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REPORT ON ELECTROMAGNETIC COMPATIBILITY TESTS

Performed at:
TWENTY PENCE TEST SITE

Twenty Pence Road,
Cottenham,
Cambridge
U.K.
CB24 8PS

on

Sepura PLC

STP8080/STP8280

dated

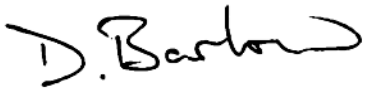
22nd June 2012

Document History

Issue	Date	Affected page(s)	Description of modifications	Revised by	Approved by
1	04/07/12		Initial release		

Based on report template:
v090319

Equipment Under Test (EUT):	**STP8080/STP8280**
Test Commissioned by:	**Sepura PLC Radio House St Andrews Road Cambridge Cambridgeshire CB4 1GR**
Representative:	**Bob Allen**
Test Started:	**10th May 2012**
Test Completed:	**20th June 2012**
Test Engineer:	**Dave Smith**
Date of Report:	**22nd June 2012**

Written by:	**Dave Smith**	**Checked by:**	**Derek Barlow**
Signature:		**Signature:**	
Date:	**22nd June 2012**	**Date:**	**4th July 2012**

dB Technology can only report on the specific unit(s) tested at its site. The responsibility for extrapolating this data to a product line lies solely with the manufacturer.

Test Standards Applied

Part 90 of CFR47	***Private Land Mobile Radio Services***

CFR 47 Part 15 Class B	***Code of Federal Regulations: Pt 15 Subpart B- Radio Frequency Devices - Unintentional Radiators***

Emissions Test Results Summary

Part 90 **PASS**

Test	Port	Method	Limit	PASS/FAIL	*Notes*
Output Power Radiated		90.205	90.205(h)	No Limit	#1
Output Power Conducted	antenna	90.205 2.1046	90.205(h)	No Limit	#1
Types of Emissions	antenna	90.207 2.1047	Specified by manufacturer		
Bandwidth	antenna	90.209 2.1049	90.209(b)(5)	PASS	#2
Emissions Masks Radiated		90.210 2.1051	90.221(d)	PASS	#3
Emissions Masks Conducted	antenna	90.210 2.1051	90.221(d)	PASS	#3
Frequency Stability	antenna	90.213 2.1055	90.213	PASS	
Frequency Transient Behaviour	antenna	90.214	90.214	PASS	
Adjacent Channel Power		90.221	90.221(b)	PASS	

specs_canadav111211

CFR 47 Part 15 **PASS**

Test	Port	Method	Limit	PASS/FAIL	*Notes*
Conducted Emissions	ac power	ANSI C63.4:2003	CISPR22(B)	N/A	#4
Radiated Emissions		ANSI C63.4:2003	FCC_B	PASS	

specs_fccv100412

#1 There is no specific limit on output power.
#2 The additional note 6 of FCC Waiver 11-63 was applied which allows a bandwidth of up to 22kHz providing the additional Adjacent Channel Power requirements are met.
#3 The additional note 5 of FCC Waiver 11-63 was applied which only stipulates limits 75kHz from the carrier providing the additional Adjacent Channel Power requirements are met.
#4 Test not applicable because EUT does not have ac power port..

This Report shows that the EUT met all of the requirements for the tests performed - as shown above.

Contents

1 EUT Details

1.1 General

The EUT was a TETRA Voice + Data Hand Portable .

The transmitter can operate over the following frequency bands:

817MHz to 824MHz (in TMO mode)
862MHz to 869MHz (in DMO mode)

The receiver can operate over the following frequency bands:

862MHz to 869MHz

Measurements were made at the top and bottom of the appropriate frequency range:

Bottom: 817 MHz
Top: 824 MHz

Bottom: 862 MHz
Top: 869 MHz

The nominal output power is 32.5dBm (1.8W).

The product can be used on a standalone basis in which case it is powered from an internal battery. It can also be used in conjunction with a Car Kit in which case it is powered from a lead acid vehicle battery with nominal voltage of 13.2V.

FCC part 90 requirements using the “Tetra Waiver” as described in FCC 11-63.

This report additionally includes radiated emissions measurements:

- o with a Remote Speaker Microphone (RSM) connected;
- o in a Car Kit configuration.

All tests were performed on the STP8080 which is the fully featured unit. For the STP8280 variant it was only considered necessary to perform receiver mode radiated emissions measurements.

Radiated field strength tests were performed at the dB Technology Test Site Registered with the FCC: Registration number: 90528.

Unless otherwise stated, tests were performed with nominal power supply voltage.

