

EQUIPMENT: Smart Bluetooth Dongle

Section 6. Time of Occupancy

Para. No.: 15.247 (a)(1)

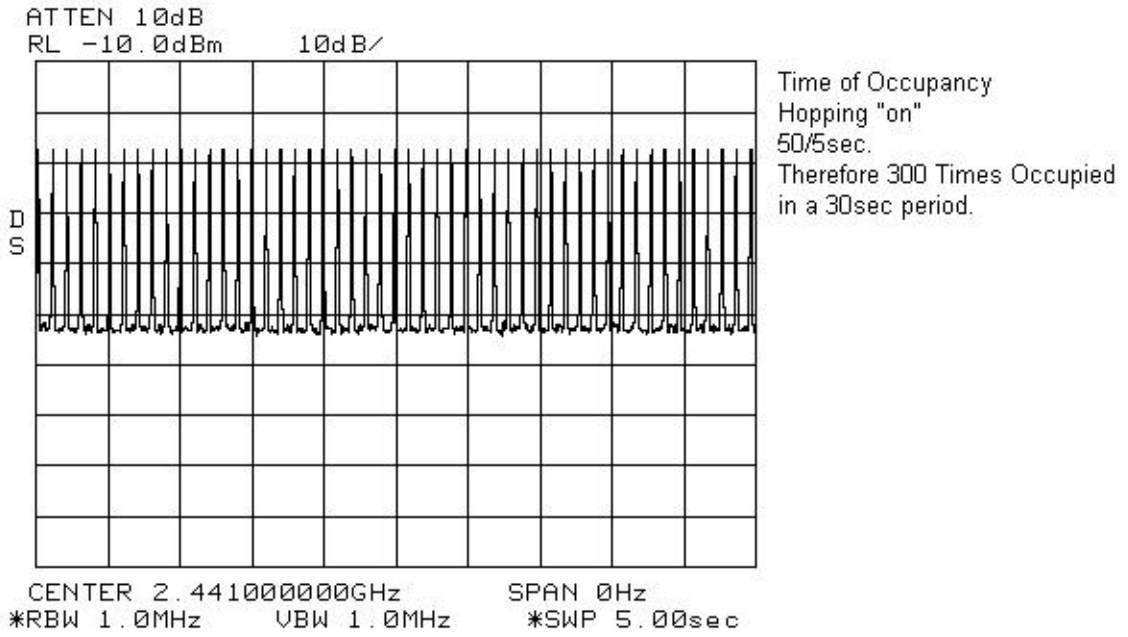
Test Performed By: Glen Westwell	Date of Test: 27 Mar. 2002
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Test Results: Complies.

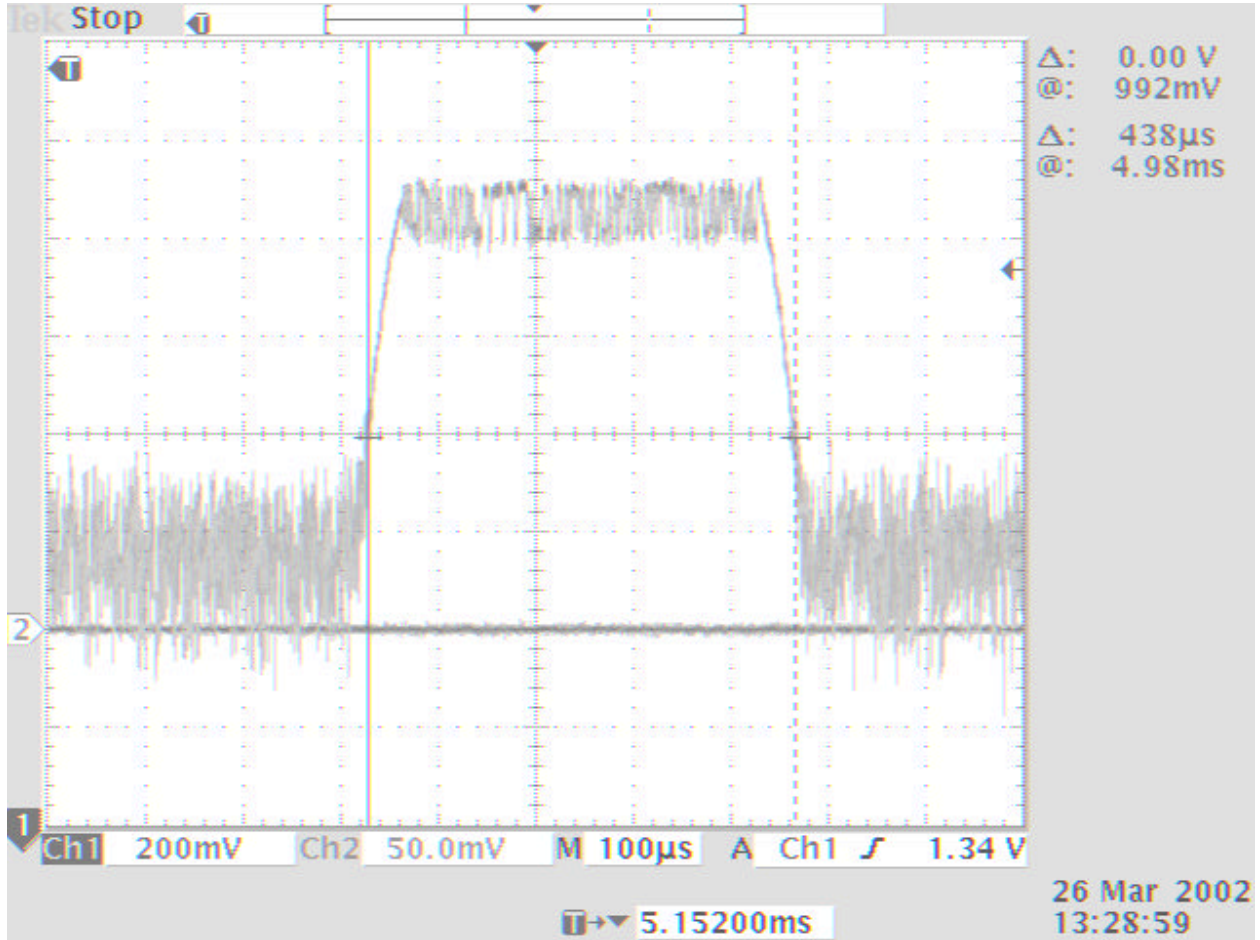
Measurement Data: Maximum Dwell Time On Any Channel:

