


	Test Report Serial No.:	210213ZP2-T1215-E15	Report Issue Date:	Mar. 1, 2013	
	Measurement Date(s):	Feb15-19, 2013	Report Revision No.:	Revision 1.1	
	FCC Rule Part(s):	47 CFR §15.249	FCC Test Firm Reg. No.:	714830	
	IC Standard(s):	RSS-210 RSS-Gen	IC Test Site No.:	IC 3874A-1	
					Test Lab Certificate No. 2470.01

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Appendix A Field Strength of Intentional Radiator and Band Edge.

A.1 REFERENCES

Normative Reference Standard	FCC CFR 47 §15.249; RSS-210
Procedure Reference	ANSI C63.4:2003

A.2 ENVIRONMENTAL CONDITIONS

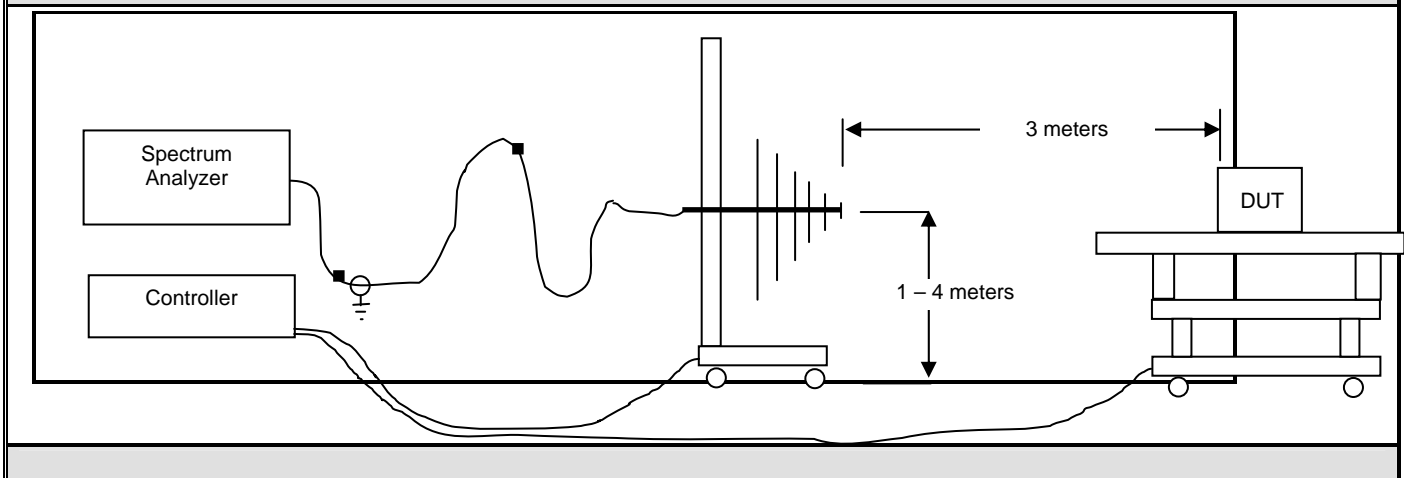
Temperature	25 +/- 5 °C
Humidity	40 +/- 10 %
Barometric Pressure	101 +/- 3 kPa


A.3 EQUIPMENT LIST


ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	CAL DUE
00051	HP	8566B	Spectrum Analyzer RF Section	10-May-2014
00049	HP	85650A	Quasi-peak Adapter	10-May-2014
00047	HP	85685A	RF Preselector	10-May-2014
00072	EMCO	2075	Mini-mast	n/a
00073	EMCO	2080	Turn Table	n/a
00071	EMCO	2090	Multi-Device Controller	n/a
00239	Miteq	JS4-00102600	Amplifier	n/a
00059	EMCO	3121C-DB4	Dipole Antenna	07-Mat-2014
00050	Chase	CBL-6111A	Bilog Antenna	09-May-2014
00034	ETS	3115	Double Ridged Guide Horn	06-Dec-2014

