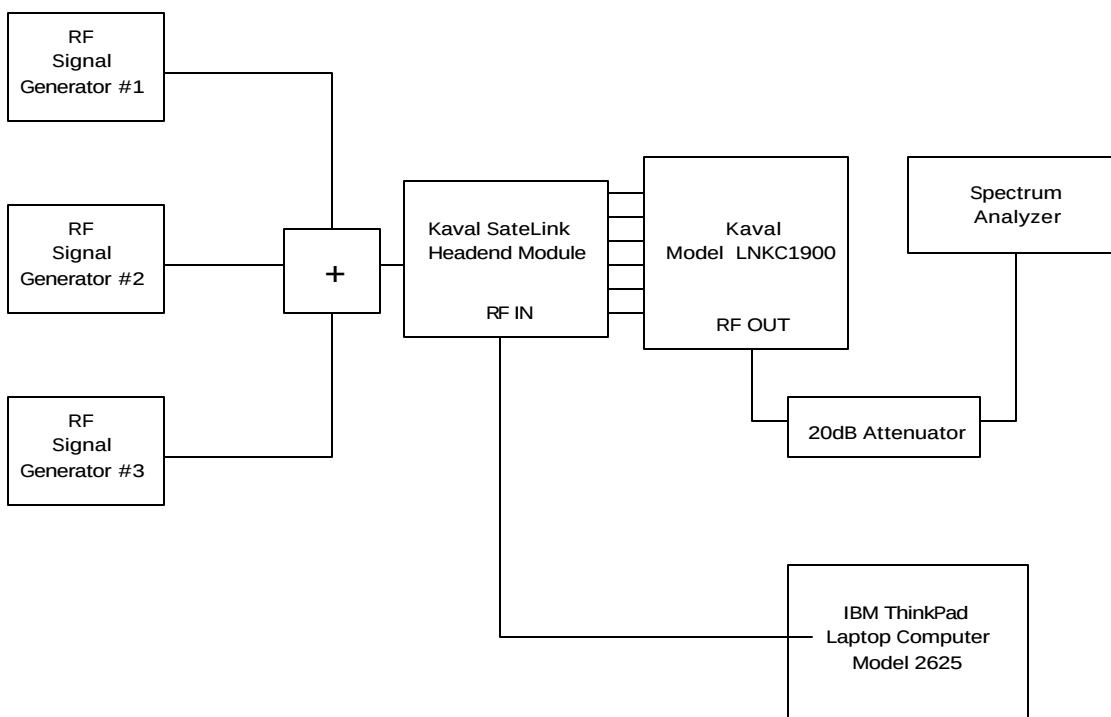
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6.8.4. Test Arrangement



6.8.5. Plots

Please refer to plots # 38 through # 126 in Annex 1 for details of measurements

6.8.6. Test Data

Remarks: Based on our prescans, the unmodulated signal operation was the worst case of rf interference; since the un-modulated rf output power is higher than the FM analog, FM data, CDMA, TDMA and GSM modulation, the unmodulated rf input and output signals will be operated during tests for the worst case of spurious/harmonic emissions.

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6.8.6.1. 1930 –1990 MHz (PCS)

6.8.6.1.1. Lowest Frequencies

Fundamental Frequency: 1930 MHz (1 Channel input) RF Output Power: +20.5 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
10 – 20,000	<<	-13 dBm	<<	Pass
The emissions were scanned from 10 MHz to 20 GHz and all emissions within 20 dB below the limits were recorded.				

Fundamental Frequency: 1930, 1930.05 MHz (2 Channel inputs) RF Output Power: +19.5 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
3860.00	-68.7	-13.0	-55.7	PASS
5790.00	-66.3	-13.0	-53.3	PASS
The emissions were scanned from 10 MHz to 20 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 1930, 1930.05, 1930.10 MHz (3 Channel inputs) RF Output Power: +17.0 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
3860.00	-68.3	-13.0	-55.3	PASS
5790.00	-66.1	-13.0	-53.1	PASS
The emissions were scanned from 10 MHz to 20 GHz and all emissions within 60 dB below the limits were recorded.				

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6.8.6.1.2. Middle Frequency

Fundamental Frequency: 1960 MHz (1 Channel input) RF Output Power: +20.5 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
10 – 20,0000	<<	-13 dBm	<<	Pass
The emissions were scanned from 10 MHz to 20 GHz and all emissions within 20 dB below the limits were recorded.				