300 times occupied in 30sec period @ 438i S = 131.4mS

EQUIPMENT: Smart Bluetooth Dongle



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Section 7. Occupied Bandwidth

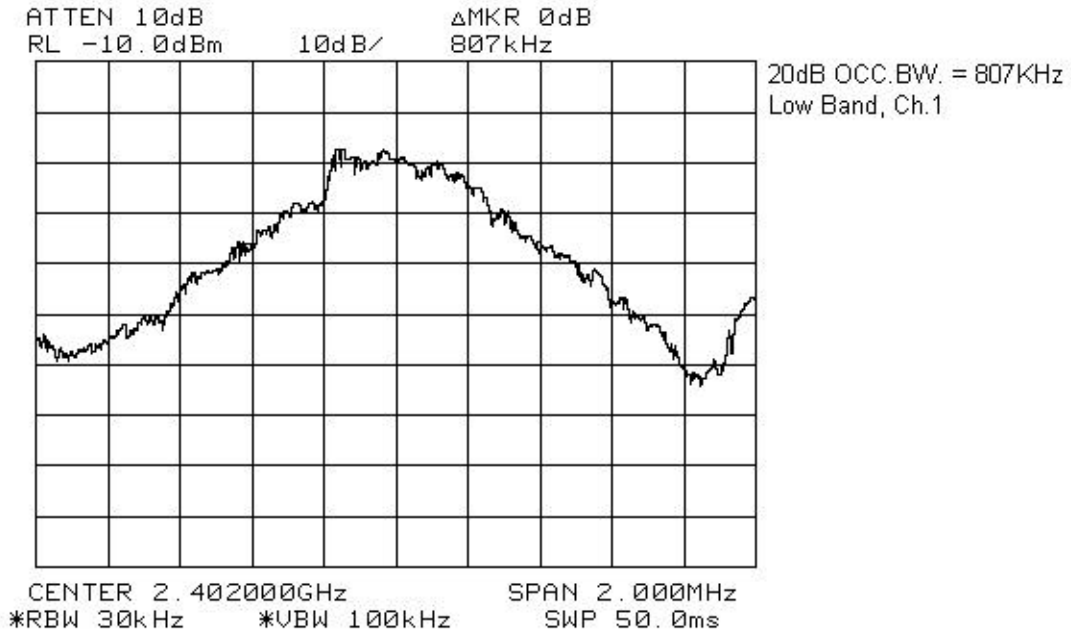
Para. No.: 15.247 (a)(1)(i)

Test Performed By: Glen Westwell	Date of Test: 27 Mar. 2002
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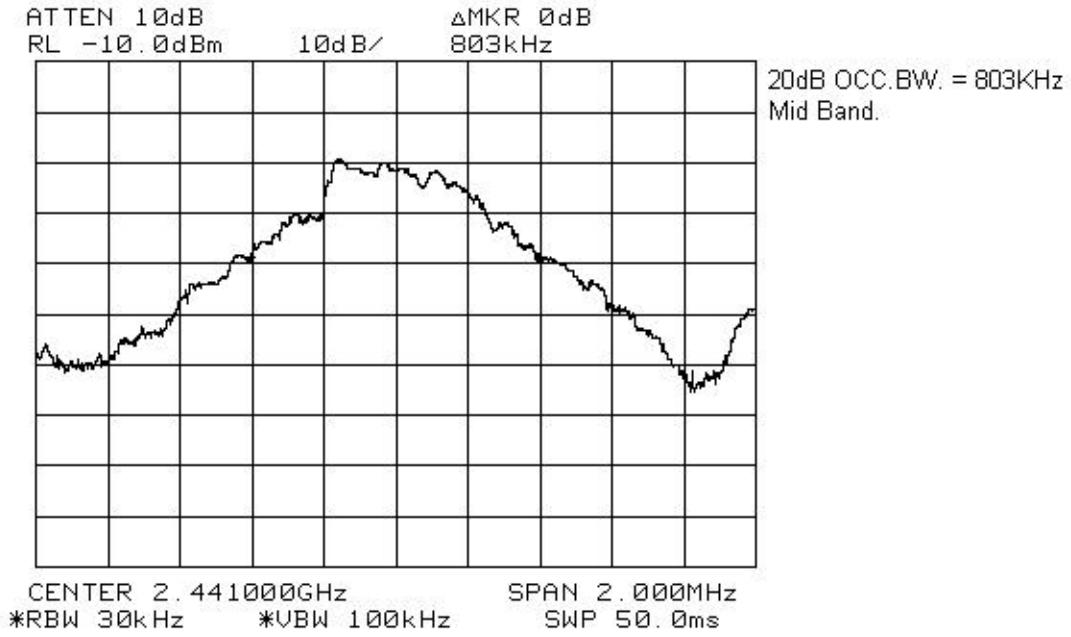
Test Results: Complies.