1.2 Modifications to EUT and Peripherals

Details of any modifications that were required to achieve compliance are listed below. The modification numbers are referred to in the results sections as appropriate.

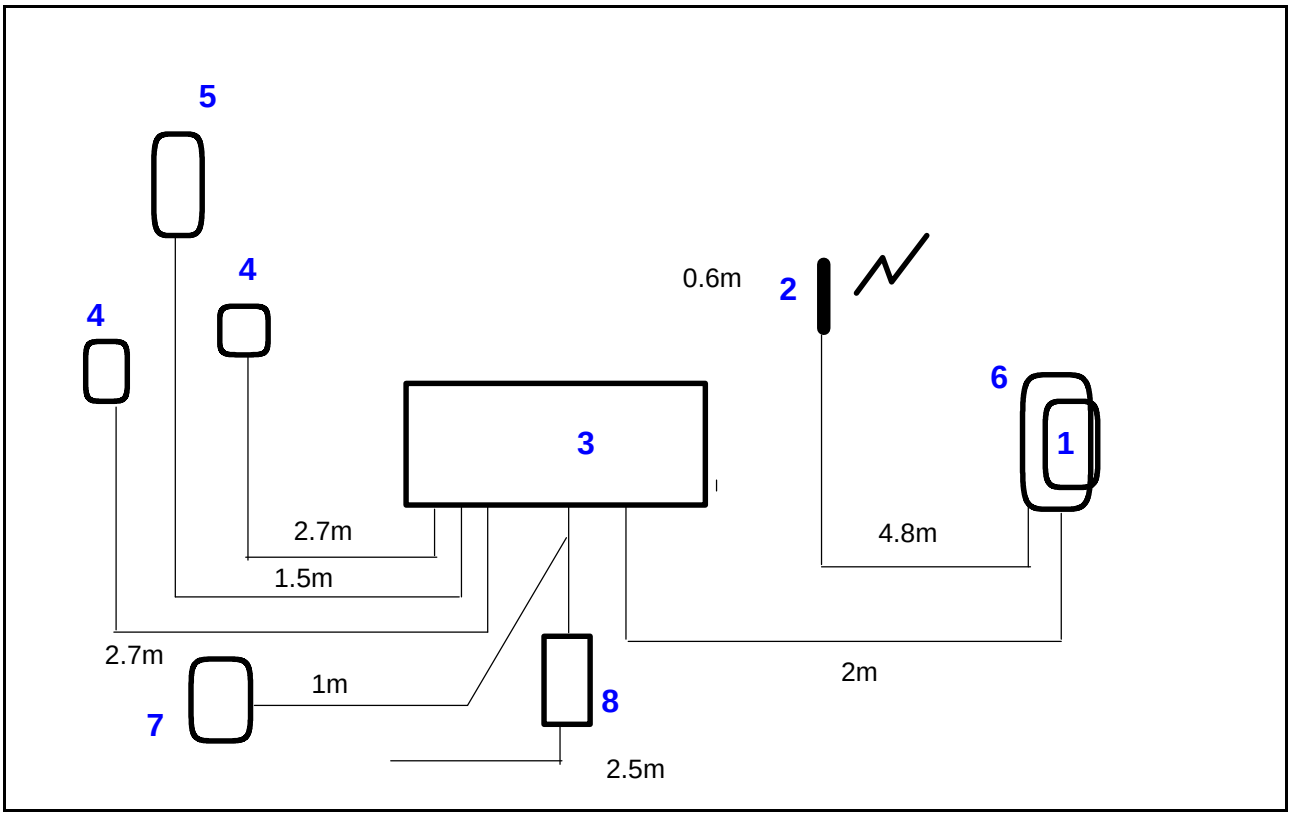
Mod No:	Details	Implemented for
0	Original sample as supplied.	
1	Screening can correctly fitted.	Radiated Spurious

1.3 EUT Operating Modes

The EUT was tested in the following operating mode or modes. Generally, operating modes are chosen that will exercise the functions of the EUT as fully as possible and in a manner likely to produce maximum emission levels or susceptibility. Individual test result sheets reference the operating mode of the EUT.

Operating Mode	Details
1	Transmitting on selected channel.
2	Receiving on selected channel.

