

TEST REPORT

Applicant Name: Cobra Electronics Corporation
Address: 1701 Golf Road Suite 3-900 Rolling Meadows Illinois United States 60008
Report Number: 2601U12729E-RF-00
FCC ID: BBOPERF850

Test Standard (s)

FCC PART 90

Sample Description

Product Type: COBRA PERFORMA 850 RADIO DIGITAL BULK, US
COBRA PERFORMA 850 DIGITAL SINGLE PACK, US
COBRA PERFORMA 850 DIGITAL SIX PACK, US
COBRA PERFORMA 850 DIGITAL RADIO, US
Model No.: 0190019-2
Multiple Model(s) No.: 0190022-1, 0190022-2, 0190022-3
Trade Mark: Cobra
Date Received: 2026/06/09
Report Date: 2026/09/18

Test Result:	Pass▲
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▲ In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

Cheeb Huang

Cheeb Huang
RF Engineer

Approved By:

Jimmy Xiao

Jimmy Xiao
EMC Manager

Note: The information marked * is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Customer model name, addresses, names, trademarks etc. are included.

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	2601U12729E-RF-00	Original Report	2026/09/18

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product	COBRA PERFORMA 850 RADIO DIGITAL BULK, US COBRA PERFORMA 850 DIGITAL SINGLE PACK, US COBRA PERFORMA 850 DIGITAL SIX PACK, US COBRA PERFORMA 850 DIGITAL RADIO, US
Tested Model	0190019-2
Multiple Model(s)	0190022-1, 0190022-2, 0190022-3
Frequency Range	400-480MHz
Rated Transmit Power	4Watts(High), 1Watt(Low)
Channel separation	12.5kHz
Modulation Technique	FM, 4FSK
Antenna Specification [#]	2.15dBi (provided by the applicant)
Voltage Range	DC 5V from USB Port or DC 7.4V from battery
Sample serial number	3NTO-2 for RF Conducted Test 3NTO-1 for Radiated Emissions Test (Assigned by BACL, Shenzhen)
Sample/EUT Status	Good condition
Adapter Information	Adapter 1 Model: KA120C-1209000Q Input: AC 100-240V, 50/60Hz, 2.0A Max Output: DC 12.0V, 9.0A, 108W Adapter 2 Model: KA12C-0502000US Input: AC 100-240V, 50/60Hz, 0.35A Max Output: DC 5V, 2000mA
Note: The Multiple models are electrically identical with the test model except for product name, model name and quantity of the radio/Six Pack/Single Pack. Please refer to the declaration letter [#] for more detail, which was provided by manufacturer.	

Objective

This test report is in accordance with Part 2, and Part 90 of the Federal Communication Commissions rules.

Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of federal Regulations Title 47 Part 2, Sub-part J as well as the following individual parts:

Part 90 – Private Land Mobile Radio Service

Applicable Standards: TIA 603-E, ANSI C63.26-2015.

All emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Each test item follows test standards and with no deviation.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		52.29kHz(k=1.96, 95% level of confidence)
RF Frequency		81.235Hz(k=1.96, 95% level of confidence)
RF output power, conducted		1.57dB(k=1.96, 95% level of confidence)
Conducted Spurious Emission		2.48dB(k=1.96, 95% level of confidence)
Audio Frequency Response		0.1dB
Low Pass Filter Response		1.2dB
Modulation Limiting		1%
Radiated Emissions	0.009MHz~30MHz	3.66dB(k=2, 95% level of confidence)
	30MHz~1000MHz (Horizontal)	5.10dB(k=2, 95% level of confidence)
	30MHz~1000MHz (Vertical)	6.28dB(k=2, 95% level of confidence)
	1GHz - 6GHz	6.18dB(k=2, 95% level of confidence)
	6GHz - 18GHz	6.62dB(k=2, 95% level of confidence)
	18GHz - 40GHz	6.66dB(k=2, 95% level of confidence)
Temperature		$\pm 0.4^{\circ}\text{C}$
Humidity		$\pm 2\%$
Supply voltages		DC $\pm 0.4\%$; AC $\pm 1\%$

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 5F(B-West) , 6F, 7F, the 3rd Phase of Wan Li Industrial Building D, Shihua Rd, FuTian Free Trade Zone, Shenzhen, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, test firm registration No.: 715558, the FCC Designation No. : CN5045.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in a test mode which has been done in the factory.

Test channel information

Test Mode	Test Frequency (MHz)
FM, 12.5kHz	400.0125
	440.0125
	479.9875
4FSK, 12.5kHz	400.0125
	440.0125
	479.9875

Equipment Modifications

No modification was made to the EUT.

Support Equipment List and Details

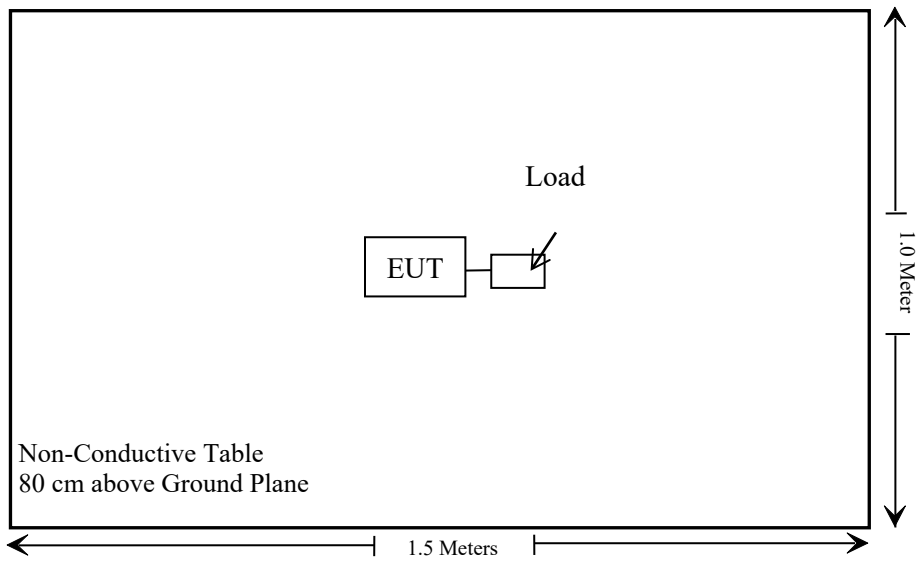
Manufacturer	Description	Model	Serial Number
Unknown	Load	Unknown	Unknown

External I/O Cable

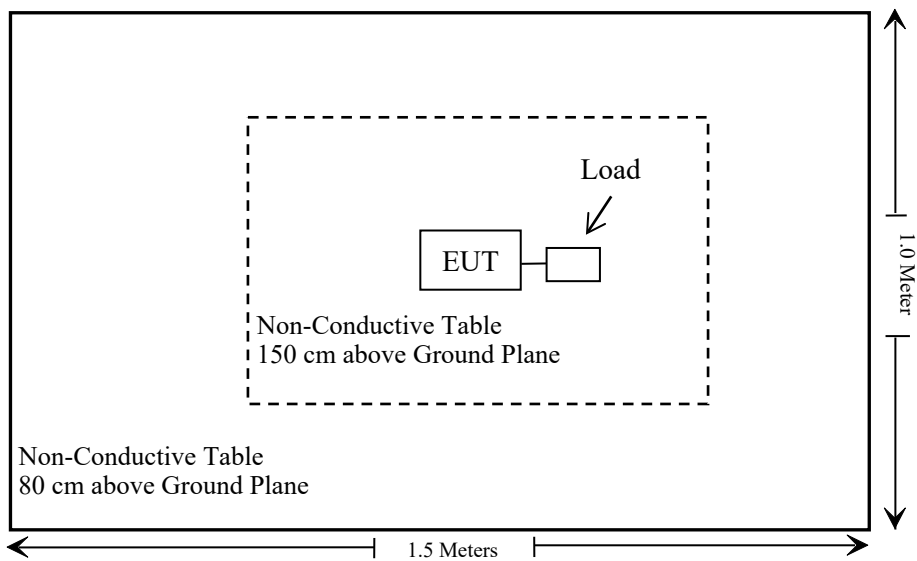
Cable Description	Length (m)	From Port	To
RF Cable	0.5	EUT	Load

Block Diagram of Test Setup

Below 1GHz



Above 1GHz



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Results
§2.1093	RF Exposure	Compliant
§2.1046; §90.205	RF Output Power	Compliant
§2.1047; §90.207	Modulation Characteristic	Compliant
§2.1049; §90.209; §90.210	Occupied Bandwidth & Emission Mask	Compliant
§2.1051;§90.210	Spurious Emission at Antenna Terminal	Compliant
§2.1053;§90.210	Spurious Radiated Emissions	Compliant
§2.1055;§90.213	Frequency Stability	Compliant
§90.214	Transient Frequency Behavior	Compliant

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
Rohde & Schwarz	EMI Test Receiver	ESR3	102455	2025/09/01	2026/08/31
Sonoma instrument	Pre-amplifier	310 N	186238	2025/09/08	2026/09/07
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2026/06/26	2029/06/25
Unknown	Chamber A Cable	Cable A1	Cable A1	2025/09/08	2026/09/07
Unknown	Chamber A Cable	Cable A2	Cable A2	2025/09/08	2026/09/07
TDK	Chamber	Chamber A	2#	2023/07/12	2026/07/11
Agilent	Signal Generator	N5183A	MY50140588	2025/09/18	2026/09/17
COM-POWER	Dipole Antenna	3121C	9209-860	NCR	NCR
Unknown	U Band Pass Filter	NHP-600+	15542	2026/06/24	2027/06/23
Rohde & Schwarz	Spectrum Analyzer	FSV40	101605	2025/09/01	2026/08/31
A.H.System	Preamplifier	PAM-0118P	489	2025/09/08	2026/09/07
Schwarzbeck	Horn Antenna	BBHA9120D (1201)	1143	2026/07/15	2027/07/14
The Electro-Mechanics Co.	Horn Antenna	3115	9107-3694	2024/06/06	2027/06/05
Unknown	Chamber B Cable	Cable B1	Cable B1	2025/09/08	2026/09/07
Unknown	Chamber B Cable	Cable B2	Cable B2	2025/09/08	2026/09/07
Unknown	Chamber B Cable	Cable B3	Cable B3	2025/09/08	2026/09/07
JD	Filter Switch Unit	DT7220FSU	DS79906	2026/06/23	2027/06/22
JD	Multiplex Switch Test Control Set	DT7220SCU	DS79903	2026/06/23	2027/06/22
TDK	Chamber	Chamber B	1#	2026/07/06	2029/07/05
RF Conducted Test					
Rohde & Schwarz	Spectrum Analyzer	FSU26	200982	2025/08/12	2026/08/11
Rohde & Schwarz	Spectrum Analyzer	FSV40	101942	2026/08/26	2027/08/25
BACL	Temp&Humi Test Chamber	BTH-150-40	30145	2025/09/11	2026/09/10
HP	RF Communication test set	8920B	US36141849	2025/09/18	2026/09/17
instek	DC Power Supply	GPS-3030DD	EM832096	NCR	NCR
Fluke	Digital Multimeter	287	19000011	2026/03/16	2027/03/15
Rohde & Schwarz	Signal Analyzer	FSIQ26	837405/023	2025/09/22	2026/09/21
Unknown	RF Cable	Cable RF1	Cable RF1	2025/09/17	2026/09/16
Unknown	RF Cable	Cable RF2	Cable RF2	2025/09/17	2026/09/16
Unknown	30dB Attenuator	53-30-43	PG633	2026/06/24	2027/06/23
HP	Power Splitter	11667A	1610A	2026/06/24	2027/06/23

* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC 1.1307 & §2.1093 - RF EXPOSURE

Applicable Standard

FCC§1.1310 and §2.1093.

Test Result

Compliance, please refer to the SAR report: 2601U12729E-SAA.

FCC §2.1046 & §90.205 - RF OUTPUT POWER

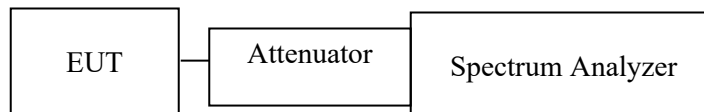
Applicable Standard

FCC §2.1046 and §90.205

Test Procedure

According to ANSI C63.26-2015 section 5.2.3.3

Conducted RF Output Power:



Note: The path loss from EUT to Spectrum Analyzer has included in the result.

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

Spectrum Analyzer Setting:

R B/W	Video B/W
100 kHz	300 kHz

Test Data

Environmental Conditions

Temperature:	26 °C
Relative Humidity:	53 %
ATM Pressure:	100.2 kPa

The testing was performed by Barry Feng from 2026-08-01 to 2026-08-05.

Test Mode: Transmitting

Test Result: Pass. Please refer to following table and plots.

Rated Output Power: 4Watts

Modulation Mode	Channel Separation	f_c	Reading (dBm)	Limit (dBm)
		MHz		
FM	12.5kHz	400.0125	36.24	36.81
		440.0125	36.11	36.81
		479.9875	36.24	36.81
4FSK	12.5kHz	400.0125	36.22	36.81
		440.0125	36.04	36.81
		479.9875	36.15	36.81

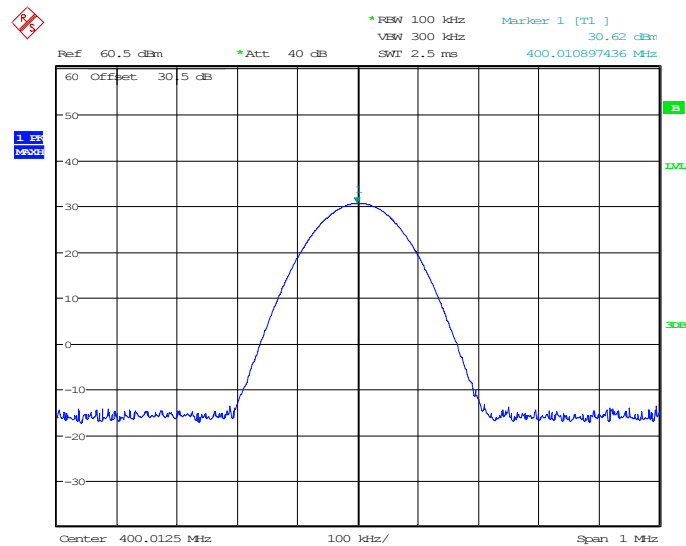
Rated Output Power: 1Watt

Modulation Mode	Channel Separation	f_c	Reading (dBm)	Limit (dBm)
		MHz		
FM	12.5kHz	400.0125	30.50	30.79
		440.0125	30.49	30.79
		479.9875	30.06	30.79
4FSK	12.5kHz	400.0125	30.62	30.79
		440.0125	30.50	30.79
		479.9875	30.09	30.79

Note: The output power shall not exceed by more than 20 percent the manufacturer's rated output power for the particular transmitter specifically listed on the authorization