Measurement Data: 807KHz.
See Attached Plots.

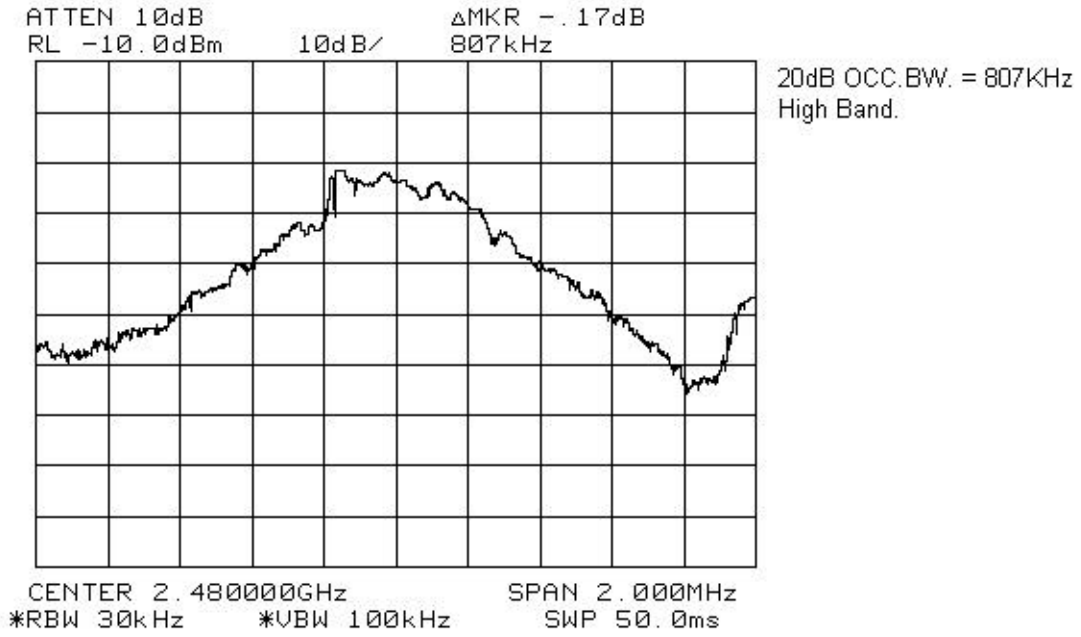
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Section 8. Peak Power Output

Para. No.: 15.247 (b)

Test Performed By: Glen Westwell	Date of Test: 26 Mar. 2002
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Test Results: Complies. The maximum peak power output of the transmitter is:
0.34mW (-4.7dBm)

Measurement Data: Detachable antenna? Yes No

Directional Gain of Antenna: 2.14dBi or 1.64 Numeric.

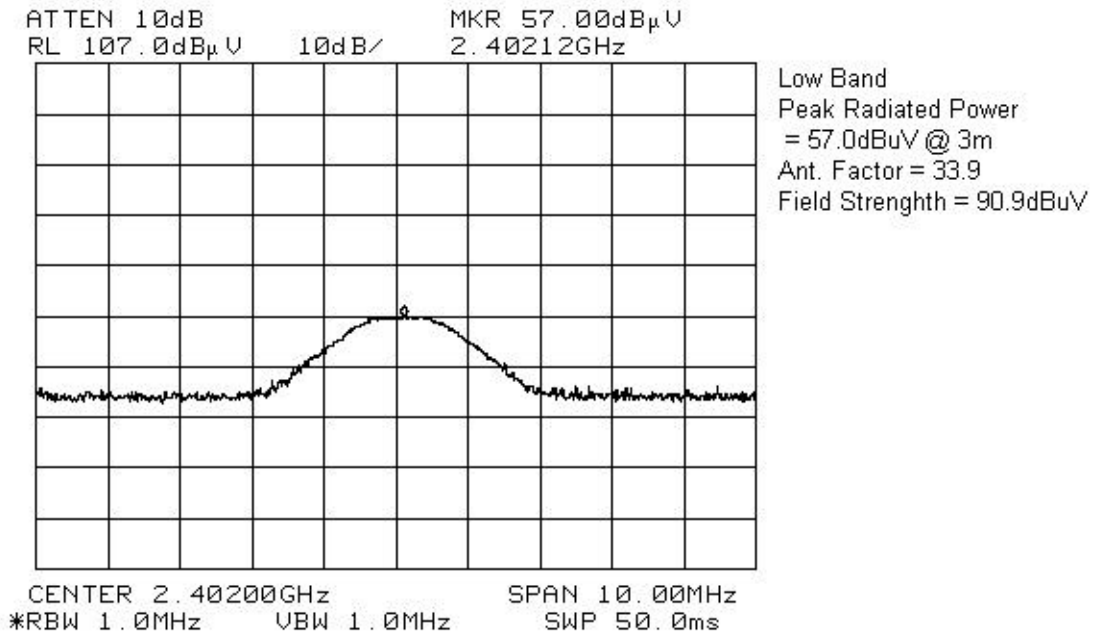
Smart Bluetooth Dongle (worst case):

Field Strength:

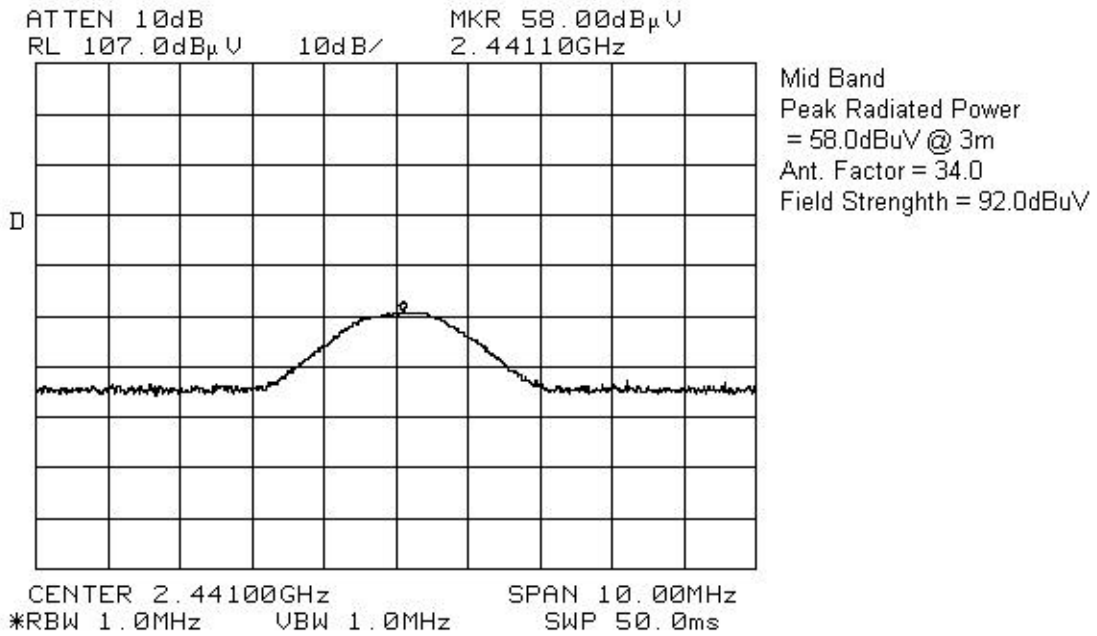
58dBuV + 34.7dB = 92.7dBuV @ 3m or 0.043152 V/m @ 3m.

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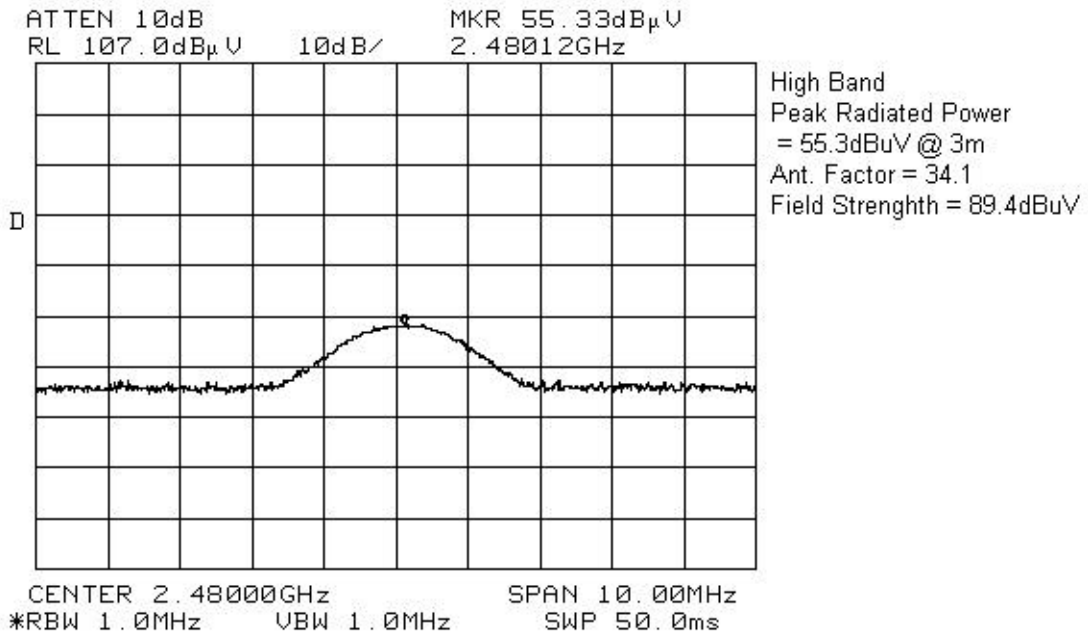
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Section 9. Spurious Emissions

Para. No.: 15.247 (c)