Fundamental Frequency: 1960, 1960.05 MHz (2 Channel inputs) RF Output Power: +19.9 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
3920.00	-69.2	-13.0	-56.2	PASS
5880.00	-65.2	-13.0	-52.2	PASS
The emissions were scanned from 10 MHz to 20 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 1959.95, 1960, 1960.05 (3 Channel inputs) RF Output Power: +17.1 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
3920.00	-66.9	-13.0	-53.9	PASS
5880.00	-65.6	-13.0	-52.6	PASS
The emissions were scanned from 10 MHz to 20 GHz and all emissions within 60 dB below the limits were recorded.				

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6.8.6.1.3. Highest Frequency

Fundamental Frequency: 1990 MHz (1 Channel input) RF Output Power: +20.5 Watts / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
10 – 20,0000	<<	-13 dBm	<<	Pass
The emissions were scanned from 10 MHz to 20 GHz and all emissions within 20 dB below the limits were recorded.				

Fundamental Frequency: 1989.95 & 1990 MHz (2 Channel inputs) RF Output Power: +19.7 Watts / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
3980.00	-69.2	-13.0	-56.2	PASS
5970.00	-65.2	-13.0	-52.2	PASS
The emissions were scanned from 10 MHz to 20 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 1989.90, 1989.95 & 1990 MHz (2 Channel inputs) RF Output Power: +16.6 Watts / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
3980.00	-70.9	-13.0	-57.9	PASS
5970.00	-65.8	-13.0	-52.8	PASS
The emissions were scanned from 10 MHz to 20 GHz and all emissions within 60 dB below the limits were recorded.				

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6.8.6.2. 869 – 894 (Base Cellular)

6.8.6.2.1. Lowest Frequencies

Fundamental Frequency: 869 MHz (1 Channel input) RF Output Power: +24.8 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1738.00	-38.1	-13.0	-25.1	PASS
2607.00	-65.5	-13.0	-52.5	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 869 & 869.05 MHz (2 Channel inputs) RF Output Power: +23.7 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1738.00	-36.7	-13.0	-23.7	PASS
2607.00	-62.6	-13.0	-49.6	PASS
6083.00	-66.8	-13.0	-53.8	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 869, 869.05 & 869.1 MHz (3 Channel inputs) RF Output Power: +20.8 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1738.00	-37.9	-13.0	-24.9	PASS
2607.00	-63.6	-13.0	-50.6	PASS
6083.00	-63.1	-13.0	-50.1	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 869, 869.05, 869.10 & 869.15 MHz (4 Channel inputs) RF Output Power: +20.3 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1738.00	-37.3	-13.0	-24.3	PASS
2607.00	-62.8	-13.0	-49.8	PASS
6083.00	-66.3	-13.0	-53.3	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

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6.8.6.2.2. Middle Frequencies

Fundamental Frequency: 881.5 MHz (1 Channel input) RF Output Power: +24.8 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1763.00	-30.0	-13.0	-17.0	PASS
2644.50	-54.0	-13.0	-41.0	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 881.475 & 881.525 MHz (2 Channel inputs) RF Output Power: +23.2 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1763.00	-26.8	-13.0	-13.8	PASS
2644.50	-48.0	-13.0	-35.0	PASS
6170.50	-65.8	-13.0	-52.8	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 881.45, 881.50 & 881.55 MHz (3 Channel inputs) RF Output Power: +20.3 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1763.00	-28.8	-13.0	-15.8	PASS
2644.50	-49.5	-13.0	-36.5	PASS
6170.50	-64.5	-13.0	-51.5	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 881.4, 881.45, 881.5 & 881.55 MHz (4 Channel inputs) RF Output Power: +19.4 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1763.00	-28.1	-13.0	-15.1	PASS
2644.50	-48.6	-13.0	-35.6	PASS
6170.50	-65.5	-13.0	-52.5	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

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6.8.6.2.3. Highest Frequencies