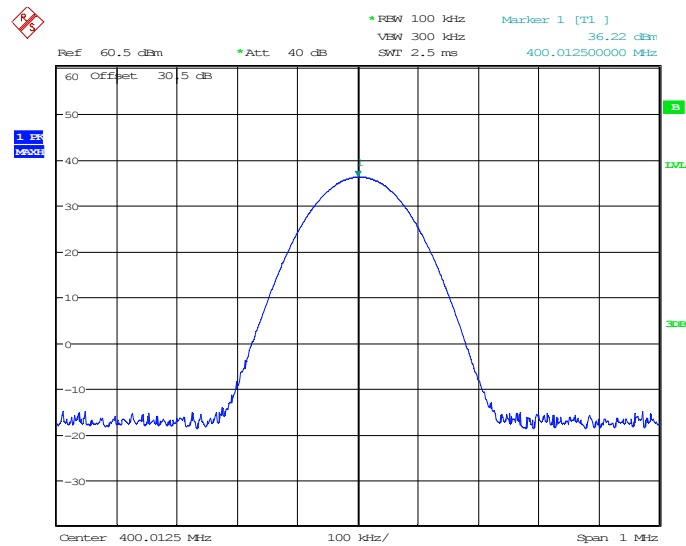
4FSK, 12.5kHz

Frequency 400.0125MHz, Low Power

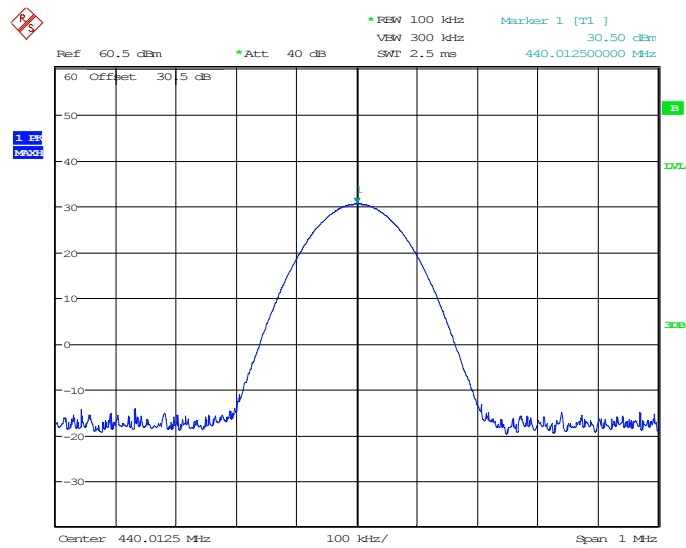


ProjectNo.:2601U12729E-RF Tester:Barry Feng
Date: 5.AUG.2026 11:55:57

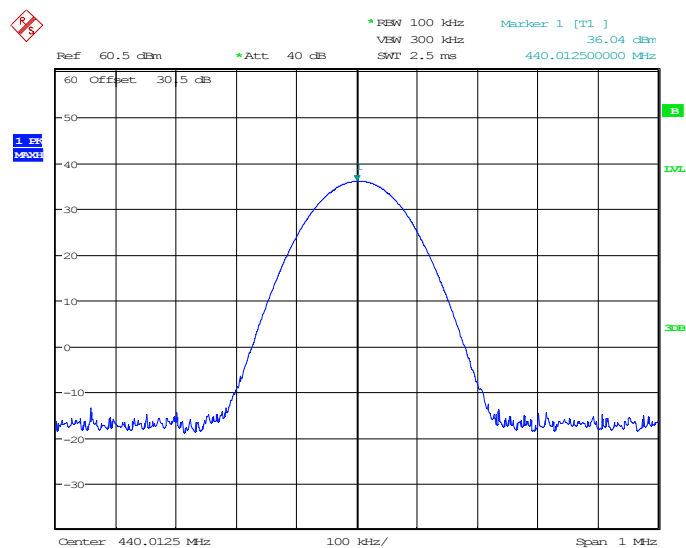
Frequency 400.0125 MHz, High Power



ProjectNo.:2601U12729E-RF Tester:Barry Feng
Date: 1.AUG.2026 14:41:22

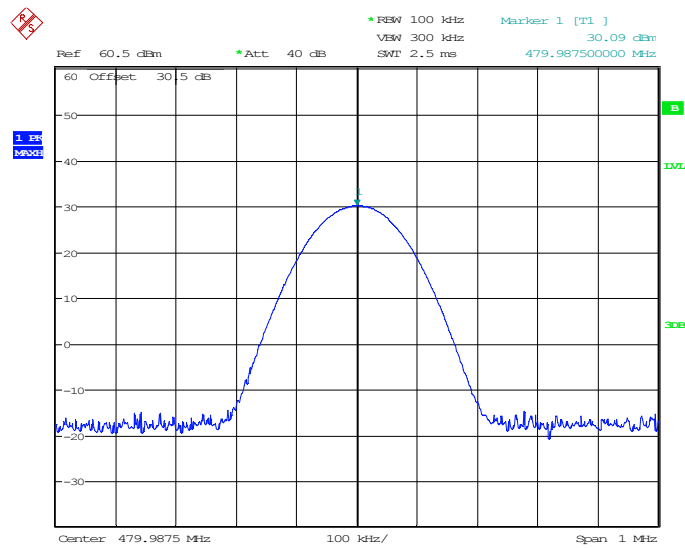
Frequency 440.0125MHz, Low Power

ProjectNo.:2601U12729E-RF Tester:Barry Feng
Date: 5.AUG.2026 11:58:09

Frequency 440.0125MHz, High Power

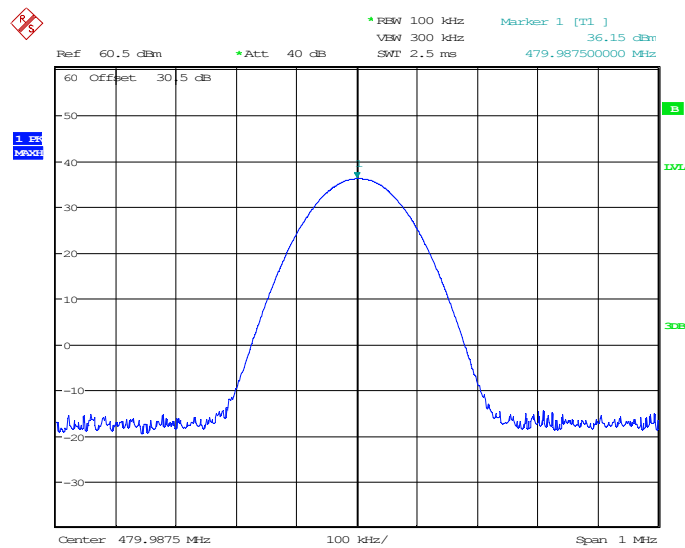
ProjectNo.:2601U12729E-RF Tester:Barry Feng
Date: 1.AUG.2026 14:47:23

Frequency 479.9875 MHz, Low Power



ProjectNo.:2601U12729E-RF Tester:Barry Feng
Date: 5.AUG.2026 11:58:52

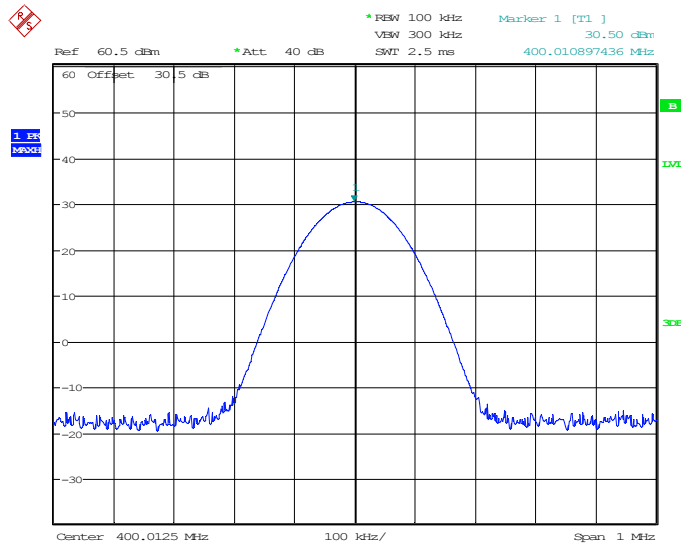
Frequency 479.9875 MHz, High Power



ProjectNo.:2601U12729E-RF Tester:Barry Feng
Date: 1.AUG.2026 14:49:16

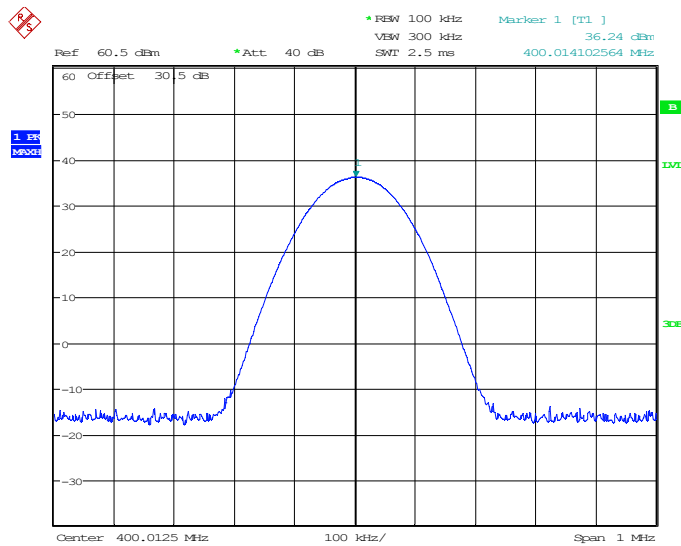
FM, 12.5kHz

Frequency 400.0125MHz, Low Power



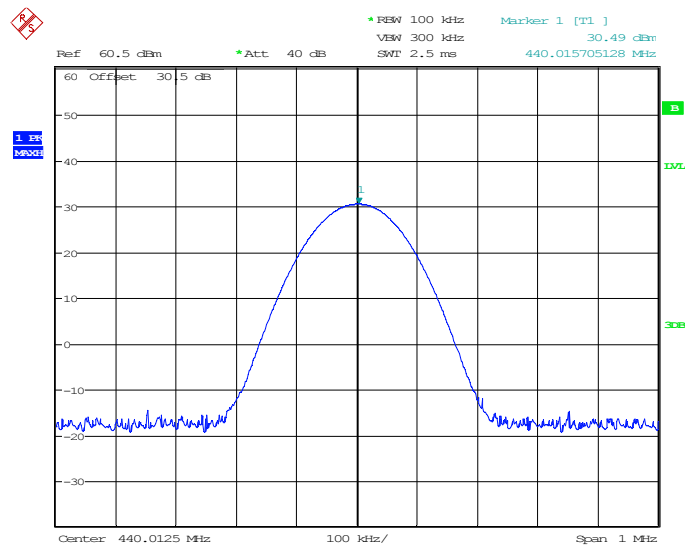
ProjectNo.:2601U12729E-RF Tester:Barry Feng
Date: 5.AUG.2026 11:56:41

Frequency 400.0125 MHz, High Power



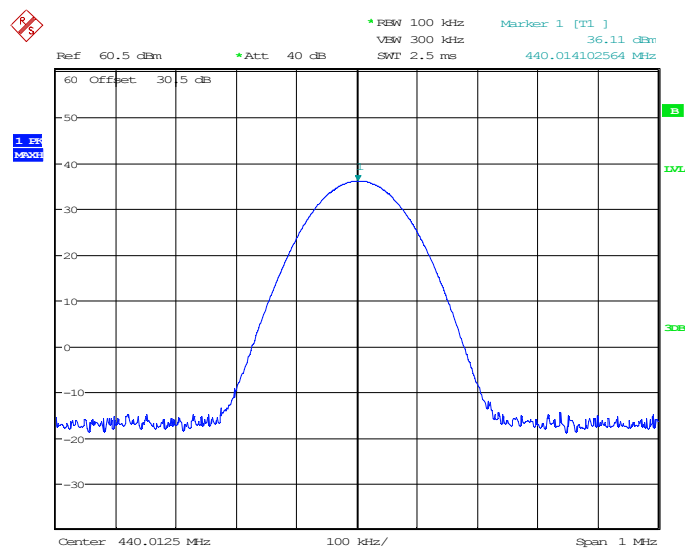
ProjectNo.:2601U12729E-RF Tester:Barry Feng
Date: 1.AUG.2026 14:42:36

Frequency 440.0125MHz, Low Power



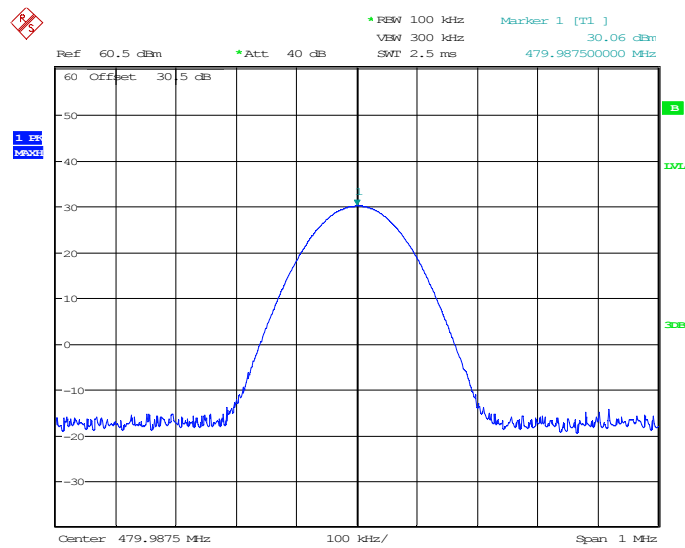
ProjectNo.:2601U12729E-RF Tester:Barry Feng
 Date: 5.AUG.2026 11:57:29

Frequency 440.0125MHz, High Power



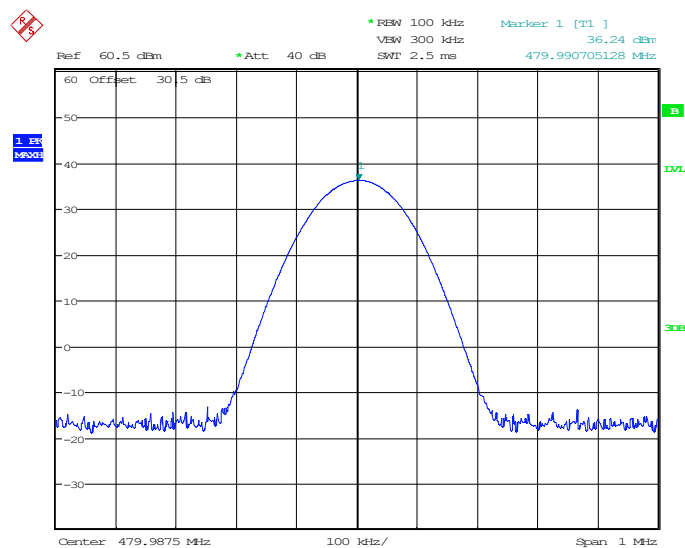
ProjectNo.:2601U12729E-RF Tester:Barry Feng
 Date: 1.AUG.2026 14:45:52

Frequency 479.9875 MHz, Low Power



ProjectNo.:2601U12729E-RF Tester:Barry Feng
 Date: 5.AUG.2026 11:59:23

Frequency 479.9875 MHz, High Power



ProjectNo.:2601U12729E-RF Tester:Barry Feng
 Date: 1.AUG.2026 14:50:03

FCC §2.1047 & §90.207 - MODULATION CHARACTERISTIC

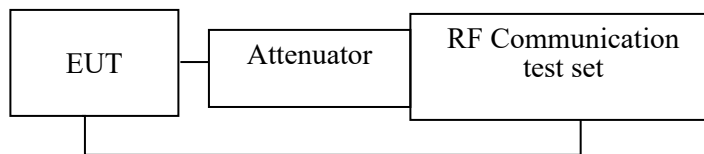
Applicable Standard

FCC§2.1047 and §90.207:

- (a) Equipment which utilizes voice modulated communication shall show the frequency response of the audio modulating circuit over a range of 100 to 5000 Hz. for equipment which is required to have a low pass filter, the frequency response of the filter, or all of the circuitry installed between the modulation limited and the modulated stage shall be supplied.
- (b) Equipment which employs modulation limiting, a curve showing the percentage of modulation versus the modulation input voltage shall be supplied.