Test Performed By: Glen Westwell	Date of Test: 27 Mar 2002
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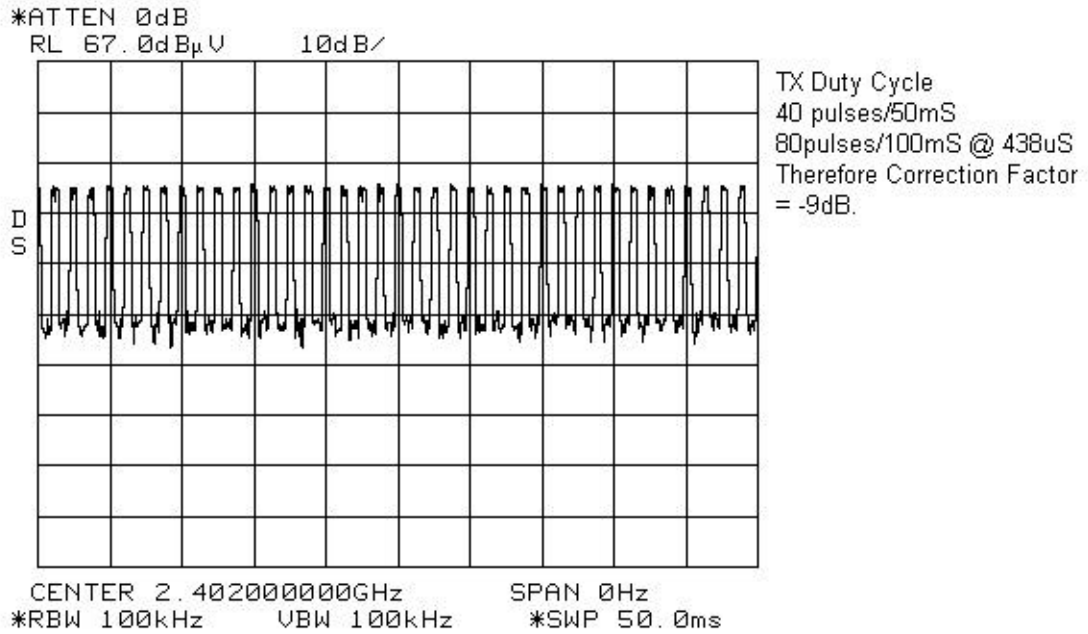
Test Results: Complies

Measurement Data: See Attached Plots & Tables.

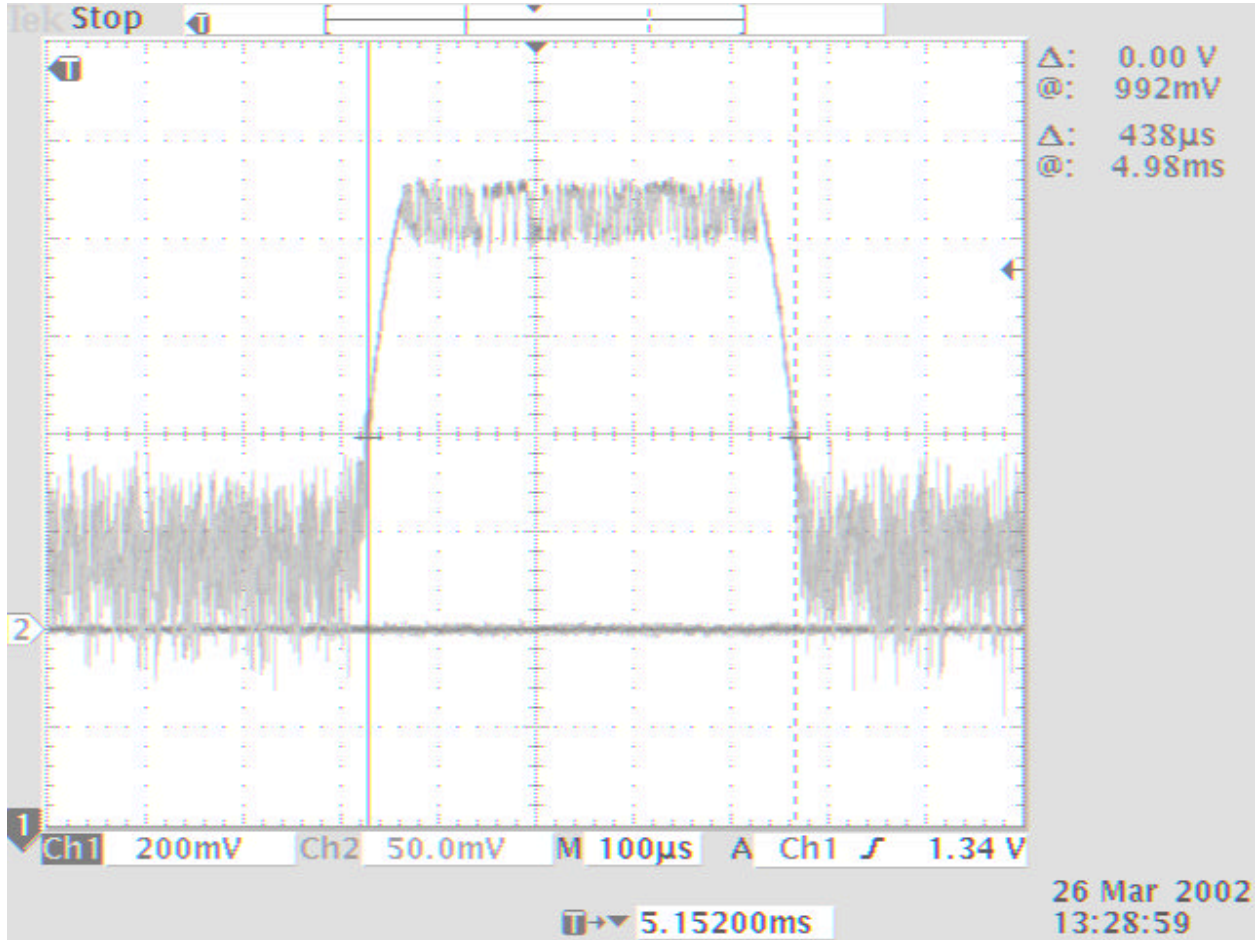
Duty Cycle Calculation:

$$\begin{aligned} (1) \quad & 20\text{Log (TX "on" Time/100mS)} \\ & 20\text{Log (35mS / 100mS)} \\ & = -9.12\text{dB} \\ & \therefore -9\text{dB} \end{aligned}$$