A.4 SETUP DRAWING

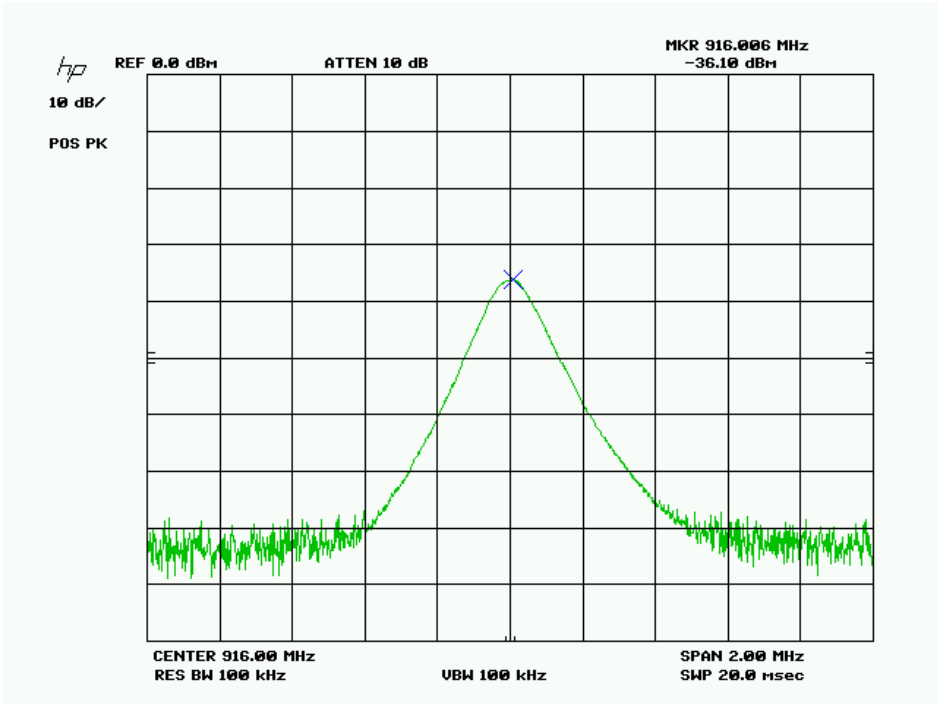
Figure E.6-1 - Setup Drawing – Radiated TX Spurious Emissions.



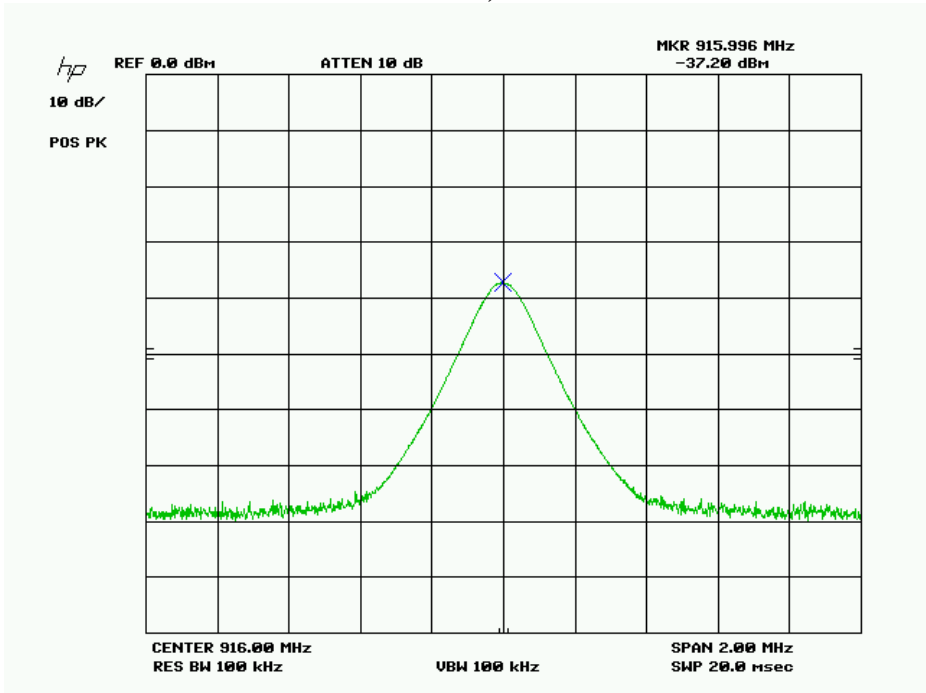
Applicant:	Check-It Solutions Inc.	Model:	CG-300	FCC ID:	RXKCG300	IC:	10867A-CG300	
DUT Type:	Z-Wave and ZigBee Advanced Gateway							
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Applicant:	Check-It Solutions Inc.	Model:	CG-300	FCC ID:	RXKCG300	IC:	10867A-CG300	
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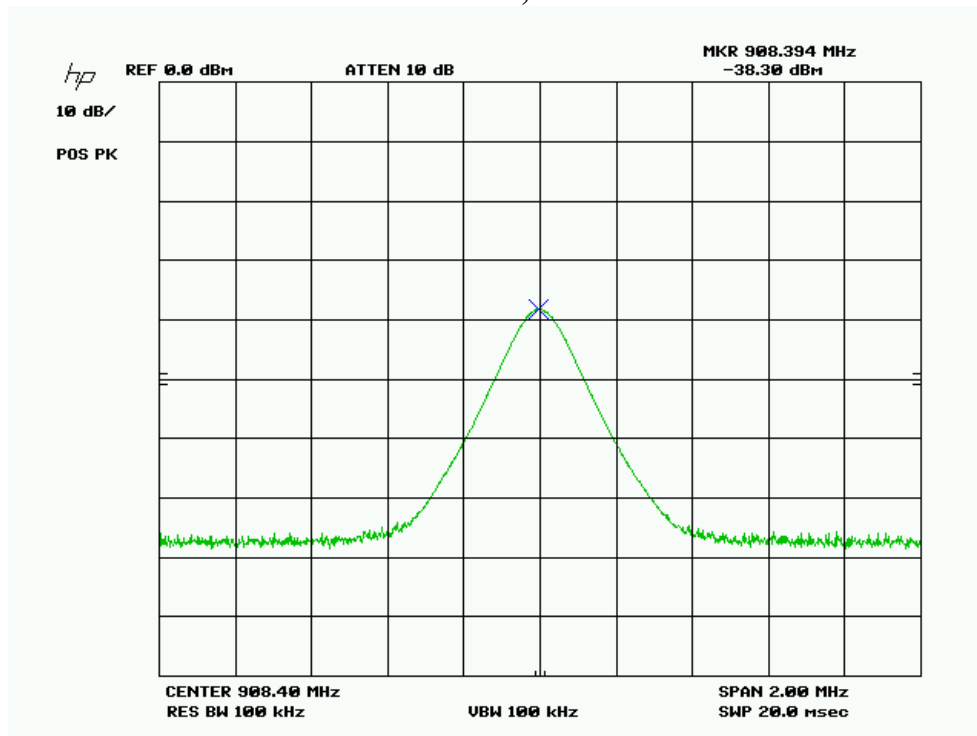
916.00 MHz – V, Peak Power