Test Block Diagram

Modulation limiting & Audio frequency response



Test Procedure

ANSI C63.26-2015 5.3.2 Modulation limiting test methodology

Modulation limiting is the ability of a transmitter circuit to limit the transmitter from producing deviations in excess of a rated system deviation.

- a) Connect the equipment as illustrated in Figure 1.
- b) Adjust the transmitter per the manufacturer's procedure for full rated system deviation.
- c) Set the test receiver to measure peak positive deviation. Set the audio bandwidth for ≤ 0.25 Hz to $\geq 15\,000$ Hz. Turn the de-emphasis function off.
- d) Apply a 1000 Hz modulating signal to the transmitter from the audio frequency generator, and
adjust the level to obtain 60% of full rated system deviation. This is the 0 dB reference level.
- e) Increase the level from the audio generator by 20 dB in 5 dB increments recording the deviation as measured from the test receiver in each step. Verify that the audio level used to make the OBW measurement is included in the sweep.
- f) Repeat for step e) at 300 Hz, 2500 Hz and 3000 Hz at a minimum using the 0 dB reference level obtained in step d).
- g) Set the test receiver to measure peak negative deviation and repeat step d) through step f).
- h) The values recorded in step f) and step g) are the modulation limiting.
- i) Plot the data set as a percentage of deviation relative to the 0 dB reference point versus input voltage.

ANSI C63.26-2015 5.3.3.2 Audio frequency response test methodology—Constant Input

- a) Connect the equipment as illustrated in Figure 3.
- b) Set the test receiver to measure peak positive deviation. Set the audio bandwidth for ≤ 50 Hz to $\geq 15\,000$ Hz. Turn the de-emphasis function off.
- c) Adjust the transmitter per the manufacturer's procedure for full rated system deviation.
- d) Apply a 1000 Hz tone and adjust the audio frequency generator to produce 20% of the rated system deviation.
- e) Set the test receiver to measure rms deviation and record the deviation reading as DEVREF.
- f) Set the audio frequency generator to the desired test frequency between 300 Hz and 3000 Hz.
- g) Record the test receiver deviation reading as DEVFREQ.
- h) Calculate the audio frequency response at the present frequency as follows in Equation (4):

$$\text{audio frequency response} = 20 \log_{10} \left(\frac{\text{DEV}_{\text{FREQ}}}{\text{DEV}_{\text{REF}}} \right) \quad (4)$$

- i) Repeat step f) through step h) for all the desired test frequencies.

Test Data**Environmental Conditions**

Temperature:	26 °C
Relative Humidity:	53 %
ATM Pressure:	100.2 kPa

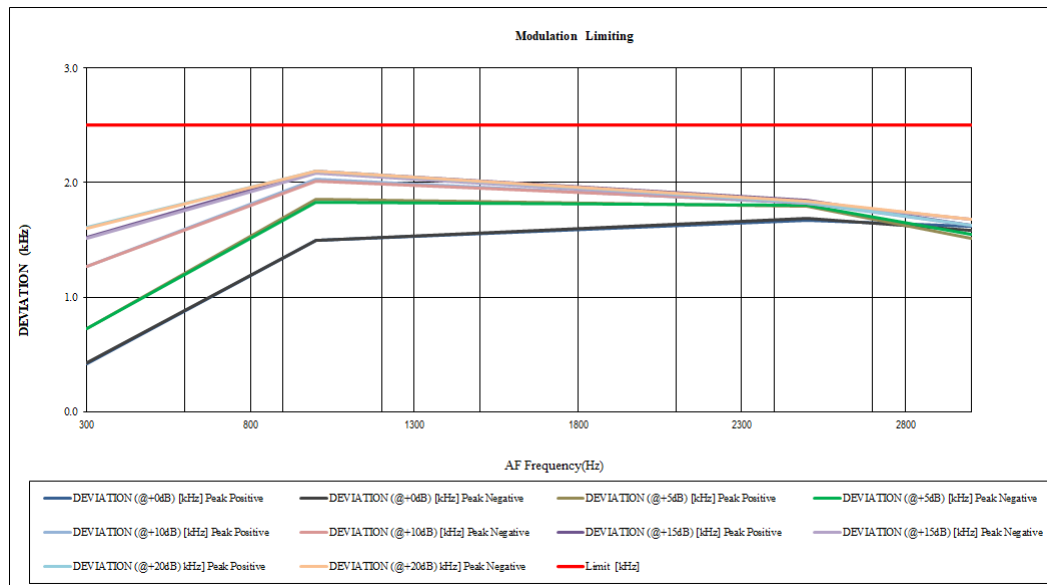
The testing was performed by Barry Feng on 2026-08-05.

Test Mode: Transmitting

Test Result: Pass. Please refer to the following tables and plots.

Analog Modulation:

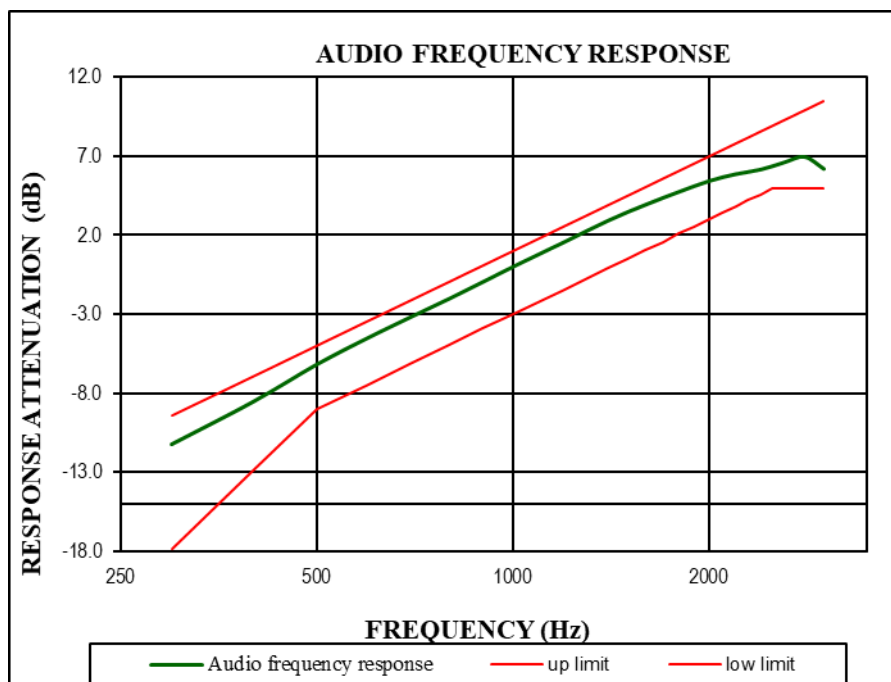
Frequency: 440.0125 MHz, Channel Spacing:12.5kHz											
Audio Frequency (Hz)	DEVIATION (@+0dB) [kHz]		DEVIATION (@+5dB) [kHz]		DEVIATION (@+10dB) [kHz]		DEVIATION (@+15dB) [kHz]		DEVIATION (@+20dB) kHz]		Limit [kHz]
	Peak Positive	Peak Negative	Peak Positive	Peak Negative	Peak Positive	Peak Negative	Peak Positive	Peak Negative	Peak Positive	Peak Negative	
300	0.422	0.425	0.727	0.724	1.267	1.266	1.521	1.518	1.611	1.602	2.500
1000	1.500	1.498	1.853	1.831	2.034	2.015	2.103	2.083	2.104	2.098	2.500
2500	1.674	1.688	1.798	1.801	1.818	1.832	1.843	1.822	1.825	1.841	2.500
3000	1.621	1.584	1.515	1.553	1.625	1.677	1.625	1.680	1.626	1.684	2.500



Audio Frequency Response

Carrier Frequency: 440.0125MHz, Separation: 12.5 kHz

Audio Frequency (Hz)	Response Attenuation (dB)
300	-11.24
400	-8.54
500	-6.20
600	-4.50
700	-3.15
800	-2.00
900	-0.95
1000	0.00
1200	1.58
1400	2.93
1600	3.95
1800	4.77
2000	5.45
2200	5.89
2400	6.18
2600	6.61
2800	6.98
3000	6.21



FCC §2.1049 & §90.209 & §90.210 - OCCUPIED BANDWIDTH & EMISSION MASK

Applicable Standard

FCC §2.1049 and §90.210

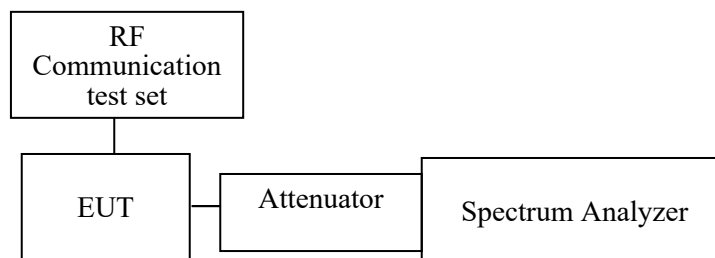
Emission Mask D - 12.5 kHz channel bandwidth equipment. For transmitters designed to operate with a 12.5 kHz channel bandwidth, any emission must be attenuated below the power (P) of the highest emission contained within the authorized bandwidth as follows:

- 1) For any frequency removed from the center of the authorized bandwidth f_0 to 5.625 kHz removed from f_0 , 0dB.
- 2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 5.626 kHz but no more than 12.5 kHz, at least 7.27 ($f_d - 2.88$ kHz) dB.
- 3) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 12.5 kHz at least: At least $50 + 10 \log (P)$ dB or 70 dB, whichever is the lesser attenuation.

Test Procedure

According to ANSI C63.26-2015 section 5.4

Analog mode:



Note: The path loss from EUT to Spectrum Analyzer has included in the result.

- a) Connect the equipment as illustrated.
- b) Adjust the spectrum analyzer for the following settings:
 - 1) Resolution Bandwidth: 100Hz for 12.5Hz Channel spacing, 200Hz for 25Hz Channel spacing .
 - 2) Video Bandwidth at least 10 times the resolution bandwidth.
 - 3) Sweep Speed slow enough to maintain measurement calibration.
 - 4) Detector Mode = Positive Peak.
 - 5) Span that will allow proper viewing of the test bandwidth.
- c) Set the center frequency of the spectrum analyzer to the assigned transmitter frequency. Key the transmitter, and set the level of the unmodulated carrier to a full scale reference line. This is the 0 dB reference for the measurement.
- d) Modulate the transmitter with a 2500 Hz sine wave at an input level 16 dB greater than that necessary to produce 50% of rated system deviation. The input level shall be established at the frequency of maximum

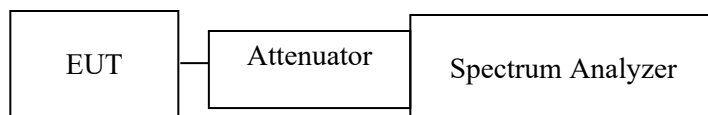
response of the audio modulating circuit. Transmitters employing digital modulation techniques that bypass the limiter and the audio low-pass filter shall be modulated as specified by the manufacturer.

e) Path loss for the measurement included.

f) Measured the 26dB bandwidth, and use the spectrum analyzer Occupied bandwidth function to measurement the 99% Occupied bandwidth, save the plot

g) Record the resulting spectrum analyzer presentation of the emission level with an on-line recording device or in a photograph. It is recommended that the emission limit be drawn on the plotted graph or photograph. The spectrum analyzer presentation is the sideband spectrum

Digital mode:



a) Program and set radio to operate in desire test frequency and digital mode with modulation.

b) Connect the equipment as illustrated.

c) Adjust the spectrum analyzer for the following settings:

- 1) Resolution Bandwidth: 100Hz.
- 2) Video Bandwidth at least 10 times the resolution bandwidth.
- 3) Sweep Speed slow enough to maintain measurement calibration.
- 4) Detector Mode = Positive Peak.
- 5) Span that will allow proper viewing of the test bandwidth.

d) Set the center frequency of the spectrum analyzer to the assigned transmitter frequency. Key the transmitter, and set the level of the unmodulated carrier to a full scale reference line. This is the 0 dB reference for the measurement.

e) Path loss for the measurement included in plot

f) Measured the 26dB bandwidth, and use the spectrum analyzer Occupied bandwidth function to measurement the 99% Occupied bandwidth, save the plot

g) Record the resulting spectrum analyzer presentation of the emission level with an on-line recording device or in a photograph. It is recommended that the emission limit be drawn on the plotted graph or photograph. The spectrum analyzer presentation is the sideband spectrum

Test Data

Environmental Conditions

Temperature:	26 °C
Relative Humidity:	53 %
ATM Pressure:	100.2 kPa

The testing was performed by Barry Feng and Jackson Zhu from 2026-08-01 to 2026-09-14.

Test mode: Transmitting

Test Result: Pass. Please refer to the following tables and plots.

Modulation Mode	Channel Separation	f_c	High Power Level	Low Power Level
			99% Occupied Bandwidth	99% Occupied Bandwidth
		MHz	kHz	kHz
FM	12.5kHz	400.0125	5.250	5.250
		440.0125	5.250	5.250
		479.9875	5.250	5.250
4FSK	12.5kHz	400.0125	6.550	6.100
		440.0125	6.350	6.500
		479.9875	6.200	6.300

Note 1: Emission designator is based on calculation instead of measurement.

Emission Designator Per CFR 47 §2.201& §2.202&, $B_n = 2M + 2D$

For FM Mode (Channel Spacing: 12.5 kHz)

Emission Designator 11K0F3E. In this case, the maximum modulating frequency is 3.0 kHz with a 2.5 kHz deviation. $BW = 2(M+D) = 2*(3.0 \text{ kHz} + 2.5 \text{ kHz}) = 11 \text{ kHz} \rightarrow 11K0$

F3E portion of the designator represents an FM voice transmission Therefore, the entire designator for 12.5 kHz channel spacing FM mode is 11K0F3E.

For Digital Mode (Channel Spacing:12.5kHz)

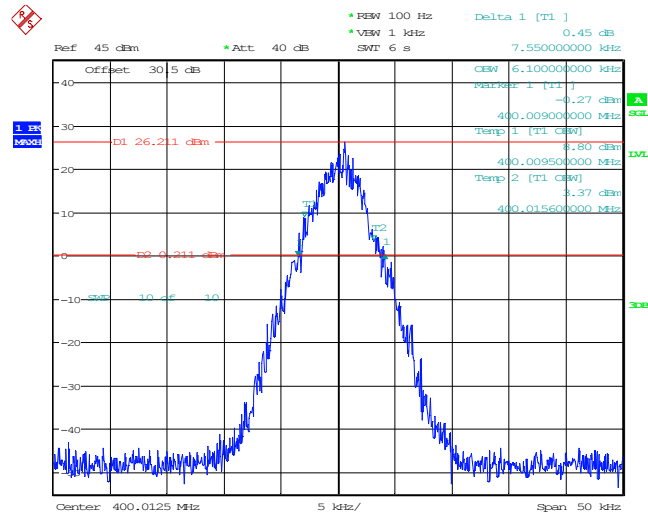
Emission Designator 7K60F1D and 7K60F1E

The 99% energy rule(title 47 CFR 2.1049) was used for digital mode. It basically states that 99% of the modulation energy falls within x kHz, in this case, 7.6kHz. The emission mask was obtained from 47CFR 90.210(d).