Figure 1 Car Kit Configuration

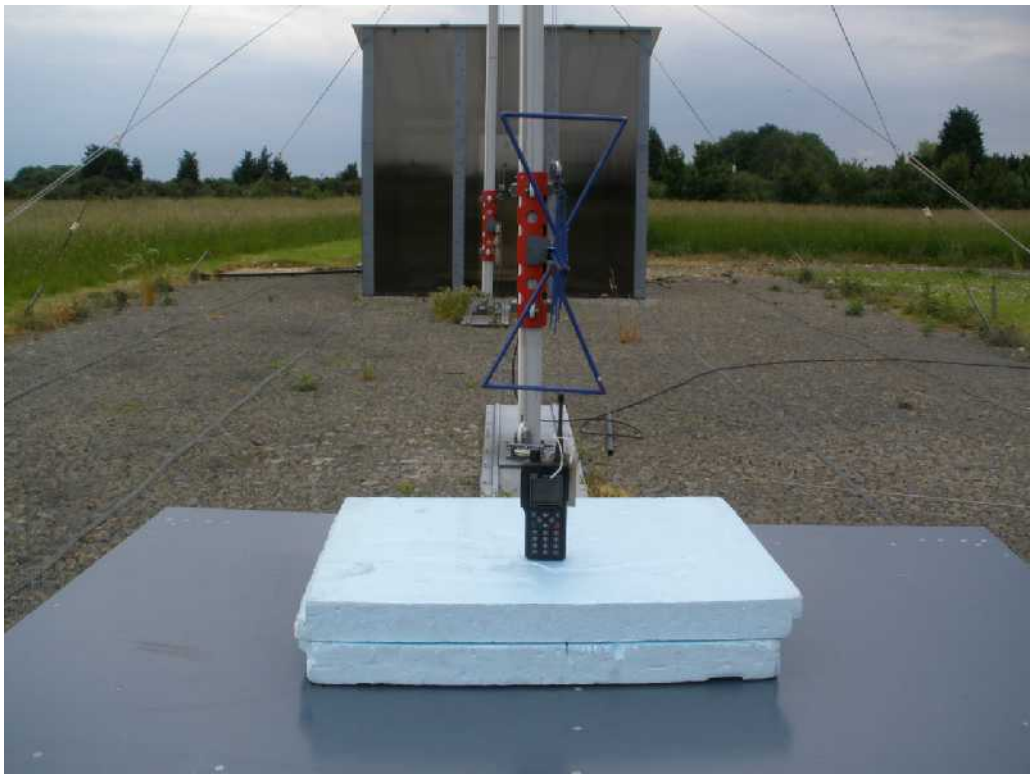


Item	Manufacturer	Model	Description	Serial No:	Notes
1	Sepura	STP8080	TETRA Hand Portable	1PRC01209G4K6MV	
2	Sepura	300-00390	Antenna		
3	Sepura	300 00797	CarKit		
4	Sepura	300 00657	Hands Free Kit		
5	Sepura	300 00492	Handset		
6	Sepura	300 00796	Cradle		
7	Sepura	300 00719	Speaker		
8	Kingshill	18V10CA	Bench Power Supply	566	

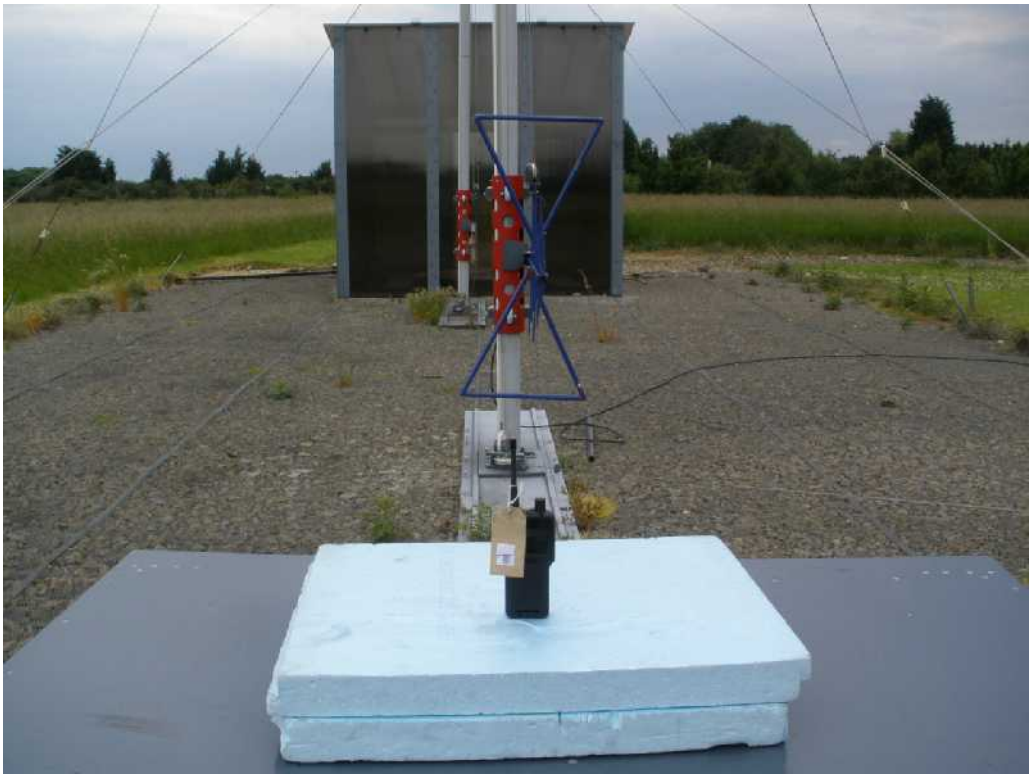
The same sample of Tetra Hand Portable was used for the conducted antenna tests.