916.00 MHz – H, Peak Power



908.40 MHz – H, Peak Power



B.5 MEASUREMENT EQUIPMENT SETUP

MEASUREMENT EQUIPMENT CONNECTIONS

For the field strength measurements, the measurement equipment was connected as shown in G.6. Various antenna types may be required to cover the applicable frequency range tested. The ranges in which each antenna was used are shown below.

Frequency Range	RX Antenna	TX Antenna
30 MHz - 1GHz	Bilog	N/a
1 GHz - 18 GHz	ETS 3115 Horn	N/a

MEASUREMENT EQUIPMENT SETTINGS

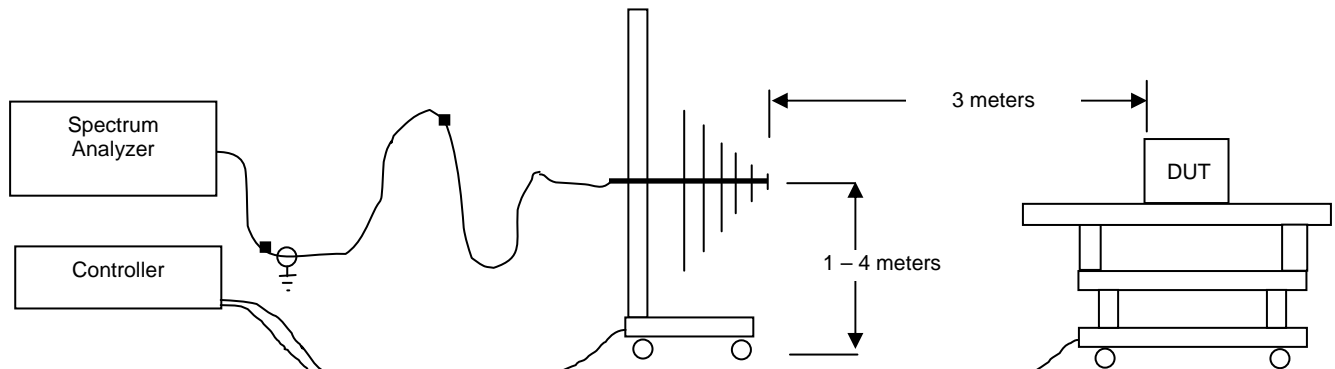
For the spurious out-of-band emissions, the spectrum analyzer was set to the following settings:

Measurement	RBW	VBW	Detector
	kHz	kHz	
< 1 GHz	100	300	Peak*
> 1 GHz	1000	3000	Peak*

* As a worst-case measurement, the QP limit was applied to measurements made with a peak detector.