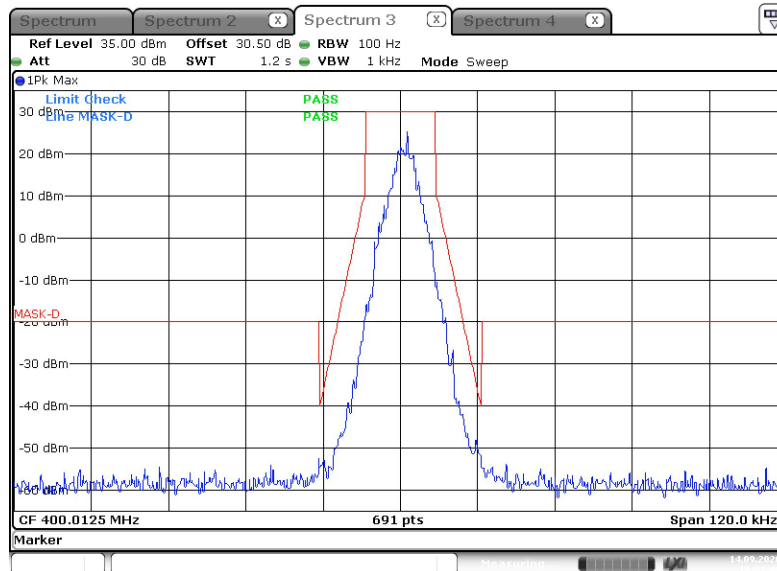
F1D and F1E portion of the designator indicates digital information.

Therefore, the entire designator for the 12.5kHz channel spacing digital mode is 7K60F1D and 7K60F1E.

Note 2: The high power level is 4Watts, the low power level is 1Watt.

4FSK, 12.5kHz**Frequency 400.0125 MHz: 99% Occupied Bandwidth, Low Power**

ProjectNo.:2601U12729E-RF Tester:Barry Feng
Date: 1.AUG.2026 16:06:02

Frequency 400.0125 MHz: Emission Mask D, Low Power

ProjectNo.:2601U12729E-RF Tester:Jackson Zhu
Date: 14.SEP.2026 18:01:49

1.50 MHz

Ref: 45 dBm *Att: 40 dB SWT: 6 s Delta 1 [T1] 1.03 dB 8.250000000 kHz

Offset: 30.5 dB

CEW 6.550000000 kHz
 MHz/Hz 1 [T1]
 400.008400000 MHz
 Temp 1 [T1 CW]
 400.009400000 MHz
 Temp 2 [T1 CW]
 400.015950000 MHz

D1 30.08 dBm
 D2 4.08 dBm
 SWR 1.0 dB

Center: 400.0125 MHz 5 kHz/ Span 50 kHz

ProjectNo.:2601U12729E-RF Tester:Barry Feng
Date: 1.AUG.2026 16:16:59

Spectrum 1 Spectrum 2 Spectrum 3 Spectrum 4

Ref Level 40.00 dBm Offset 30.50 dB RBW 100 Hz
 Att 30 dB SWT 1.2 s VBW 1 kHz Mode Sweep

1PK Max

Limit Check
 Line MASK-D

PASS
 PASS

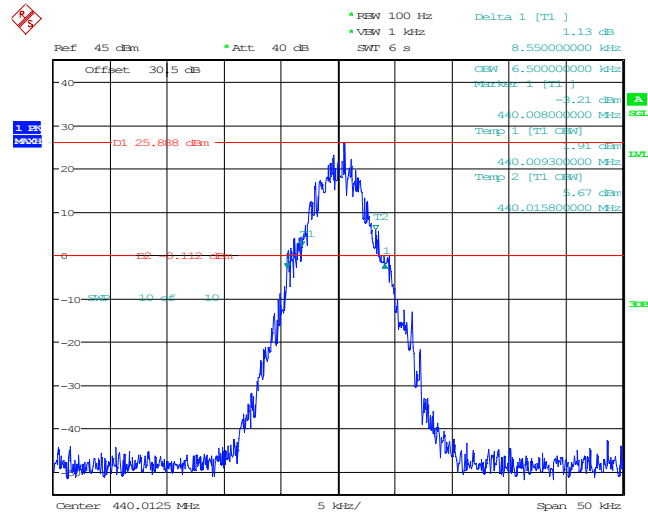
MASK-D

CF 400.0125 MHz 691 pts Span 120.0 kHz

Marker

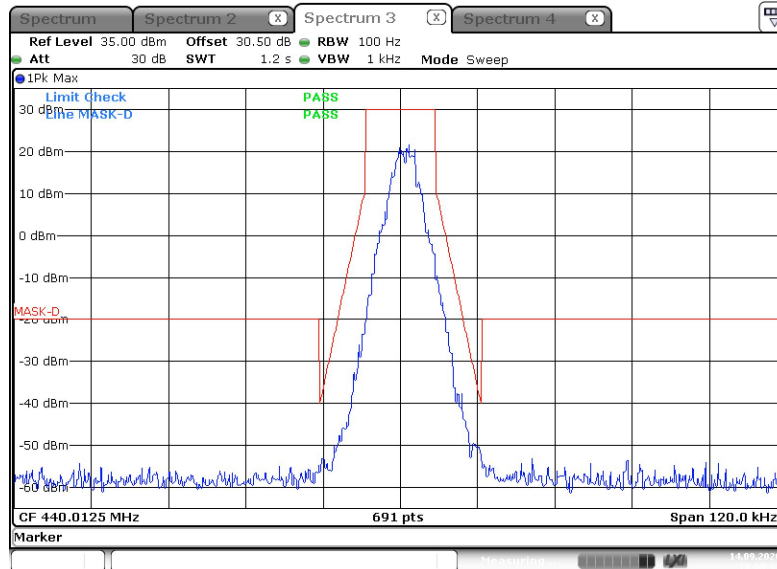
ProjectNo.:2601U12729E-RF Tester:Jackson Zhu
Date: 14.SEP.2026 17:39:59

Frequency 440.0125 MHz: 99% Occupied Bandwidth, Low Power



ProjectNo.:2601U12729E-RF Tester:Barry Feng
Date: 1.AUG.2026 16:09:09

Frequency 440.0125 MHz: Emission Mask D, Low Power



ProjectNo.:2601U12729E-RF Tester:Jackson Zhu
Date: 14.SEP.2026 18:00:33

Ref: 45 dBm *Att: 40 dB BW: 1 kHz SWT: 6 s Delta 1 [T1] 0.09 dB 8.350000000 kHz

Offset: 30.5 dB

CEW: 6.350000000 kHz
 MixHz: 1 [T1]
 440.008450000 MHz
 Temp: 1 [T1] CW
 440.009500000 MHz
 Temp: 2 [T1] CW
 440.015850000 MHz

D1 20.906 dBm

D2 3.896 dBm

T1

Center: 440.0125 MHz 5 kHz/ Span: 50 kHz

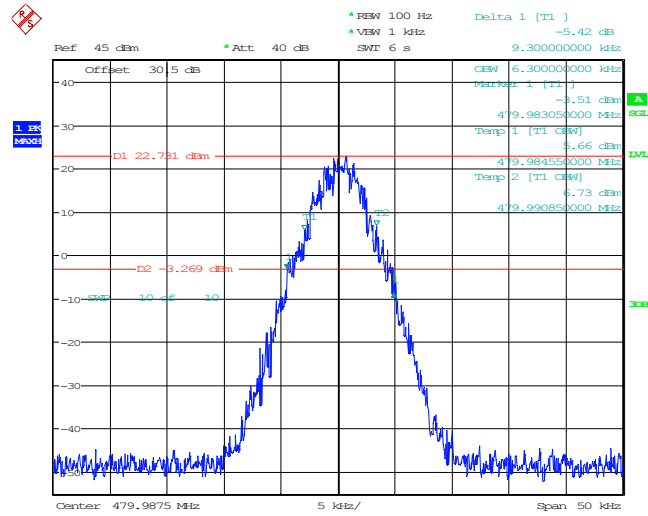
ProjectNo.:2601U12729E-RF
Date: 1.AUG.2026 16:21:05

The screenshot displays a spectrum analyzer interface with the following details:

- Top Panel:** Three tabs are visible: "Spectrum 1", "Spectrum 2", and "Spectrum 3". The "Spectrum 2" tab is active.
- Parameters:**
 - Ref Level: 40.00 dBm
 - Offset: 30.50 dB
 - RBW: 100 Hz
 - Att: 30 dB
 - SWT: 1.2 s
 - VBW: 1 kHz
 - Mode: Sweep
- Main Display:**
 - Y-axis:** Power level in dBm, ranging from -50 dBm to 30 dBm.
 - X-axis:** Frequency in MHz, centered at 440.0125 MHz with a span of 120.0 kHz.
 - Signal:** A blue line representing the spectrum, showing a prominent peak at the center frequency.
 - Limit Check:** A red trapezoidal mask is overlaid on the signal peak. The word "PASS" is displayed in green above the peak, indicating the signal complies with the mask.
 - Reference Line:** A horizontal red line is drawn at approximately -25 dBm, labeled "MASK-D" on the left.
 - Peak Marker:** A blue dot on the left side of the display is labeled "1PK Max".
 - Statistics:** At the bottom, it shows "CF 440.0125 MHz", "691 pts" (points), and "Span 120.0 kHz".
- Bottom Panel:** A "Marker" section is visible at the bottom left, and a status bar at the bottom right shows the time "14:09:20".

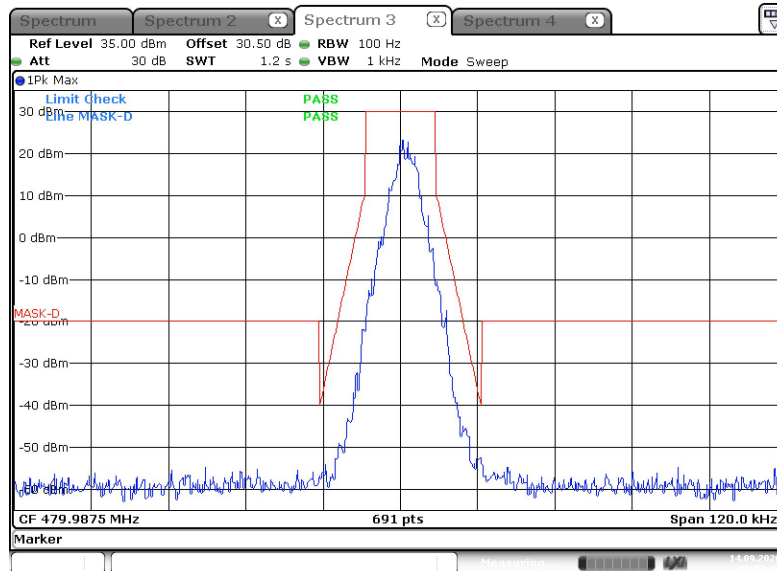
ProjectNo.:2601U12729E-RF
Date: 14.SEP.2026 17:43:12

Frequency 479.9875 MHz: 99% Occupied Bandwidth, Low Power



ProjectNo.:2601U12729E-RF Tester:Barry Feng
Date: 1.AUG.2026 16:11:44

Frequency 479.9875 MHz: Emission Mask D, Low Power



ProjectNo.:2601U12729E-RF Tester:Jackson Zhu
Date: 14.SEP.2026 18:02:43

Ref: 45 dBm *Att: 40 dB SWT: 6 s 8.500000000 kHz

Offset: 30.5 dB

CEW: 6.200000000 kHz
 MaxHz: 1 [T1]
 4.52 dBm
 479.983500000 MHz
 Temp: 1 [T1] CW
 11.02 dBm
 479.984600000 MHz
 Temp: 2 [T1] CW
 11.39 dBm
 479.990800000 MHz

D1 30.605 dBm
 D2 4.605 dBm
 SWT 10 dB 10

Center: 479.9875 MHz 5 kHz/ Span 50 kHz

Spectrum 1 Spectrum 2 Spectrum 3 Spectrum 4

Ref Level 40.00 dBm Offset 30.50 dB RBW 100 Hz
 Att 30 dB SWT 1.2 s VBW 1 kHz Mode Sweep