Fundamental Frequency: 894 MHz (1 Channel input) RF Output Power: +24.8 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
10 – 10 GHz	<<	-13.0	<<	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 893.95 & 894 MHz (2 Channel inputs) RF Output Power: +23.3 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1788.00	-31.2	-13.0	-18.2	PASS
2682.00	-57.2	-13.0	-44.2	PASS
6258.00	-66.2	-13.0	-53.2	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 893.9, 893.95 & 894 MHz (3 Channel inputs) RF Output Power: +20.3 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1788.00	-33.3	-13.0	-20.3	PASS
2682.00	-58.1	-13.0	-45.1	PASS
6258.00	-66.0	-13.0	-53.0	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 893.85, 893.9, 893.95 & 894 MHz (4 Channel inputs) RF Output Power: +19.0 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1788.00	-31.3	-13.0	-18.3	PASS
2682.00	-57.2	-13.0	-44.2	PASS
6258.00	-65.3	-13.0	-52.3	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

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6.8.6.3. 928 – 941 MHz (Paging)

Remarks: The most stringent limit –20 dBm is used for compliance for the worst case operations in FCC permitted bands 929-930 MHz (Limit = -13 dBm) and 935-940 MHz (Limit = -20 dBm).

6.8.6.3.1. Lowest Frequencies

Fundamental Frequency: 928 MHz (1 Channel input) RF Output Power: +23.8 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1856.00	-32.7	-20.0	-12.7	PASS
2784.00	-73.5	-20.0	-53.5	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 928, 928.05 MHz (2 Channel inputs) RF Output Power: +22.3 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1856.00	-23.4	-20.0	-3.4	PASS
2784.00	-60.9	-20.0	-40.9	PASS
6496.00	-66.3	-20.0	-46.3	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 928, 928.05 & 928.1 MHz (3 Channel inputs) RF Output Power: +19.8 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1856.00	-26.6	-20.0	-6.6	PASS
2784.00	-65.5	-20.0	-45.5	PASS
6496.00	-65.7	-20.0	-45.7	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 928, 928.05, 928.10 & 928.15 MHz (4 Channel inputs) RF Output Power: +19.0 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1856.00	-33.5	-20.0	-13.5	PASS
2784.00	-75.7	-20.0	-55.7	PASS
6496.00	-63.9	-20.0	-43.9	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

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6.8.6.3.2. Middle Frequencies

Fundamental Frequency: 934.5 MHz (1 Channel input) RF Output Power: +23.9 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1869.00	-34.7	-20.0	-14.7	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 934.45 & 934.50 MHz (2 Channel inputs) RF Output Power: +22.3 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1869.00	-24.9	-20.0	-4.9	PASS
2803.50	-69.7	-20.0	-49.7	PASS
6541.50	-66.4	-20.0	-46.4	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 934.45, 934.50 & 934.55 MHz (3 Channel inputs) RF Output Power: +19.8 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1869.00	-24.3	-20.0	-4.3	PASS
2803.50	-68.5	-20.0	-48.5	PASS
6541.50	-66.1	-20.0	-46.1	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: MHz (4 Channel inputs) RF Output Power: +18.8 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1869.00	-33.1	-20.0	-13.1	PASS
6541.50	-65.5	-20.0	-45.5	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

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6.8.6.3.3. Highest Frequencies

Fundamental Frequency: 941 MHz (1 Channel input) RF Output Power: +23.1 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1882.00	-38.4	-20.0	-18.4	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 940.95 & 941 MHz (2 Channel inputs) RF Output Power: +19.9 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1882.00	-30.2	-20.0	-10.2	PASS
2823.00	-71.5	-20.0	-51.5	PASS
6587.00	-67.3	-20.0	-47.3	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 940.90, 940.95 & 941 MHz (3 Channel inputs) RF Output Power: +19.1 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1882.00	-30.9	-20.0	-10.9	PASS
2823.00	-71.5	-20.0	-51.5	PASS
6587.00	-66.5	-20.0	-46.5	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 940.85, 940.90, 940.95 & 941 MHz (4 Channel inputs) RF Output Power: +dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1882.00	-33.5	-20.0	-13.5	PASS
2823.00	-71.4	-20.0	-51.4	PASS
6587.00	-65.1	-20.0	-45.1	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

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6.8.6.4. 851 – 866 MHz (Trunking)