The serial number of the STP8280 was 1PR101114G4D4VX.

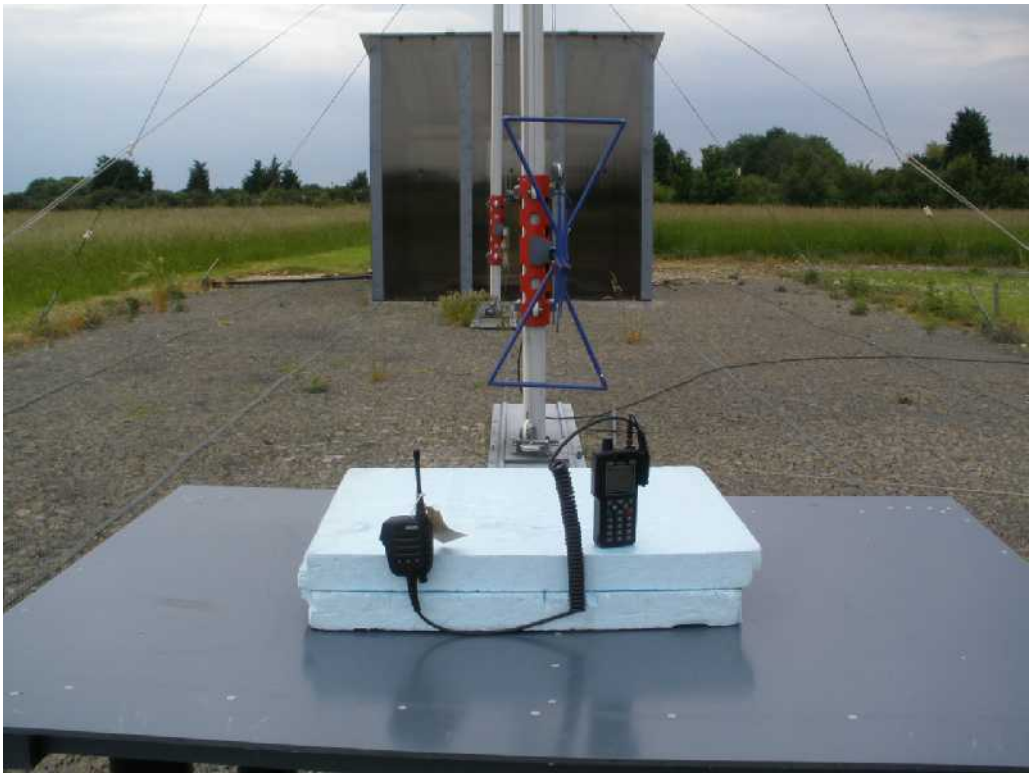
Photograph 1 STP8080: Connected to Agilent Analyser