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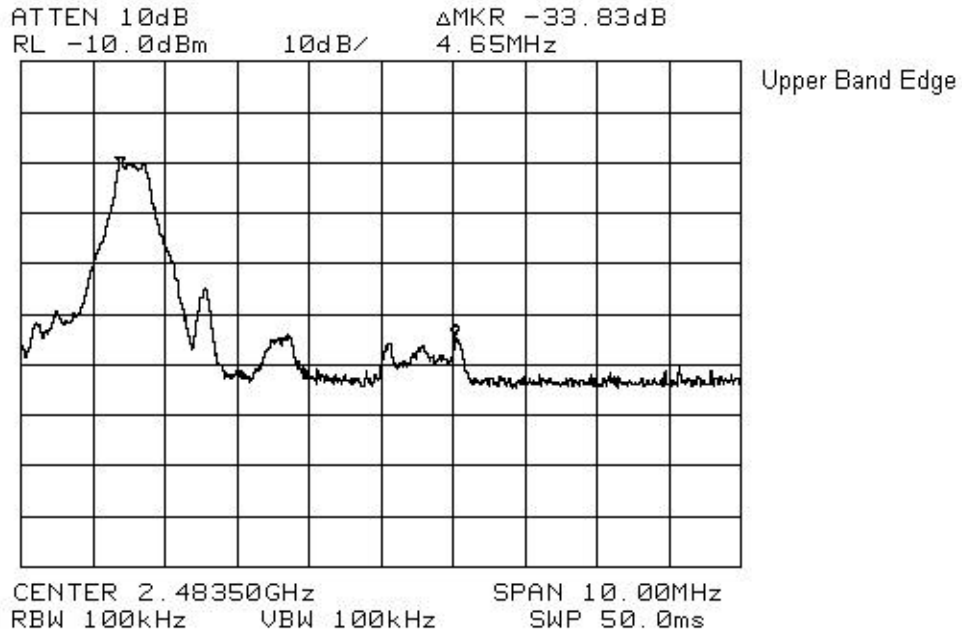


EQUIPMENT: Smart Bluetooth Dongle



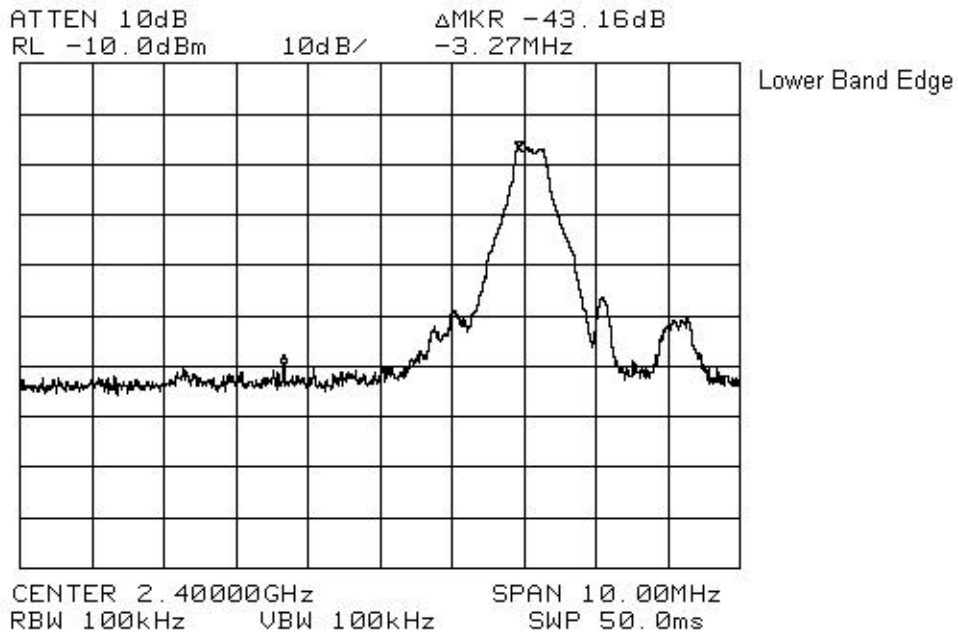
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20dB Band Edge