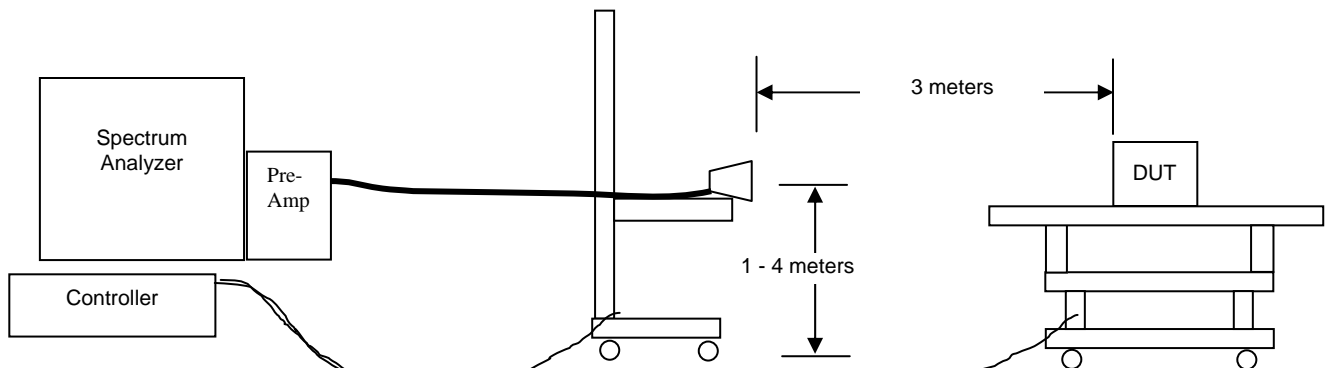
B.6 SETUP DRAWING

Figure B.66-1 - Setup Drawing – Radiated RX Spurious Emissions (< 1 GHz)



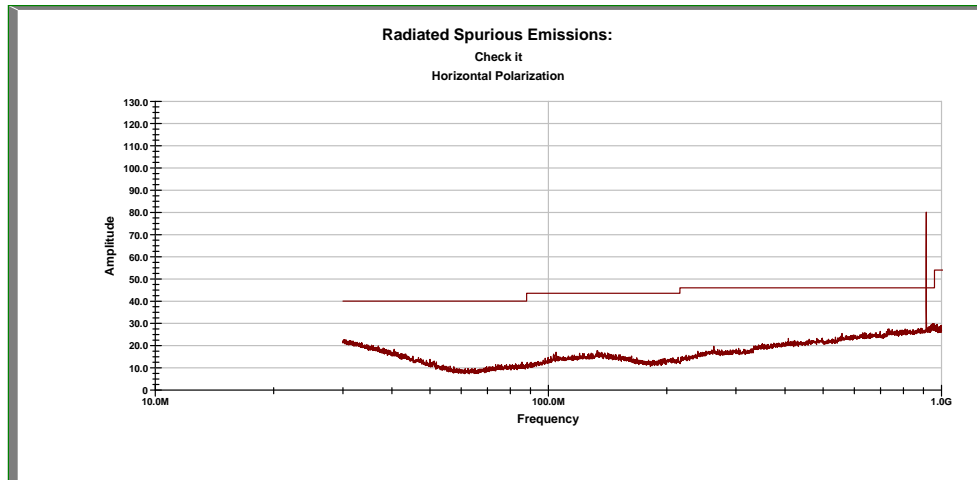
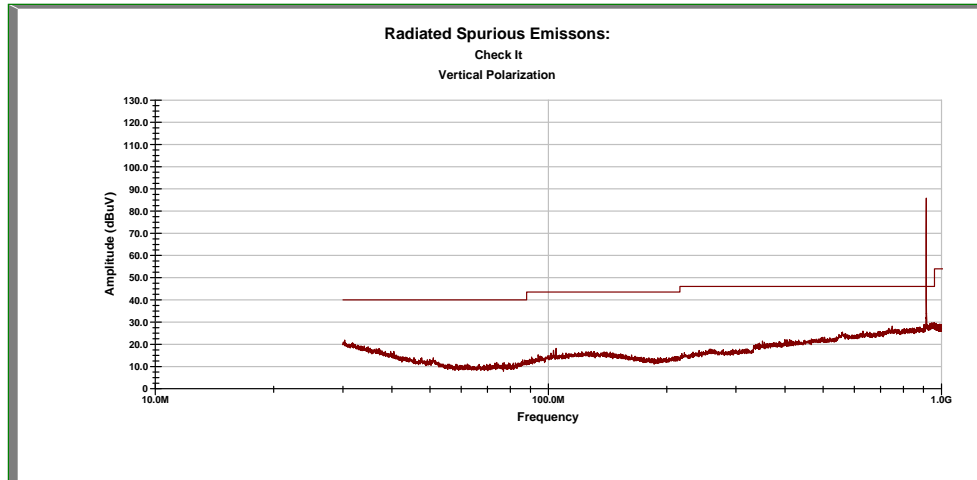
B.7 SETUP DRAWING