1PK Max

Limit Check
 Line MASK-D

30 dBm
 20 dBm
 10 dBm
 0 dBm
 -10 dBm
 -20 dBm
 -30 dBm
 -40 dBm
 -50 dBm

MASK-D

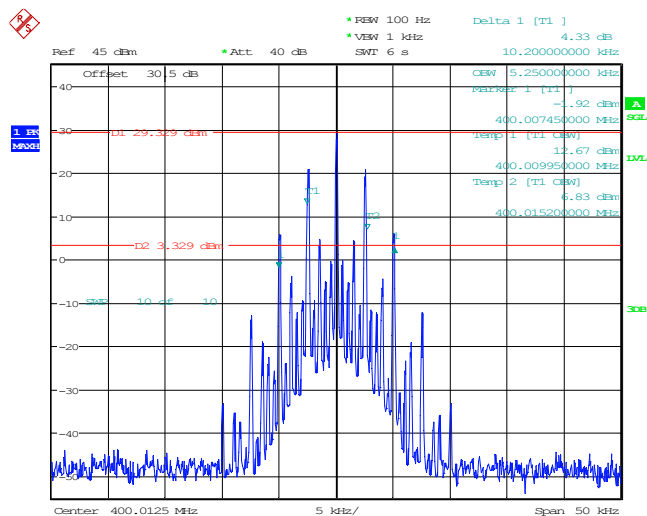
CF 479.9875 MHz 691 pts Span 120.0 kHz

Marker

Version 3.0

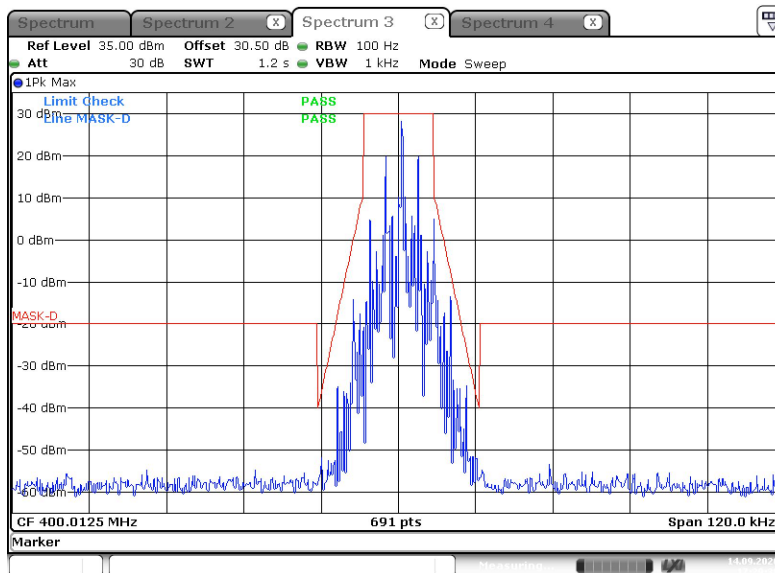
FM, 12.5kHz

Frequency 400.0125 MHz: 99% Occupied Bandwidth, Low Power

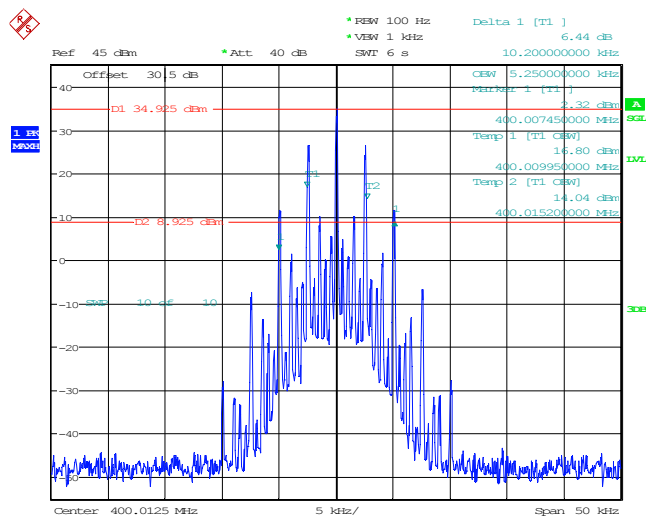


ProjectNo.:2601U12729E-RF Tester:Barry Feng
Date: 1.AUG.2026 15:56:36

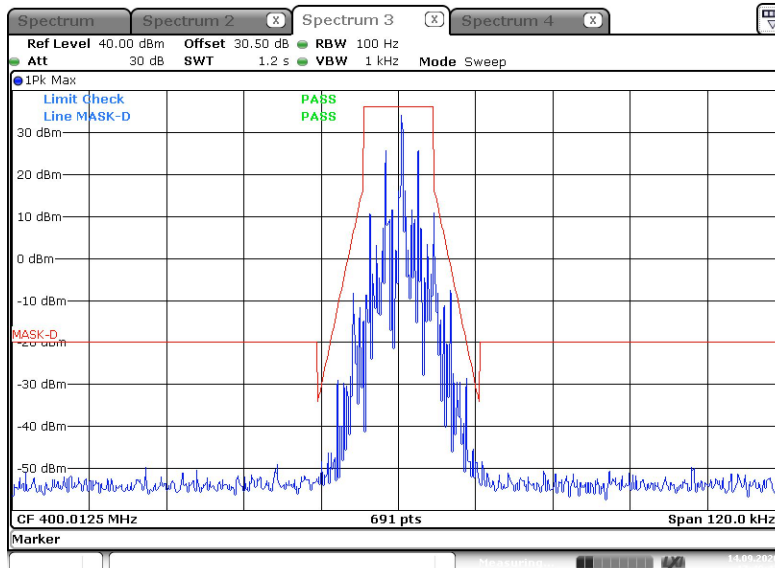
Frequency 400.0125 MHz: Emission Mask D, Low Power



ProjectNo.:2601U12729E-RF Tester:Jackson Zhu
Date: 14.SEP.2026 17:29:39

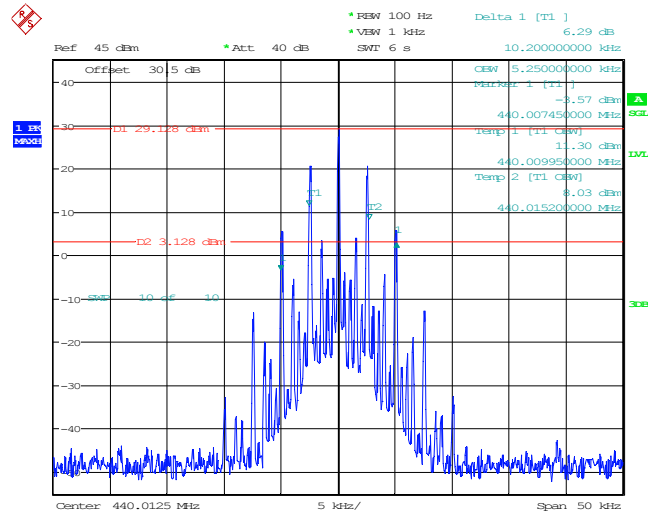
Frequency 400.0125 MHz: 99% Occupied Bandwidth, High Power

ProjectNo.:2601U12729E-RF Tester:Barry Peng
Date: 1.AUG.2026 15:43:47

Frequency 400.0125 MHz: Emission Mask D, High Power

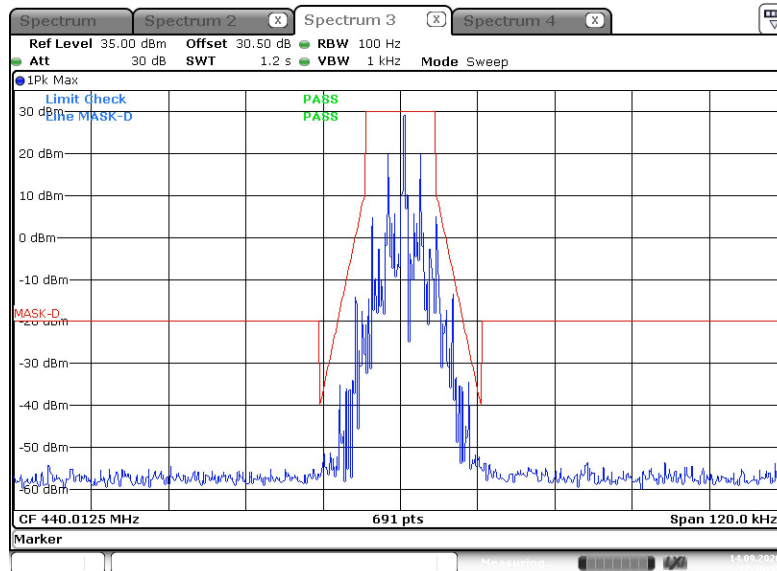
ProjectNo.:2601U12729E-RF Tester:Jackson Zhu
Date: 14.SEP.2026 17:40:46

Frequency 440.0125 MHz: 99% Occupied Bandwidth, Low Power



ProjectNo.:2601U12729E-RF Tester:Barry Feng
Date: 1.AUG.2026 15:59:07

Frequency 440.0125 MHz: Emission Mask D, Low Power



ProjectNo.:2601U12729E-RF Tester:Jackson Zhu
Date: 14.SEP.2026 17:30:35

Ref 45 cfm *Att 40 dB BW 100 kHz View 1 kHz SWT 6 s Delta 1 [Ti] -1.99 dB 10.250000000 kHz

Offset 30 5 dB

D1 34.841 cfm

D2 8.841 cfm

CEW 5.250000000 kHz

Mhz/Hz 1 [Ti]

Temp 1 [Ti CW]

Temp 2 [Ti CW]

Center 440.0125 Mhz 5 kHz/ Span 50 kHz

ProjectNo.:2601U12729E-RF
Date: 1.AUG.2026 15:46:50

Spectrum 2 Spectrum 3 Spectrum 4

Ref Level 40.00 dBm Offset 30.50 dB RBW 100 Hz
Att 30 dB SWT 1.2 s VBW 1 kHz Mode Sweep

1Pk Max

Limit Check
Line MASK-D

30 dBm
20 dBm
10 dBm
0 dBm
-10 dBm
-30 dBm
-40 dBm
-50 dBm

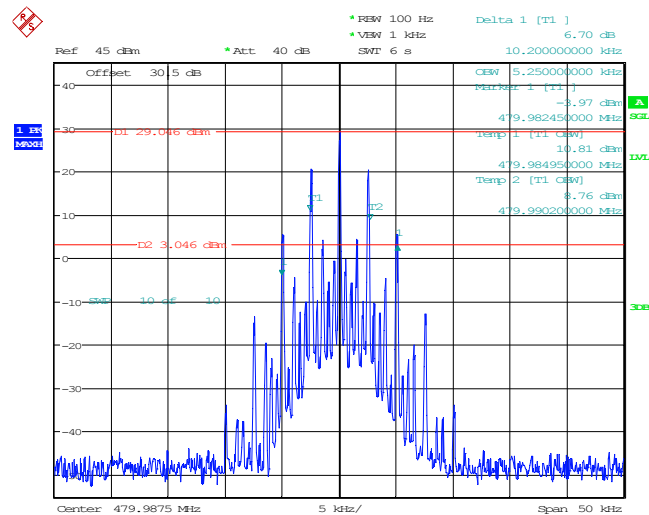
MASK-D

CF 440.0125 MHz 691 pts Span 120.0 kHz

Marker

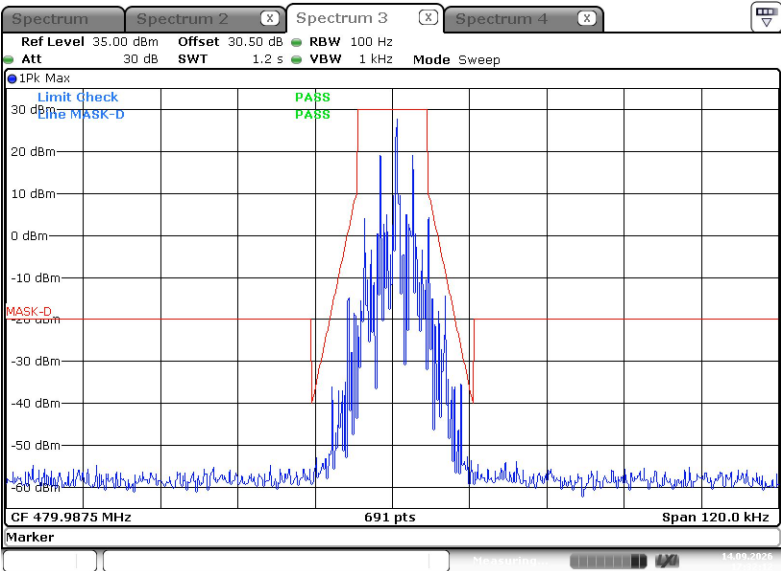
ProjectNo.:2601U12729E-RF
Date: 14.SEP.2026 17:44:17

Frequency 479.9875 MHz: 99% Occupied Bandwidth, Low Power

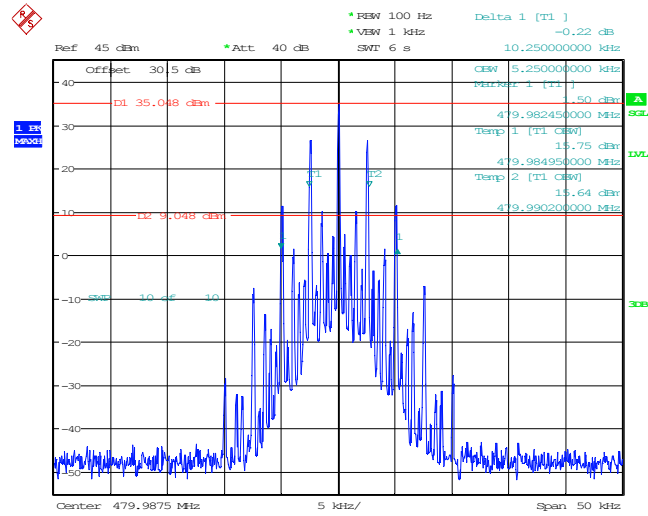


ProjectNo.:2601U12729E-RF Tester:Barry Feng
Date: 1.AUG.2026 16:01:48

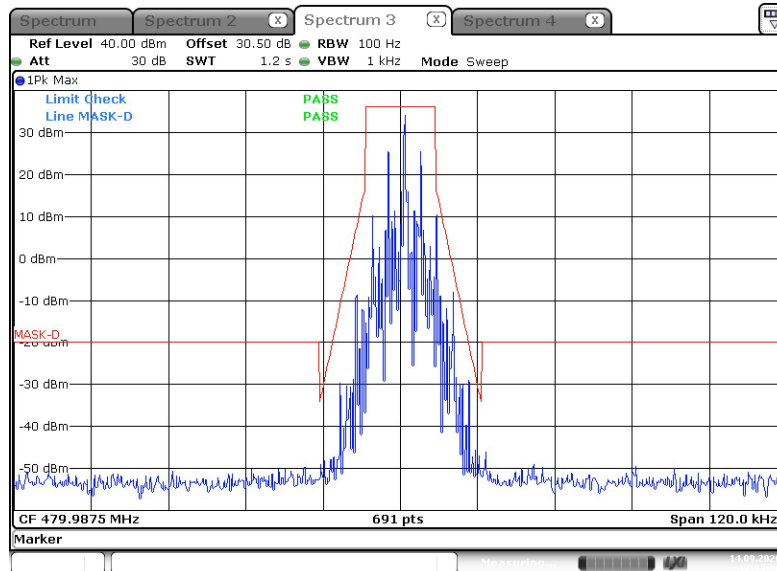
Frequency 479.9875 MHz: Emission Mask D, Low Power



ProjectNo.:2601U12729E-RF Tester:Jackson Zhu
Date: 14.SEP.2026 17:32:13

Frequency 479.9875 MHz: 99% Occupied Bandwidth, High Power

ProjectNo.: 2601U12729E-RF Tester: Barry Feng
Date: 1.AUG.2026 15:49:49

Frequency 479.9875 MHz: Emission Mask D, High Power

ProjectNo.: 2601U12729E-RF Tester: Jackson Zhu
Date: 14.SEP.2026 17:48:08

FCC §2.1051 & §90.210 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

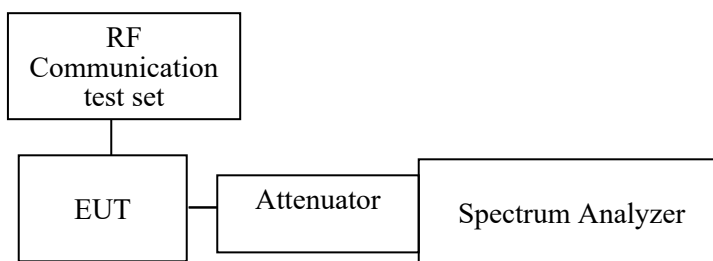
Applicable Standard

Emission Mask D—12.5 kHz channel bandwidth equipment. For transmitters designed to operate with a 12.5 kHz channel bandwidth, any emission must be attenuated below the power (P) of the highest emission contained within the authorized bandwidth as follows:

- 1) For any frequency removed from the center of the authorized bandwidth f_0 to 5.625 kHz removed from f_0 , 0 dB.
- 2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 5.626 kHz but no more than 12.5 kHz, at least 7.27 ($f_d - 2.88$ kHz) dB.
- 3) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 12.5 kHz: At least $50 + 10 \log (P)$ dB or 70 dB, whichever is the lesser attenuation.
- (4) The reference level for showing compliance with the emission mask shall be established using a resolution bandwidth sufficiently wide (usually two or three times the channel bandwidth) to capture the true peak emission of the equipment under test. In order to show compliance with the emission mask up to and including 50 kHz removed from the edge of the authorized bandwidth, adjust the resolution bandwidth to 100 Hz with the measuring instrument in a peak hold mode. A sufficient number of sweeps must be measured to insure that the emission profile is developed. If video filtering is used, its bandwidth must not be less than the instrument resolution bandwidth. For emissions beyond 50 kHz from the edge of the authorized bandwidth, see paragraph (o) of this section. If it can be shown that use of the above instrumentation settings do not accurately represent the true interference potential of the equipment under test, an alternate procedure may be used provided prior Commission approval is obtained.

Test Procedure

According to ANSI C63.26-2015 section 5.7



Note: The path loss from EUT to Spectrum Analyzer has included in the result.