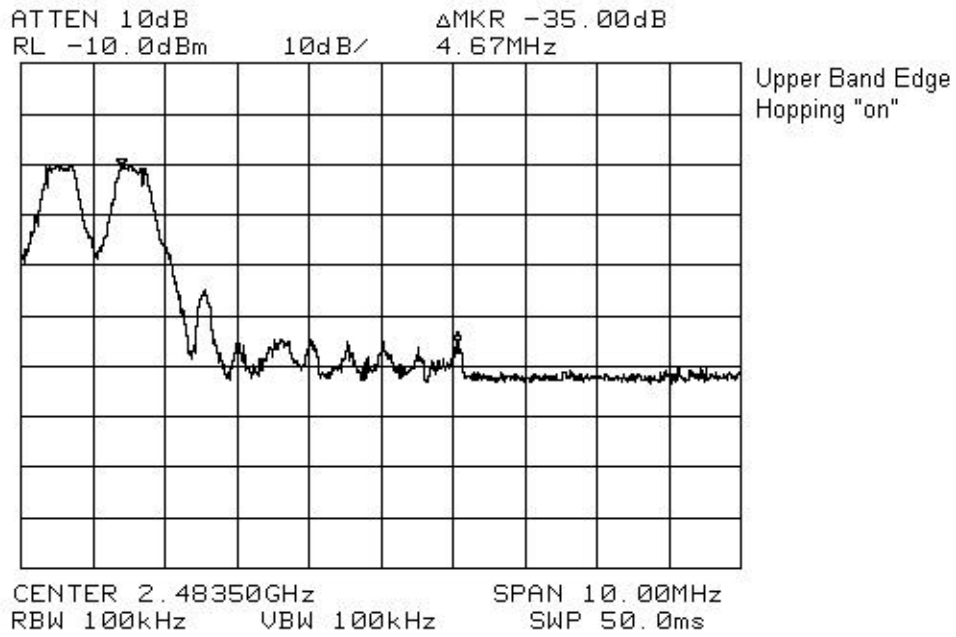
EQUIPMENT: Smart Bluetooth Dongle

20dB Band Edge



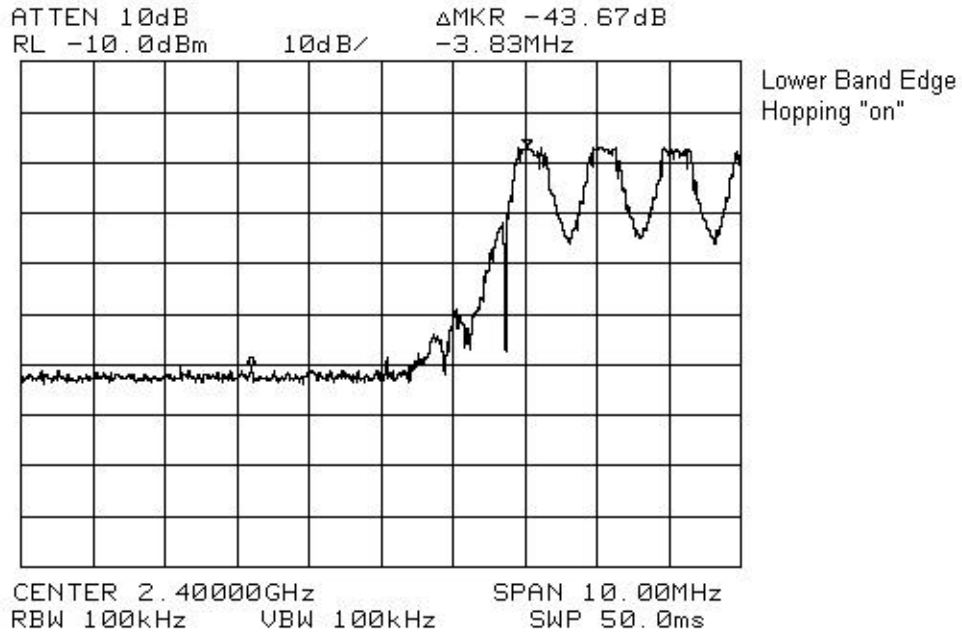
EQUIPMENT: Smart Bluetooth Dongle

20dB Band Edge



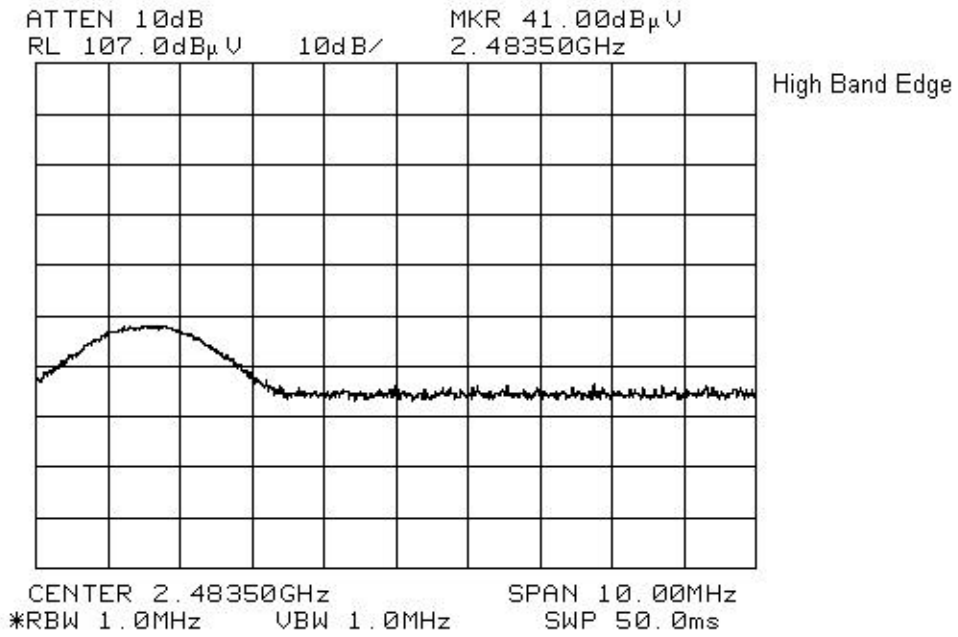
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20dB Band Edge



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**Band Edge (Restricted Band)
Marker Delta Method**



Peak Level Band Edge = No Band Edge Emissions Detected @ 3m.