Figure G.7-1 - Setup Drawing – Radiated RX Spurious Emissions (> 1 GHz)



Spurious Emissions (worst case)

Radiated Pre-Scan at 1m, 30 MHz-1 GHz
No Emissions Detected.



C.5 MEASUREMENT EQUIPMENT SETUP

MEASUREMENT EQUIPMENT CONNECTIONS

For the field strength measurements, the measurement equipment was connected as shown in G.6. Various antenna types may be required to cover the applicable frequency range tested. The ranges in which each antenna was used are shown below.

Frequency Range	RX Antenna	TX Antenna
30 MHz - 1GHz	Bilog	N/a
1 GHz - 18 GHz	ETS 3115 Horn	N/a

MEASUREMENT EQUIPMENT SETTINGS

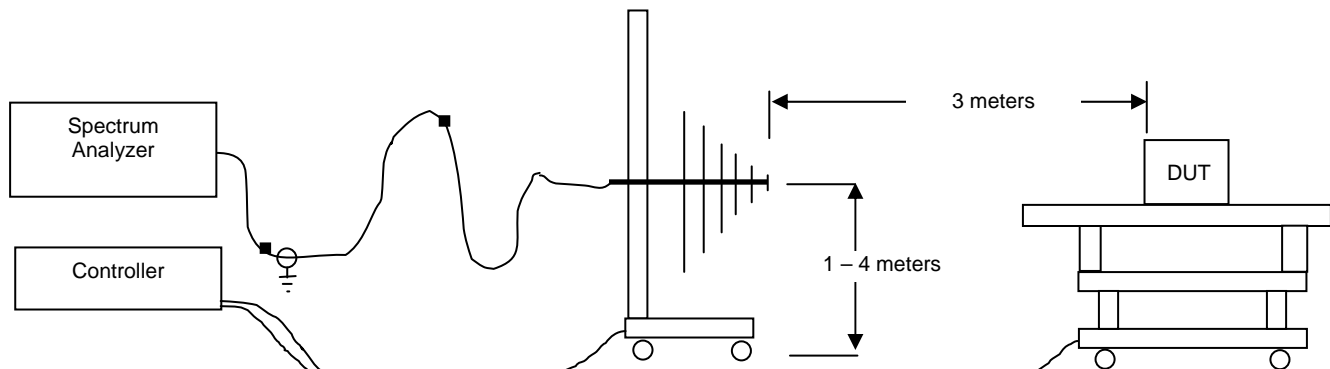
For the spurious out-of-band emissions, the spectrum analyzer was set to the following settings:

Measurement	RBW kHz	VBW kHz	Detector
< 1 GHz	100	300	Peak*
> 1 GHz	1000	3000	Peak*

* As a worst-case measurement, the QP limit was applied to measurements made with a peak detector.