The RF output of the EUT was connected to a spectrum analyzer through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 100 kHz for below 1GHz, and 1MHz for above 1GHz. Sufficient scans were taken to show any out of band emissions up to 10th harmonic.

Test Data**Environmental Conditions**

Temperature:	26 °C
Relative Humidity:	53 %
ATM Pressure:	100.2 kPa

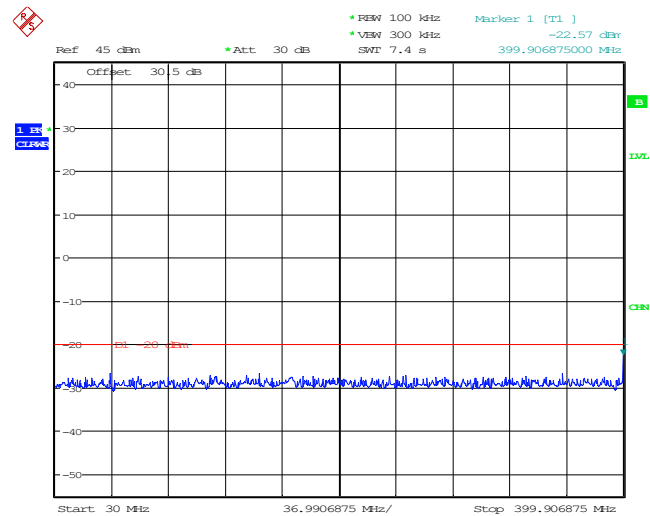
The testing was performed by Vern Shen and Ethan Bu from 2026-08-03 to 2026-09-18.

Test Mode: Transmitting, Worst case for high power level.

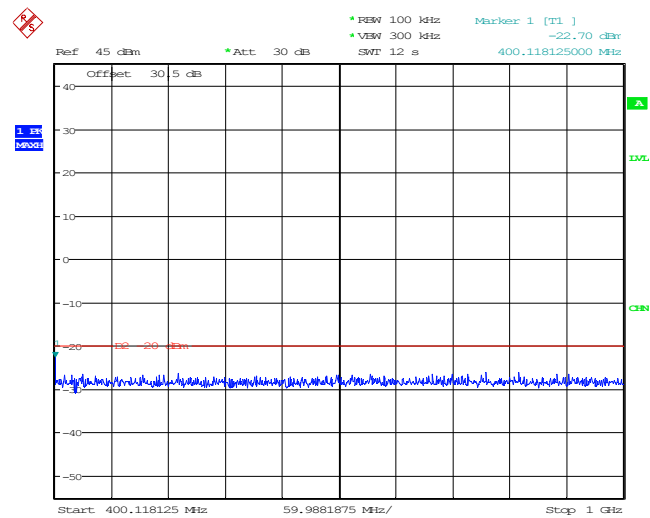
Test Result: Pass. Please refer to the following plots.

Digital signal, 12.5kHz

30MHz – 1 GHz, Low Channel

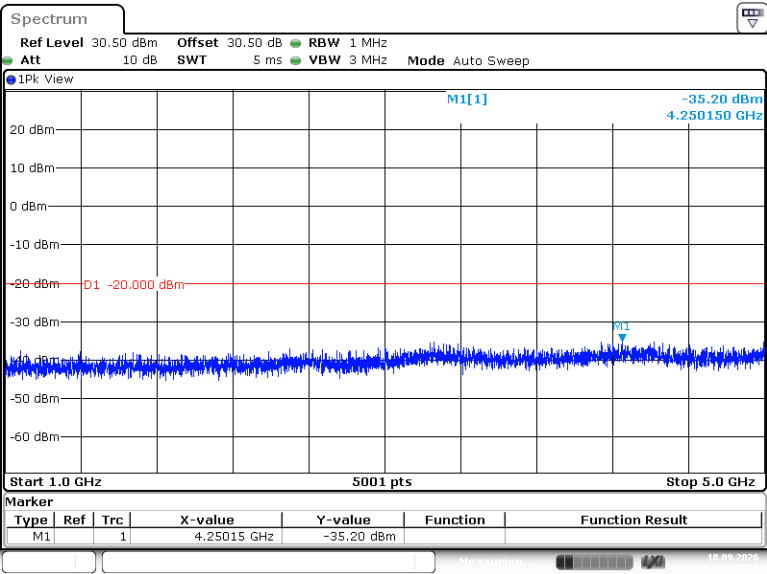


ProjectNo.:2601U12729E-RF Tester:Vern Shen
Date: 3.AUG.2026 20:10:28



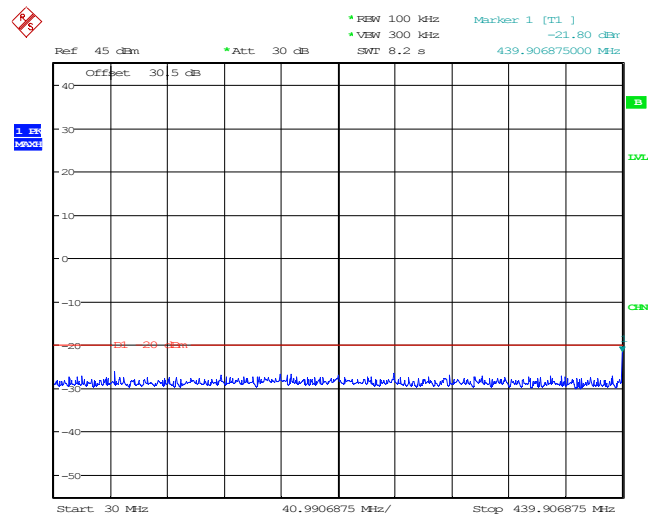
ProjectNo.:2601U12729E-RF Tester:Vern Shen
Date: 3.AUG.2026 20:11:28

1 GHz – 5 GHz, Low Channel

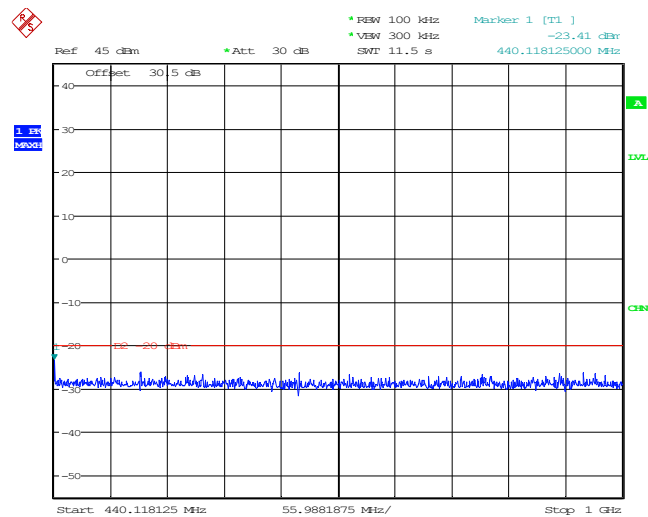


ProjectNo.:2601U12729E-RF Tester:Ethan Bu
Date: 18.SEP.2026 16:05:11

30MHz – 1 GHz, Middle Channel

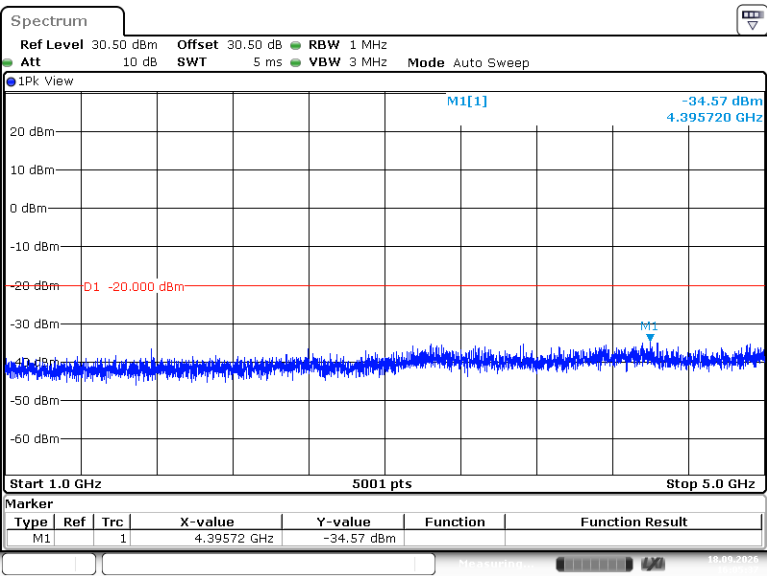


ProjectNo.:2601U12729E-RF Tester:Vern Shen
Date: 3.AUG.2026 20:18:07



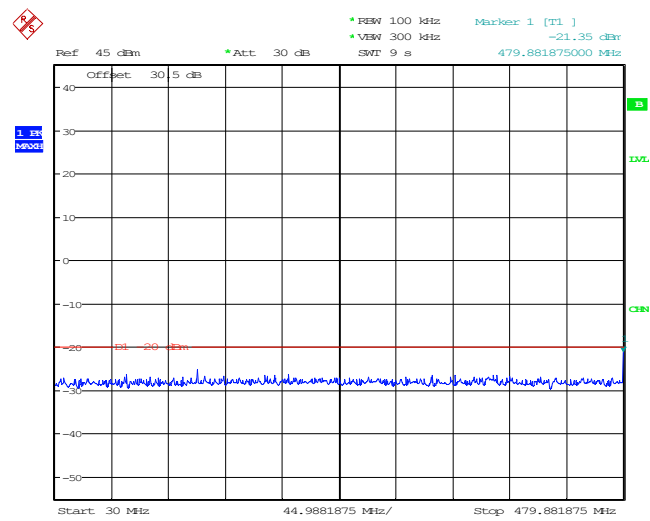
ProjectNo.:2601U12729E-RF Tester:Vern Shen
Date: 3.AUG.2026 20:16:42

1 GHz – 5 GHz, Middle Channel

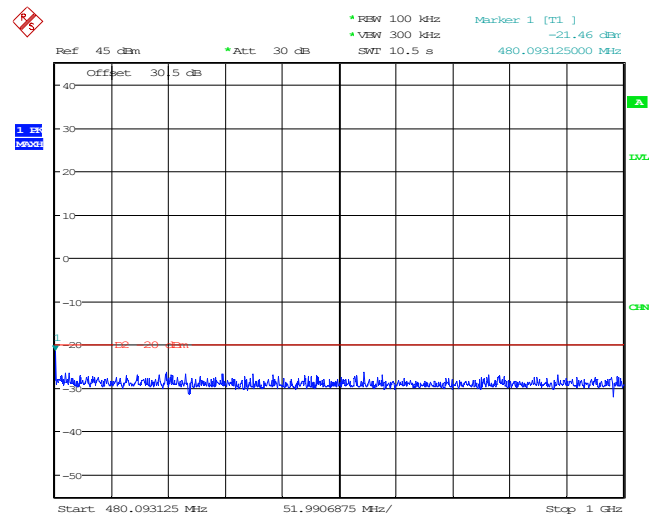


ProjectNo.:2601U12729E-RF Tester:Ethan Bu
Date: 18.SEP.2026 16:05:37

30MHz – 1 GHz, High Channel

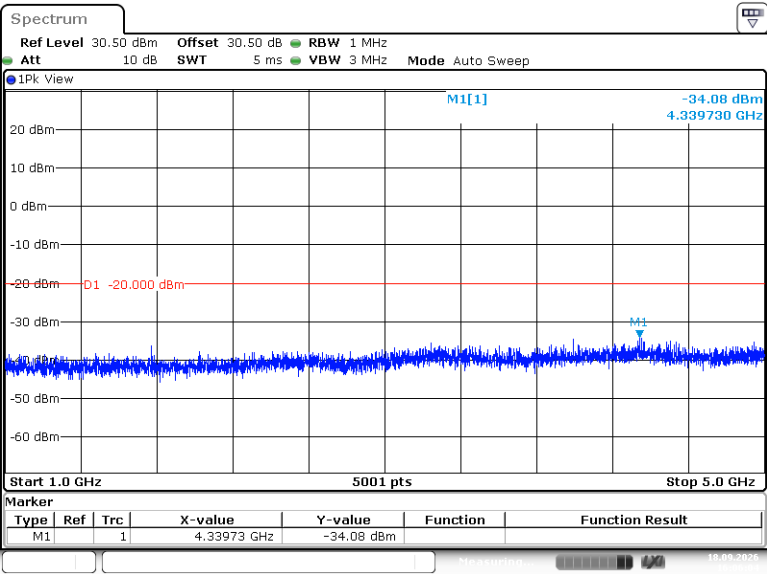


ProjectNo.:2601U12729E-RF Tester:Vern Shen
Date: 3.AUG.2026 20:20:20



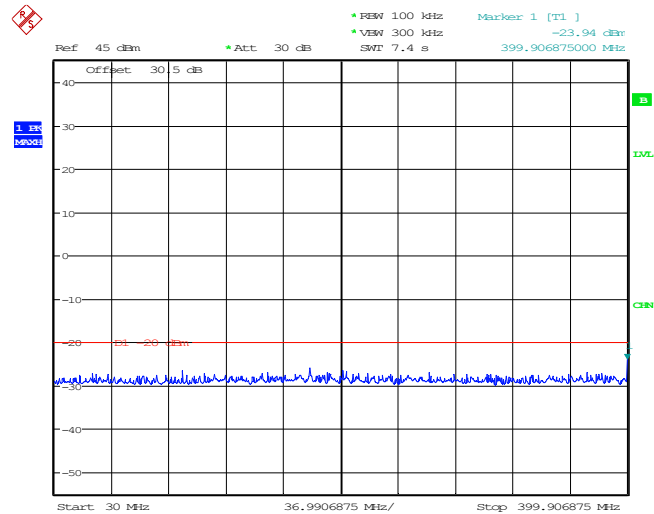
ProjectNo.:2601U12729E-RF Tester:Vern Shen
Date: 3.AUG.2026 20:20:56