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Test Data - Radiated Emissions

Test Distance (meters) : 3		Range: A		Receiver: 8565E		RBW(kHz): 1000		Detector: Peak	
Freq. (MHz)	Ant.	Pol. (V/H)	RCVD Signal (dBµV/m)	Ant. Factor (dB)**	Amp. Gain (dB)***	D/C Corr. (dB)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Peak									
Low Band Ch.									
4804	Hrn 2	V	71.7	42.2	-56.1		57.2	74	16.8
4804	Hrn 2	H	70.1	42.2	-56.1		56.2	74	17.8
Mid Band Ch.									
4882	Hrn 2	V	69.5	42.3	-55.5		56.3	74	17.7
4882	Hrn 2	H	70.8	42.3	-55.5		57.6	74	16.4
High Band Ch.									
4960	Hrn 2	V	68.5	42.7	-54.8		56.4	74	17.6
4960	Hrn 2	H	68.1	42.7	-54.8		56.0	74	18.0
Average									
Low Band Ch.									
4804	Hrn 2	V	71.7	42.2	-56.1	-9.0	48.2	54	5.8
4804	Hrn 2	H	70.1	42.2	-56.1	-9.0	47.2	54	6.8
Mid Band Ch.									
4882	Hrn 2	V	69.5	42.3	-55.5	-9.0	47.3	54	6.7
4882	Hrn 2	H	70.8	42.3	-55.5	-9.0	48.6	54	5.4
High Band Ch.									
4960	Hrn 2	V	68.5	42.7	-54.8	-9.0	47.4	54	6.6
4960	Hrn 2	H	68.1	42.7	-54.8	-9.0	47.0	54	7.0
Notes: * Re-measured using dipole antenna. ** Includes cable loss when amplifier is not used. *** Includes cable loss.									

All spurious & harmonic emissions were searched. Only those within 20dB of the limit were reported.

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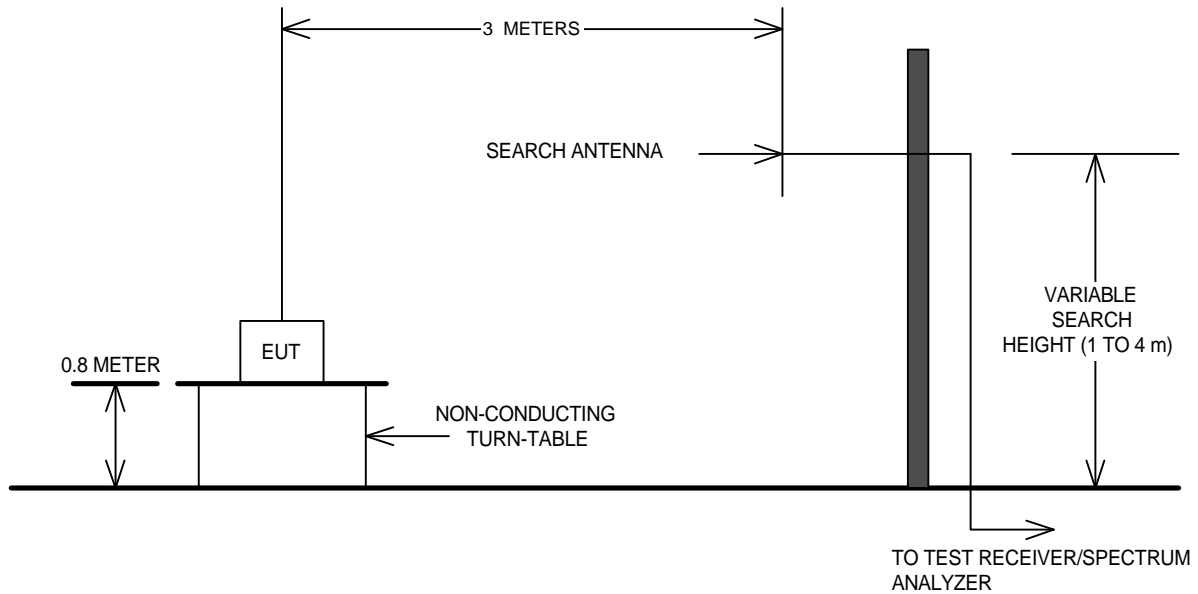
Smart Bluetooth Dongle



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Section 10. Block Diagrams

Test Site For Radiated Emissions



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Section 11. Test Equipment List

RADIO TEST EQUIPMENT LIST

CAL CYCLE	EQUIPMENT	MANUFACTURER	MODEL	SERIAL	LAST CAL.	NEXT CAL.
1 Year	Spectrum Analyzer	Hewlett Packard	8565E	FA000981	June 08/01	June 08/02
1 Year	Spectrum Analyzer-1	Hewlett Packard	8566B	2311A02238	27 Nov 01	27 Nov 02
1 Year	Spectrum Analyzer Display-1	Hewlett Packard	8566B	2314A04759	27 Nov 01	27 Nov 02
1 Year	Quasi-peak adapter-1	Hewlett-Packard	85650A	2043A00302	27 Nov 01	27 Nov 02
1 Year	LISN	EMCO	4825/2	0002-1/47	09 Oct 01	09 Oct 02
1 Year	Receiver	Rohde & Schwarz	ESVP	892661/014	Sep 19/01	Sep 19/02
1 Year	Horn Antenna	EMCO #2	3115	4336	Dec. 1/01	Dec. 1/02
3 Year	Signal Generator	Hewlett Packard	8673B	2332A00378	Jan. 27/01	Jan. 27/04
	High Pass Filter	K&L	11SH10-4000	FA001340	COU	COU
1 Year	RF AMP	JCA	4-8 GHz	FA001497	May 31/01	May 31/02