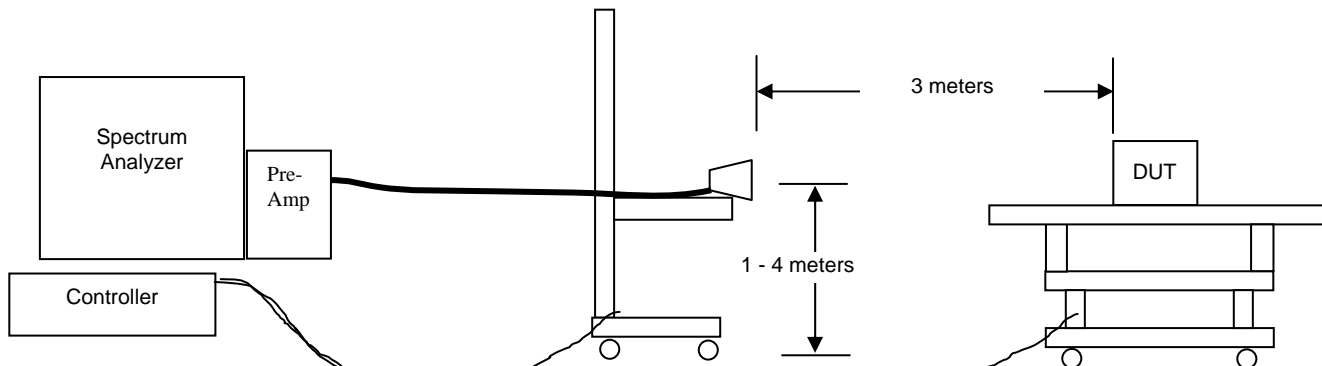
C.6 SETUP DRAWING

Figure C.66-1 - Setup Drawing – Radiated RX Spurious Emissions (< 1 GHz)



C.7 SETUP DRAWING

Figure G.7-1 - Setup Drawing – Radiated RX Spurious Emissions (> 1 GHz)



15.249(d)(e) Field Strength of Spurious Emissions – Peak Detector
CG-300 Wireless Gateway
Low Power Transmitter, DXX

Frequency (MHz)	Antenna Pol.	Emission Level (dBuV/m) @ 1m	Antenna Factor (dB)	Cable Loss/Amp Gain Corr.	Distance Correction	Emission Level (dBuV/m@3m)	Limit (avg) (dBuV/m@3m)	Margin
1824.98	V	40.3	26.8	-28.7	-9.54	28.86	54.0	-25.14
	H	43.1	26.8	-28.7	-9.54	31.66	54.0	-22.34
1999.92	V	51.7	27.2	-28.8	-9.54	40.56	54.0	-13.44
2799.9	V	47.3	29.0	-27.6	-9.54	39.16	54.0	-14.84

ND = Not Detected.

Data presented using a Pk detector compared to average limits. Therefore satisfying the requirements of 15.249(e).

Device characterization was performed on 3 orthogonal axis to determine worst case orientation.

EUT was measured at 1m and extrapolated to 3m due to low tx power and receiver sensitivity..