1 GHz – 5 GHz, High Channel

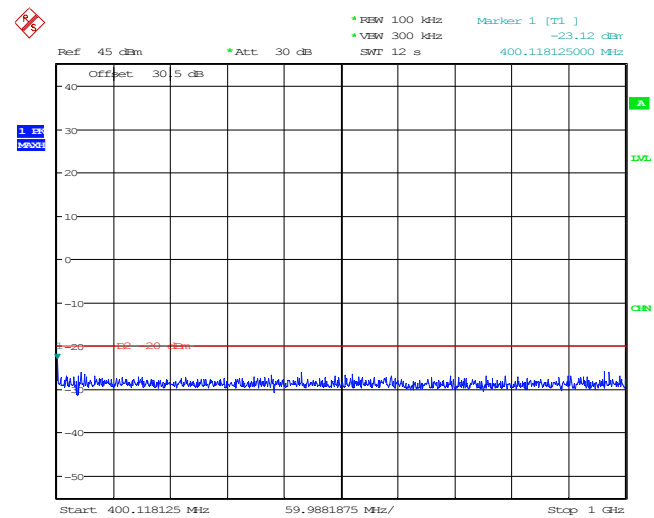


ProjectNo.:2601U12729E-RF Tester:Ethan Bu
Date: 18,SEP,2026 16:06:04

Analog signal, 12.5kHz

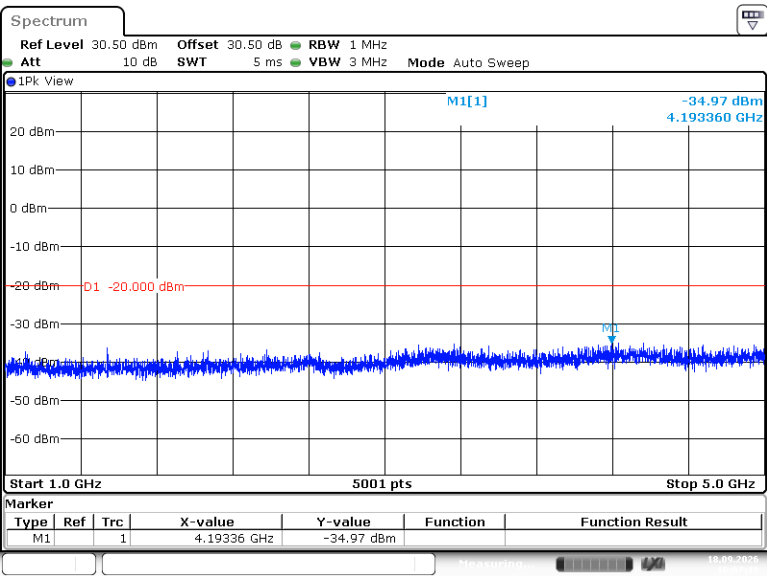
30MHz – 1 GHz, Low Channel

ProjectNo.:2601U12729E-RF Tester:Vern Shen
Date: 3.AUG.2026 20:12:45



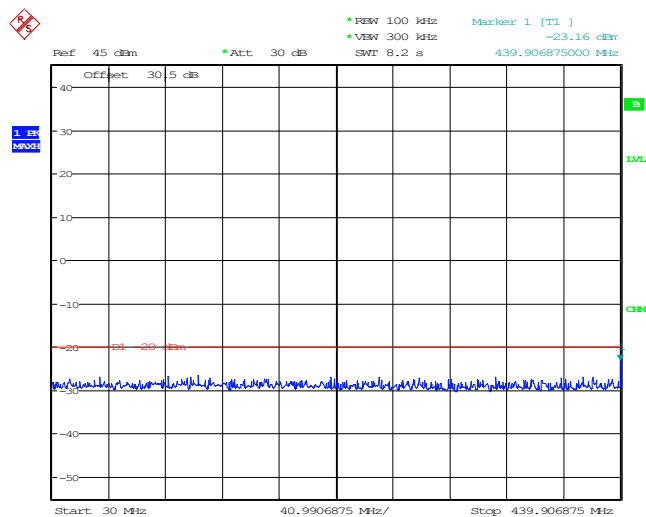
ProjectNo.:2601U12729E-RF Tester:Vern Shen
Date: 3.AUG.2026 20:12:13

1 GHz – 5 GHz, Low Channel

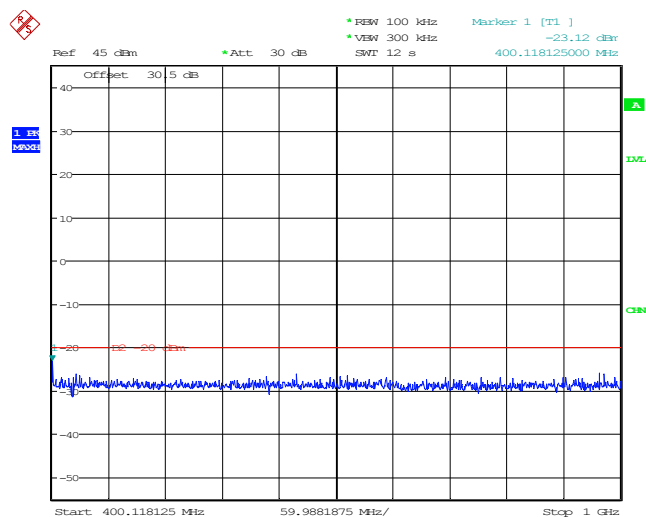


ProjectNo.:2601U12729E-RF Tester:Ethan Bu
Date: 18.SEP.2026 16:07:18

30MHz – 1 GHz, Middle Channel

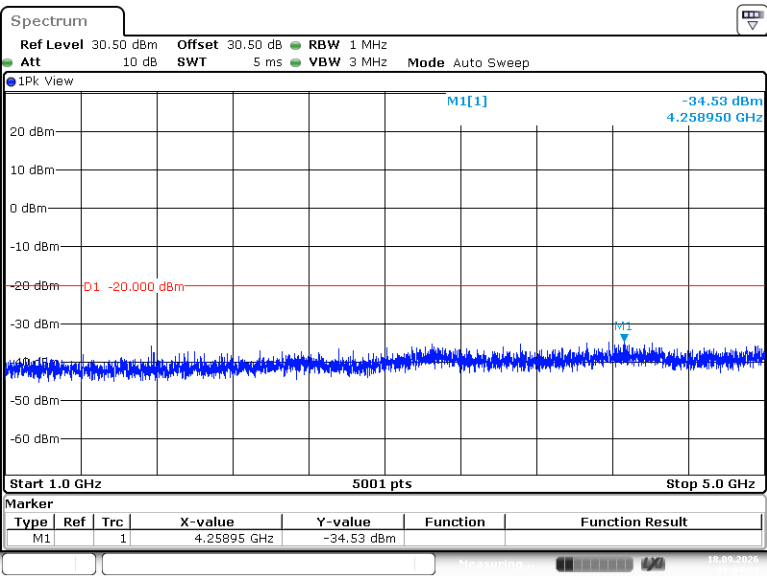


ProjectNo.:2601U12729E-RF Tester:Vern Shen
Date: 3.AUG.2026 20:14:28

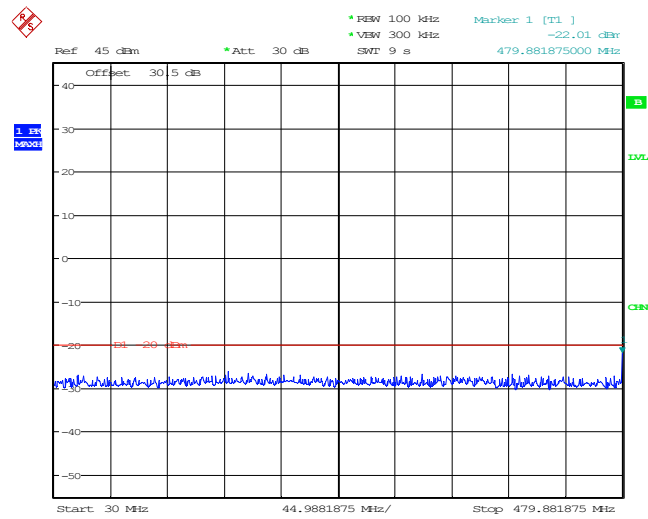


ProjectNo.:2601U12729E-RF Tester:Vern Shen
Date: 3.AUG.2026 20:12:13

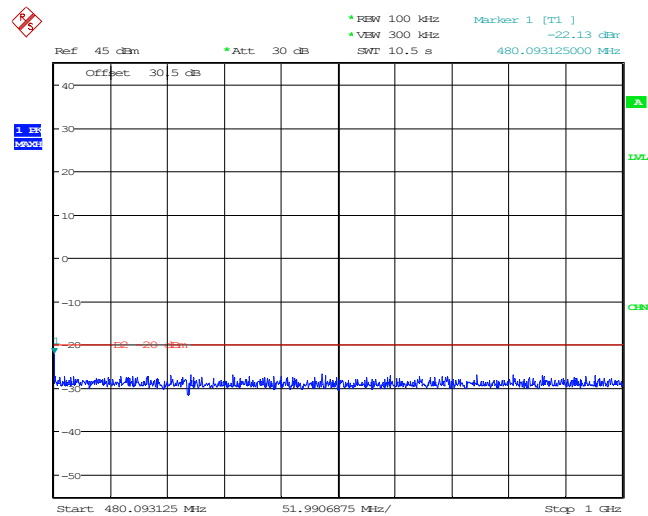
1 GHz – 5 GHz, Middle Channel



30MHz – 1 GHz, High Channel

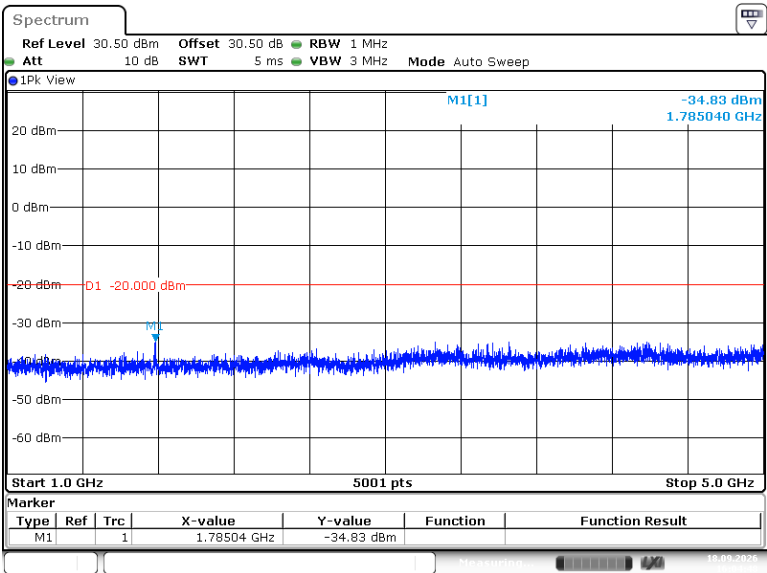


ProjectNo.: 2601U12729E-RF Tester: Vern Shen
 Date: 3.AUG.2026 20:22:35



ProjectNo.: 2601U12729E-RF Tester: Vern Shen
 Date: 3.AUG.2026 20:21:35

1 GHz – 5 GHz, High Channel



ProjectNo.:2601U12729E-RF Tester:Ethan Bu
Date: 18.SEP.2026 16:04:48

FCC §2.1053 & §90.210 - RADIATED SPURIOUS EMISSIONS

Applicable Standard

FCC §2.1053 and §90.210

Test Procedure

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load, which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to teeth harmonic of the fundamental frequency was investigated.

Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

Spurious emissions in dB = 10 lg (TXpwr in Watts/0.001)-the absolute level

Spurious attenuation limit in dB = 50 + 10 Log₁₀ (power out in Watts) for EUT with a 12.5 kHz channel bandwidth.

Test Data

Environmental Conditions

Temperature:	23~23.4 °C
Relative Humidity:	56~57 %
ATM Pressure:	100.2~101.5 kPa

The testing was performed by Alex Yan on 2026-06-30 for below 1GHz and Hugh Li on 2026-07-21 for above 1GHz.

Test Mode: Transmitting, Worst case for high power level.

Note: Scan with X-AXIS, Y-AXIS, Z-AXIS, the worst case Z-AXIS was recorded

Test Result: Pass. Please refer to the following tables.

Digital, 12.5kHz

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
400.0125MHz								
800.025	47.60	H	-49.5	1.30	0.0	-50.80	-20	30.80
800.025	50.48	V	-44.5	1.30	0.0	-45.80	-20	25.80
1200.0375	61.26	H	-53.0	1.10	6.70	-47.40	-20	27.40
1200.0375	68.41	V	-46.5	1.10	6.70	-40.90	-20	20.90
1600.0500	65.49	H	-48.8	1.50	8.60	-41.70	-20	21.70
1600.0500	62.33	V	-52.5	1.50	8.60	-45.40	-20	25.40
2000.0625	55.07	H	-59.2	1.40	9.40	-51.20	-20	31.20
2000.0625	55.60	V	-59.4	1.40	9.40	-51.40	-20	31.40
2400.0750	54.65	H	-60.0	1.50	9.40	-52.10	-20	32.10
2400.0750	55.12	V	-59.5	1.50	9.40	-51.60	-20	31.60
2800.0875	68.82	H	-45.1	1.70	9.30	-37.50	-20	17.50
2800.0875	64.99	V	-48.7	1.70	9.30	-41.10	-20	21.10
3200.1000	50.21	H	-63.0	2.00	9.50	-55.50	-20	35.50
3200.1000	49.15	V	-63.8	2.00	9.50	-56.30	-20	36.30
3600.1125	58.96	H	-53.8	1.90	9.60	-46.10	-20	26.10
3600.1125	59.80	V	-52.7	1.90	9.60	-45.00	-20	25.00
4000.1250	64.27	H	-48.8	1.80	9.70	-40.90	-20	20.90
4000.1250	57.27	V	-55.8	1.80	9.70	-47.90	-20	27.90
440.0125 MHz								
880.025	46.97	H	-49.4	1.33	0.0	-50.73	-20	30.73
880.025	50.11	V	-46.0	1.33	0.0	-47.33	-20	27.33
1320.0375	62.62	H	-51.7	1.00	7.30	-45.40	-20	25.40
1320.0375	67.27	V	-48.0	1.00	7.30	-41.70	-20	21.70
1760.0500	76.25	H	-37.9	1.40	9.10	-30.20	-20	10.20
1760.0500	69.29	V	-45.5	1.40	9.10	-37.80	-20	17.80
2200.0625	52.58	H	-61.8	1.50	9.70	-53.60	-20	33.60
2200.0625	55.36	V	-59.4	1.50	9.70	-51.20	-20	31.20
2640.0750	59.5	H	-54.7	1.70	9.40	-47.00	-20	27.00
2640.0750	56.03	V	-58.0	1.70	9.40	-50.30	-20	30.30
3080.0875	50.08	H	-63.3	1.80	9.30	-55.80	-20	35.80
3080.0875	48.28	V	-64.8	1.80	9.30	-57.30	-20	37.30
3520.1000	62.96	H	-50.6	1.80	9.70	-42.70	-20	22.70
3520.1000	68.21	V	-45.0	1.80	9.70	-37.10	-20	17.10
3960.1125	65.27	H	-47.7	1.80	9.70	-39.80	-20	19.80
3960.1125	58.77	V	-54.3	1.80	9.70	-46.40	-20	26.40
4400.1250	65.96	H	-46.8	2.00	9.80	-39.00	-20	19.00
4400.1250	62.26	V	-50.5	2.00	9.80	-42.70	-20	22.70

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
479.9875 MHz								
959.975	46.93	H	-49.6	1.36	0.0	-50.96	-20	30.96
959.975	50.23	V	-43.8	1.36	0.0	-45.16	-20	25.16
1439.9625	60.62	H	-53.7	0.90	7.80	-46.80	-20	26.80
1439.9625	58.40	V	-56.6	0.90	7.80	-49.70	-20	29.70
1919.9500	61.92	H	-52.4	1.20	9.40	-44.20	-20	24.20
1919.9500	57.51	V	-57.5	1.20	9.40	-49.30	-20	29.30
2399.9375	48.68	H	-66.0	1.50	9.40	-58.10	-20	38.10
2399.9375	52.86	V	-61.7	1.50	9.40	-53.80	-20	33.80
2879.9250	68.11	H	-45.0	1.80	9.30	-37.50	-20	17.50
2879.9250	65.88	V	-47.0	1.80	9.30	-39.50	-20	19.50
3359.9125	59.89	H	-53.9	1.70	9.60	-46.00	-20	26.00
3359.9125	56.44	V	-57.0	1.70	9.60	-49.10	-20	29.10
3839.9000	63.59	H	-49.8	2.00	9.60	-42.20	-20	22.20
3839.9000	58.61	V	-54.7	2.00	9.60	-47.10	-20	27.10
4319.8875	72.68	H	-40.1	2.20	9.70	-32.60	-20	12.60
4319.8875	67.59	V	-45.0	2.20	9.70	-37.50	-20	17.50
4799.8750	69.24	H	-43.2	2.00	10.40	-34.80	-20	14.80
4799.8750	66.78	V	-45.7	2.00	10.40	-37.30	-20	17.30