6.8.6.4.1. Lowest Frequencies

Fundamental Frequency: 851 MHz (1 Channel input) RF Output Power: +25.3 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1702.00	-29.5	-13.0	-16.5	PASS
2553.00	-58.7	-13.0	-45.7	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 851 & 851.05 MHz (2 Channel inputs) RF Output Power: + 23.9 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1702.00	-23.5	-13.0	-10.5	PASS
2553.00	-49.0	-13.0	-36.0	PASS
3404.00	-72.3	-13.0	-59.3	PASS
6808.00	-66.9	-13.0	-53.9	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 851, 851.05 & 851.10 MHz (3 Channel inputs) RF Output Power: +21.7 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1702.00	-27.3	-13.0	-14.3	PASS
2553.00	-51.1	-13.0	-38.1	PASS
3404.00	-73.3	-13.0	-60.3	PASS
6808.00	-65.5	-13.0	-52.5	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 851, 851.05, 851.10 & 851.15 MHz (4 Channel inputs) RF Output Power: +20.8 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1702.00	-24.9	-13.0	-11.9	PASS
2553.00	-49.8	-13.0	-36.8	PASS
3404.00	-72.7	-13.0	-59.7	PASS
6808.00	-65.2	-13.0	-52.2	PASS

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The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.

6.8.6.4.2. Middle Frequencies

Fundamental Frequency: 858.5 MHz (1 Channel input) RF Output Power: +25.4 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1717.00	-28.1	-13.0	-15.1	PASS
2575.50	-54.6	-13.0	-41.6	PASS
6009.50	-68.6	-13.0	-55.6	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 858.475 & 858.525 MHz (2 Channel inputs) RF Output Power: +24.0 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1717.00	-20.7	-13.0	-7.7	PASS
2575.50	-41.8	-13.0	-28.8	PASS
3434.00	-68.8	-13.0	-55.8	PASS
4292.50	-68.9	-13.0	-55.9	PASS
6009.50	-66.4	-13.0	-53.4	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 858.45, 858.50 & 858.55 MHz (3 Channel inputs) RF Output Power: +22.1 dBm / Channel Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1717.00	-24.4	-13.0	-11.4	PASS
2575.50	-43.1	-13.0	-30.1	PASS
3434.00	-72.6	-13.0	-59.6	PASS
4292.50	-69.5	-13.0	-56.5	PASS
6009.50	-66.3	-13.0	-53.3	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

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 May 21, 2001

- Assessed by ITI (UK) Competent Body, NVLAP (USA) Accreditation Body & ACA/AUSTEL (Australia), VCCI (Japan)
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Fundamental Frequency: 858.4, 858.45, 858.50 & 858.55 MHz (4 Channel inputs)				
RF Output Power: +20.9 dBm / Channel				
Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1717.00	-23.7	-13.0	-10.7	PASS
2575.50	-43.2	-13.0	-30.2	PASS
3434.00	-71.2	-13.0	-58.2	PASS
4292.50	-68.9	-13.0	-55.9	PASS
6009.50	-65.5	-13.0	-52.5	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

6.8.6.4.3. Highest Frequencies

Fundamental Frequency: 866 MHz (1 Channel input)				
RF Output Power: +24.8 dBm / Channel				
Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1732.00	-32.4	-13.0	-19.4	PASS
2598.00	-59.1	-13.0	-46.1	PASS
6062.00	-70.3	-13.0	-57.3	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 865.95 & 866 MHz (2 Channel inputs)				
RF Output Power: +23.8 dBm / Channel				
Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1732.00	-26.5	-13.0	-13.5	PASS
2598.00	-49.0	-13.0	-36.0	PASS
4330.00	-71.5	-13.0	-58.5	PASS
6062.00	-67.1	-13.0	-54.1	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

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Fundamental Frequency: 865.90, 865.95 & 866 MHz (3 Channel inputs)				
RF Output Power: +20.6 dBm / Channel				
Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1732.00	-30.4	-13.0	-17.4	PASS
2598.00	-52.8	-13.0	-39.8	PASS
4330.00	-75.6	-13.0	-62.6	PASS
6062.00	-65.2	-13.0	-52.2	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

Fundamental Frequency: 865.85, 865.90, 865.95 & 866 MHz (4 Channel inputs)				
RF Output Power: +21.9 dBm / Channel				
Modulation: unmodulated				
Frequency (MHz)	RF Level (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
1732.00	-29.8	-13.0	-16.8	PASS
2598.00	-52.4	-13.0	-39.4	PASS
4330.00	-74.9	-13.0	-61.9	PASS
6062.00	-66.0	-13.0	-53.0	PASS
The emissions were scanned from 10 MHz to 10 GHz and all emissions within 60 dB below the limits were recorded.				

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