 hp

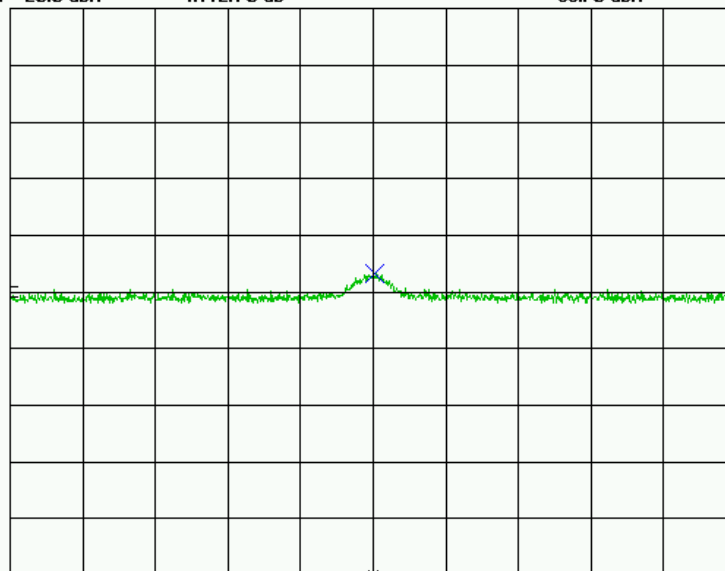
REF -20.0 dBm

ATTEN 0 dB

MKR 1.825 01 GHz
-66.70 dBm

10 dB/

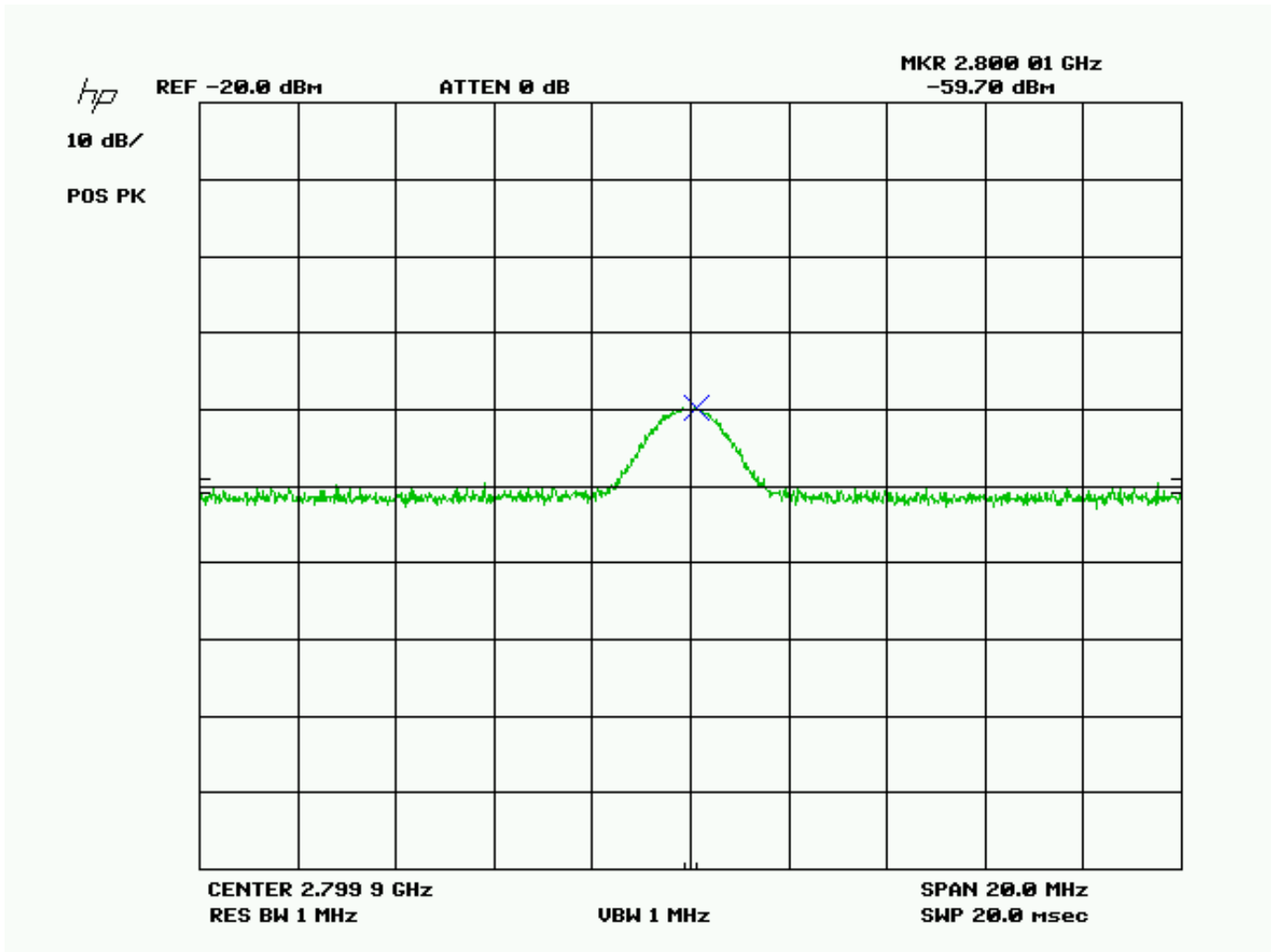
POS PK



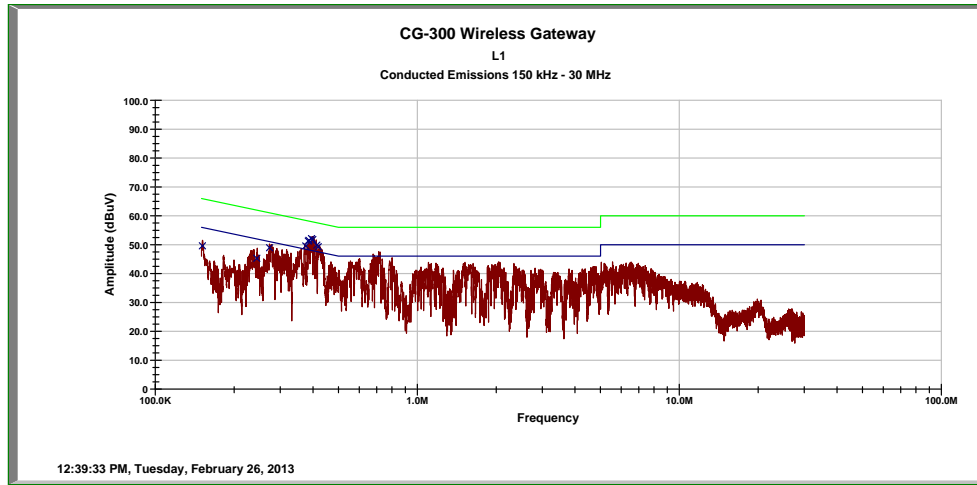
CENTER 1.824 9 GHz
RES BW 1 MHz

VBW 1 MHz

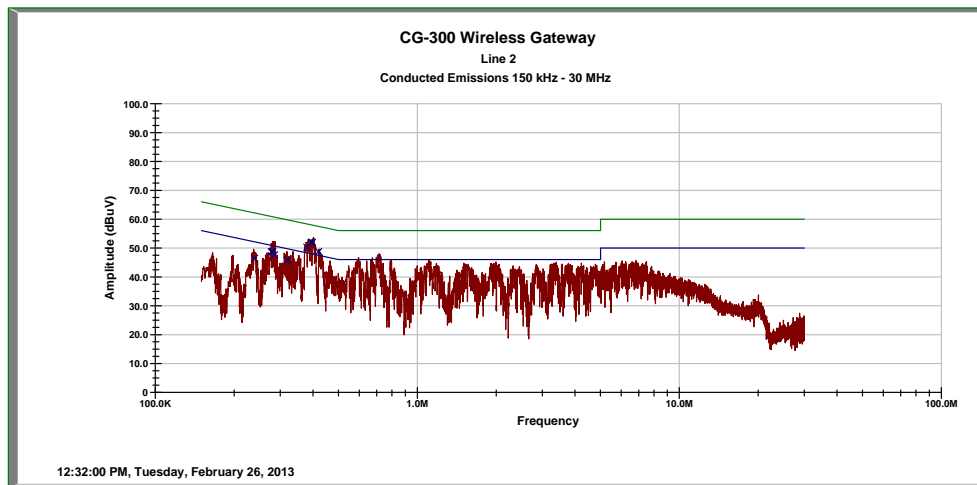
SPAN 20.0 MHz
SWP 20.0 msec



15.207, Powerline Conducted Emissions.



Frequency (MHz)	Emission Level (dBuV)			Limits (dBuV)		Margin (dB)		Result
	Corrected Average	Corrected Peak	Corrected QP	Average	QP	Average	QP	
0.151329	39.548	52.001	49.591	56	66.0	16.452	16.409	Pass
0.244142	33.159	50.371	45.261	53.3	63.3	20.141	18.039	Pass
0.272925	41.963	51.658	48.938	52.48	62.48	10.517	13.542	Pass
0.375074	36.07	51.458	49.568	49.56	59.56	13.49	9.992	Pass
0.383656	41.732	52.957	51.217	49.32	59.32	7.588	8.103	Pass
0.385878	42.789	53.054	51.514	49.25	59.25	6.461	7.736	Pass
0.394545	44.136	53.451	52.091	49.00	59.00	4.864	6.909	Pass