Analog, 12.5kHz

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
400.0125MHz								
800.025	46.35	H	-50.8	1.30	0.0	-52.10	-20	32.10
800.025	50.46	V	-44.5	1.30	0.0	-45.80	-20	25.80
1200.0375	57.36	H	-56.9	1.10	6.70	-51.30	-20	31.30
1200.0375	67.99	V	-46.9	1.10	6.70	-41.30	-20	21.30
1600.0500	61.47	H	-52.9	1.50	8.60	-45.80	-20	25.80
1600.0500	61.35	V	-53.5	1.50	8.60	-46.40	-20	26.40
2000.0625	55.72	H	-58.5	1.40	9.40	-50.50	-20	30.50
2000.0625	56.82	V	-58.1	1.40	9.40	-50.10	-20	30.10
2400.0750	54.89	H	-59.8	1.50	9.40	-51.90	-20	31.90
2400.0750	56.68	V	-57.9	1.50	9.40	-50.00	-20	30.00
2800.0875	70.25	H	-43.7	1.70	9.30	-36.10	-20	16.10
2800.0875	65.73	V	-47.9	1.70	9.30	-40.30	-20	20.30
3200.1000	53.17	H	-60.1	2.00	9.50	-52.60	-20	32.60
3200.1000	51.03	V	-61.9	2.00	9.50	-54.40	-20	34.40
3600.1125	60.37	H	-52.4	1.90	9.60	-44.70	-20	24.70
3600.1125	62.43	V	-50.1	1.90	9.60	-42.40	-20	22.40
4000.1250	64.51	H	-48.6	1.80	9.70	-40.70	-20	20.70
4000.1250	61.73	V	-51.4	1.80	9.70	-43.50	-20	23.50
440.0125 MHz								
880.025	46.16	H	-50.2	1.33	0.0	-51.53	-20	31.53
880.025	49.95	V	-46.1	1.33	0.0	-47.43	-20	27.43
1320.0375	62.84	H	-51.5	1.00	7.30	-45.20	-20	25.20
1320.0375	66.35	V	-48.9	1.00	7.30	-42.60	-20	22.60
1760.0500	75.43	H	-38.7	1.40	9.10	-31.00	-20	11.00
1760.0500	70.55	V	-44.2	1.40	9.10	-36.50	-20	16.50
2200.0625	55.1	H	-59.3	1.50	9.70	-51.10	-20	31.10
2200.0625	54.3	V	-60.5	1.50	9.70	-52.30	-20	32.30
2640.0750	62.01	H	-52.2	1.70	9.40	-44.50	-20	24.50
2640.0750	60.62	V	-53.4	1.70	9.40	-45.70	-20	25.70
3080.0875	51.85	H	-61.5	1.80	9.30	-54.00	-20	34.00
3080.0875	50.95	V	-62.1	1.80	9.30	-54.60	-20	34.60
3520.1000	58.81	H	-54.7	1.80	9.70	-46.80	-20	26.80
3520.1000	58.93	V	-54.3	1.80	9.70	-46.40	-20	26.40
3960.1125	66.5	H	-46.5	1.80	9.70	-38.60	-20	18.60
3960.1125	62.08	V	-51.0	1.80	9.70	-43.10	-20	23.10
4400.1250	66.54	H	-46.2	2.00	9.80	-38.40	-20	18.40
4400.1250	62.03	V	-50.7	2.00	9.80	-42.90	-20	22.90

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
479.9875 MHz								
959.975	46.01	H	-50.5	1.36	0.0	-51.86	-20	31.86
959.975	48.96	V	-45.1	1.36	0.0	-46.46	-20	26.46
1439.9625	61.67	H	-52.6	0.90	7.80	-45.70	-20	25.70
1439.9625	58.50	V	-56.5	0.90	7.80	-49.60	-20	29.60
1919.9500	57.46	H	-56.9	1.20	9.40	-48.70	-20	28.70
1919.9500	57.86	V	-57.2	1.20	9.40	-49.00	-20	29.00
2399.9375	49.44	H	-65.2	1.50	9.40	-57.30	-20	37.30
2399.9375	50.50	V	-64.1	1.50	9.40	-56.20	-20	36.20
2879.9250	66.02	H	-47.1	1.80	9.30	-39.60	-20	19.60
2879.9250	65.95	V	-47.0	1.80	9.30	-39.50	-20	19.50
3359.9125	55.85	H	-57.9	1.70	9.60	-50.00	-20	30.00
3359.9125	55.55	V	-57.9	1.70	9.60	-50.00	-20	30.00
3839.9000	64.86	H	-48.5	2.00	9.60	-40.90	-20	20.90
3839.9000	63.45	V	-49.9	2.00	9.60	-42.30	-20	22.30
4319.8875	70.86	H	-41.9	2.20	9.70	-34.40	-20	14.40
4319.8875	65.87	V	-46.7	2.20	9.70	-39.20	-20	19.20
4799.8750	68.01	H	-44.4	2.00	10.40	-36.00	-20	16.00
4799.8750	68.78	V	-43.7	2.00	10.40	-35.30	-20	15.30

Note:

Absolute Level = Substituted Level - Cable loss+ Antenna Gain

Margin = Limit-Absolute Level

The unit of antenna gain is dBd for frequency below 1GHz and is dBi for frequency above 1GHz.

FCC §2.1055 & §90.213 - FREQUENCY STABILITY

Applicable Standard

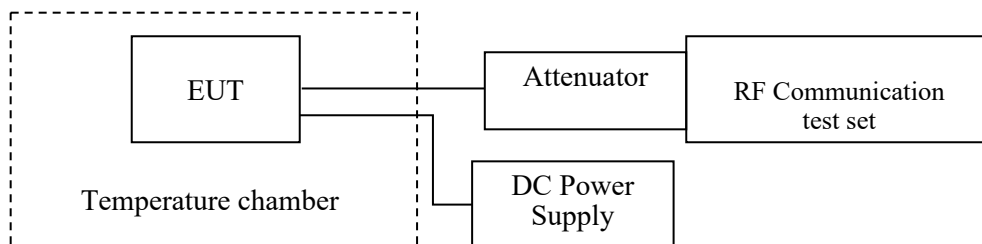
FCC §2.1055 and §90.213

Test Procedure

According to ANSI C63.26-2015 section 5.6

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to communication test set via feed-through attenuators. The EUT was placed inside the temperature chamber. The power cable and RF output cable exited the chamber through an opening made for the purpose.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the counter.



Test Data

Environmental Conditions

Temperature:	26 °C
Relative Humidity:	53 %
ATM Pressure:	100.2 kPa

The testing was performed by Barry Feng on 2026-08-03.

Test Mode: Transmitting(Unmodulation), Worst case for high power level.

Test Result: Pass. Please refer to the following tables.

fc =		440.0125	MHz		Note
Temperature	Voltage	Reading	Frequency Error	Limit	
°C	V _{DC}	MHz	ppm	ppm	FCC part 90
-30	7.4	440.0123580	-0.32	2.5	
-20		440.0126923	0.44		
-10		440.0124697	-0.07		
0		440.0127688	0.61		
10		440.0128941	0.90		
20		440.0125801	0.18		
30		440.0133689	1.97		
40		440.0127751	0.63		
50		440.0127698	0.61		
20	6.2	440.0129723	1.07		
20	8.4	440.0134886	2.25		

FCC §90.214 - TRANSIENT FREQUENCY BEHAVIOR

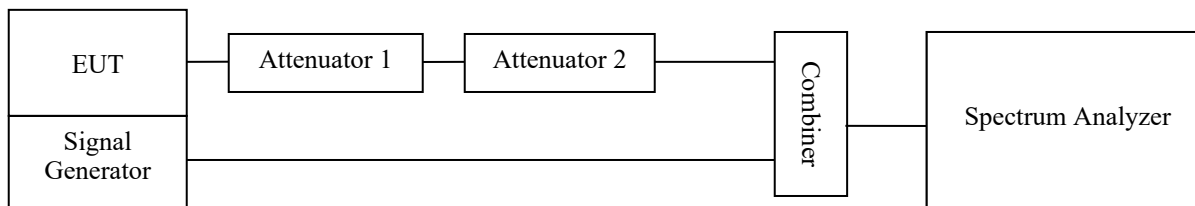
Applicable Standard

Regulations: FCC §90.214

Test method: ANSI C63.26-2015

Test Procedure

- a) Connect the EUT and test equipment as shown on the following block diagram.
- b) Set the Spectrum Analyzer to measure FM deviation, and tune the RF frequency to the transmitter assigned frequency.
- c) Set the signal generator to the assigned transmitter frequency and modulate it with a 1 kHz tone at ± 12.5 kHz deviation and set its output level to -100dBm.
- d) Turn on the transmitter.
- e) Supply sufficient attenuation via the RF attenuator to provide an input level to the Spectrum Analyzer that is 40 dB below the maximum allowed input power when the transmitter is operating at its rated power level. Note this power level on the Spectrum Analyzer as P_0 .
- f) Turn off the transmitter.
- g) Adjust the RF level of the signal generator to provide RF power equal to P_0 . This signal generator RF level shall be maintained throughout the rest of the measurement.
- h) Remove the attenuation 1, so the input power to the Spectrum Analyzer is increased by 30 dB when the transmitter is turned on.
- i) Adjust the vertical amplitude control of the spectrum analyzer to display the 1000 Hz at ± 4 divisions vertically centered on the display. Set trigger mode of the Spectrum Analyzer to "Video", and tune the "trigger level" on suitable level. Then set the "trigger offset" to -10ms for turn on and -15ms for turn off.
- j) Turn on the transmitter and the transient wave will be captured on the screen of Spectrum Analyzer. Observe the stored display. The instant when the 1 kHz test signal is completely suppressed is considered to be t_{on} . The trace should be maintained within the allowed divisions during the period t_1 and t_2 .
- k) Then turn off the transmitter, and another transient wave will be captured on the screen of Spectrum Analyzer. The trace should be maintained within the allowed divisions during the period t_3 .



Test Data

Environmental Conditions

Temperature:	26 °C
Relative Humidity:	53 %
ATM Pressure:	100.2 kPa

The testing was performed by Barry Feng on 2026-08-05.

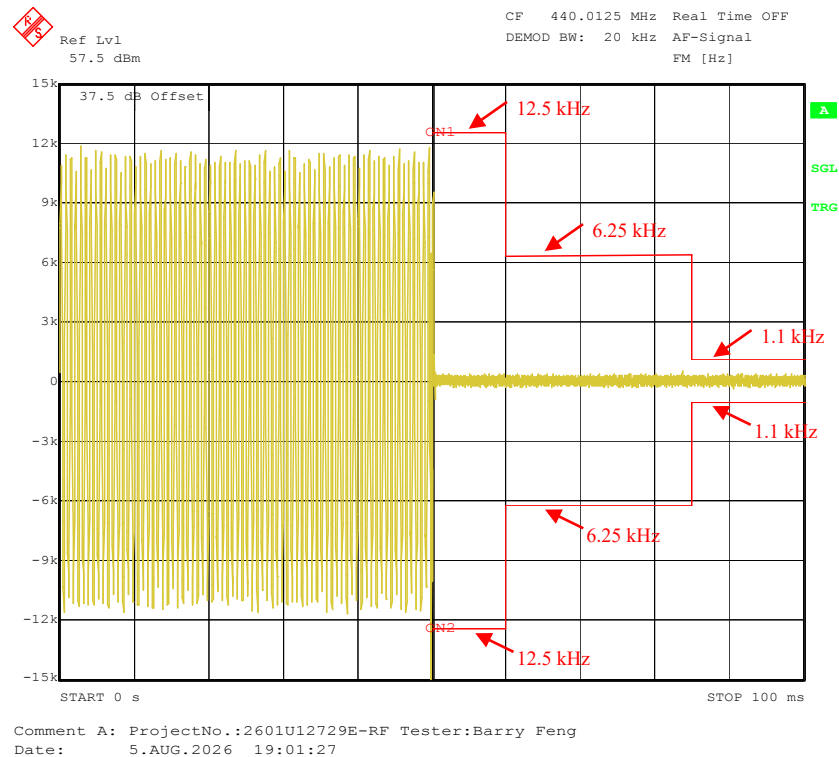
Test Result: Pass. Please refer to the following tables and plots.

Test Frequency (MHz)	Channel Bandwidth (kHz)	Time Intervals	Maximum Frequency Difference (kHz)	Transient Duration Limit (ms)	Test Result
440.0125	12.5	t1	±12.5	10	Pass
		t2	±6.25	25	Pass
		t3	±12.5	10	Pass

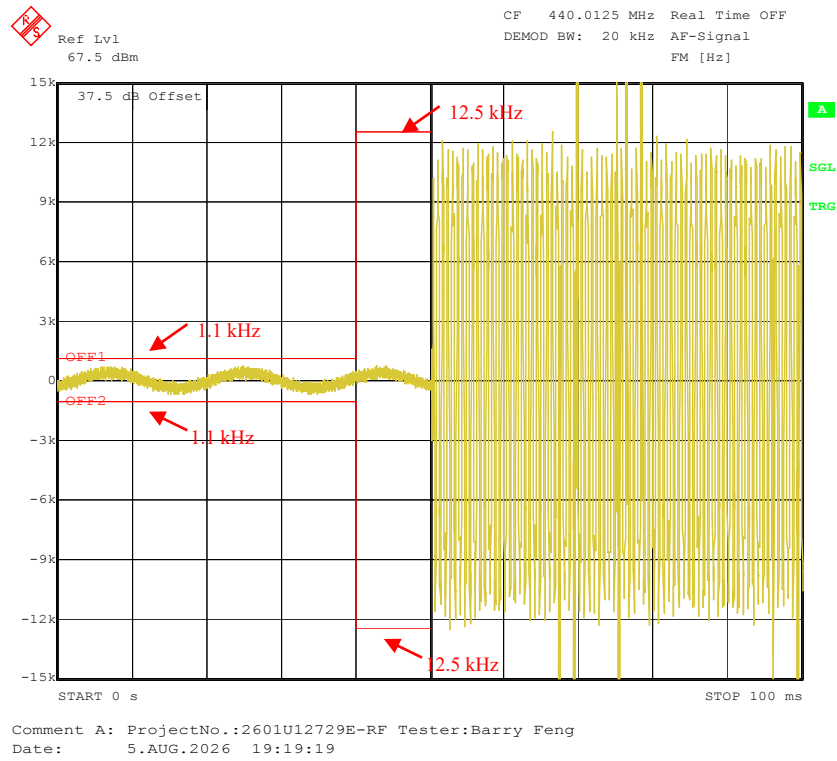
Note: During the time from the end of t₂ to the beginning of t₃, the frequency difference not exceed the limits specified in §90.213

For 440.0125MHz 12.5 kHz mode, the limit is 440.0125MHz *2.5ppm=1.1kHz

Turn on



Turn off



EUT PHOTOGRAPHS

Please refer to the attachment 2601U12729E-RF-EXP External photo and 2601U12729E-RF-INP Internal photo.

TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2601U12729E-RF-TSP Test Setup photo.

******* END OF REPORT *******