0.399256	41.086	53.251	51.771	48.87	58.87	7.784	7.099	Pass
0.413253	35.468	52.268	49.828	48.47	58.47	13.002	8.642	Pass
0.418938	37.45	51.262	49.282	48.3	58.3	10.85	9.018	Pass



Frequency (MHz)	Emission Level (dBuV)			Limits (dBuV)		Margin (dB)		Result
	Corrected Average	Corrected Peak	Corrected QP	Average	QP	Average	QP	
0.239131	38.264	50.369	46.489	53.45	63.45	15.186	16.961	Pass
0.277060	41.56	53.648	48.718	52.37	62.37	10.81	13.652	Pass
0.279925	39.812	53.447	48.937	52.28	62.28	12.468	13.343	Pass
0.280687	39.519	53.547	48.717	52.26	62.26	12.741	13.543	Pass
0.285221	35.982	52.95	47.71	52.13	62.13	16.148	14.42	Pass
0.319570	35.286	51.348	45.858	51.15	61.15	15.864	15.292	Pass
0.378745	38.592	52.352	50.332	49.46	59.46	10.868	9.128	Pass
0.393092	44.264	53.454	52.094	49.05	59.05	4.786	6.956	Pass
0.397820	42.497	53.45	52.01	48.9	58.9	6.403	6.89	Pass
0.419576	37.067	50.547	48.767	48.3	58.3	11.233	9.533	Pass