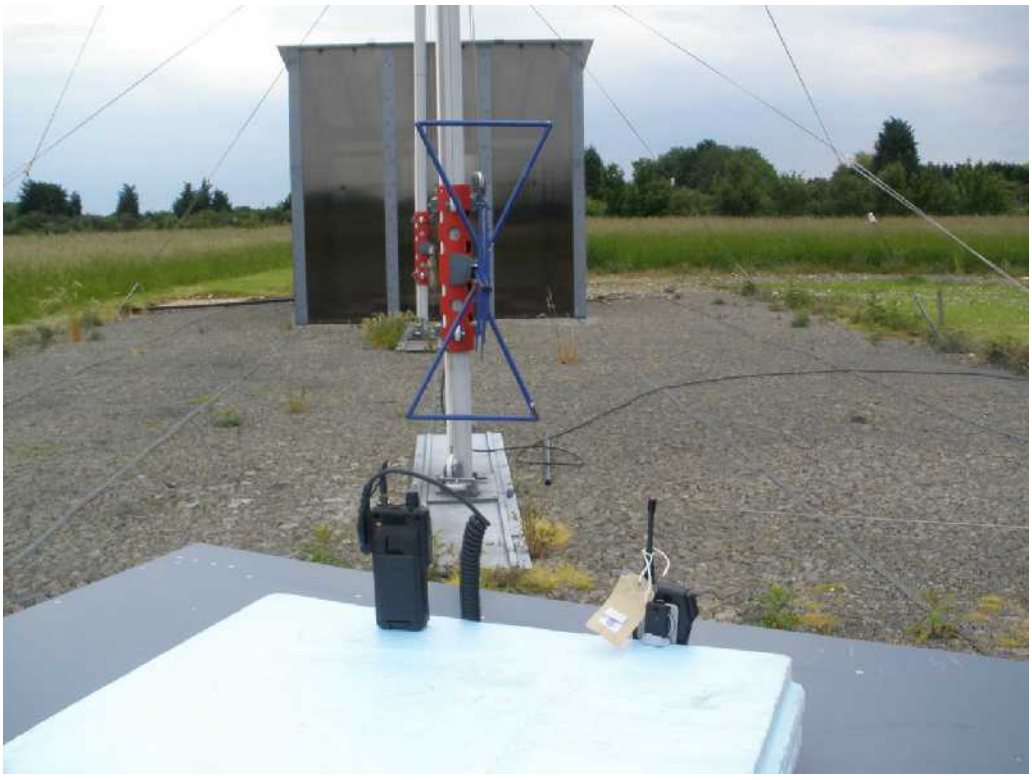
Photograph 2 Standalone: Radiated Emissions - Front



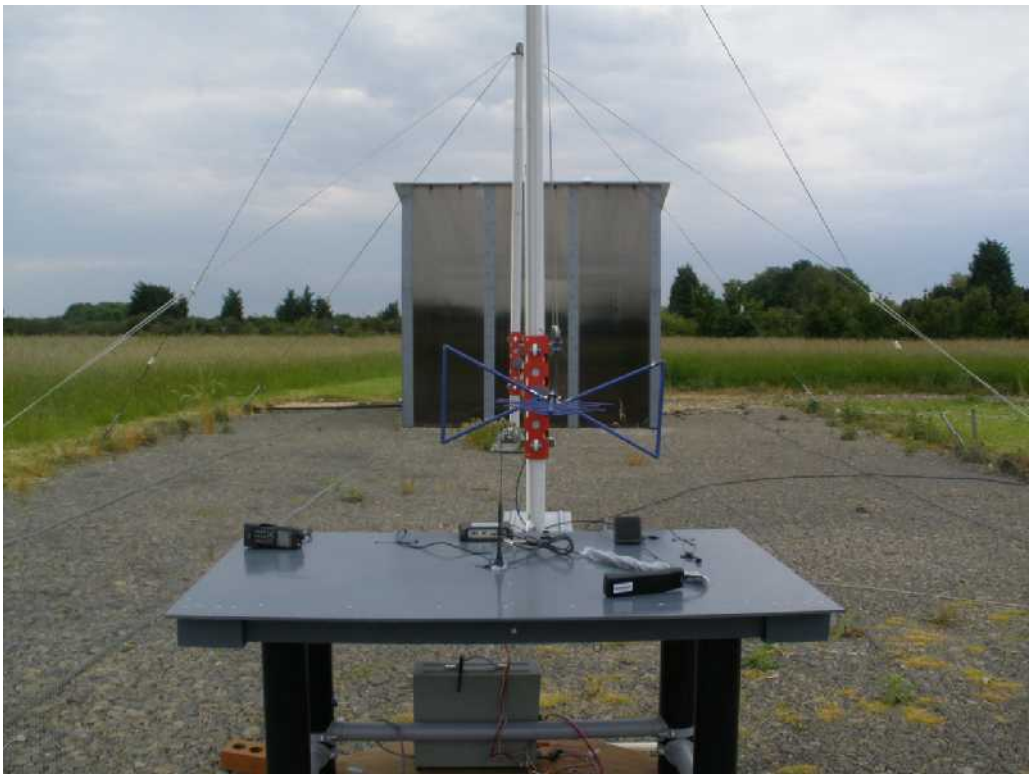
Photograph 3 Standalone: Radiated Emissions - Back



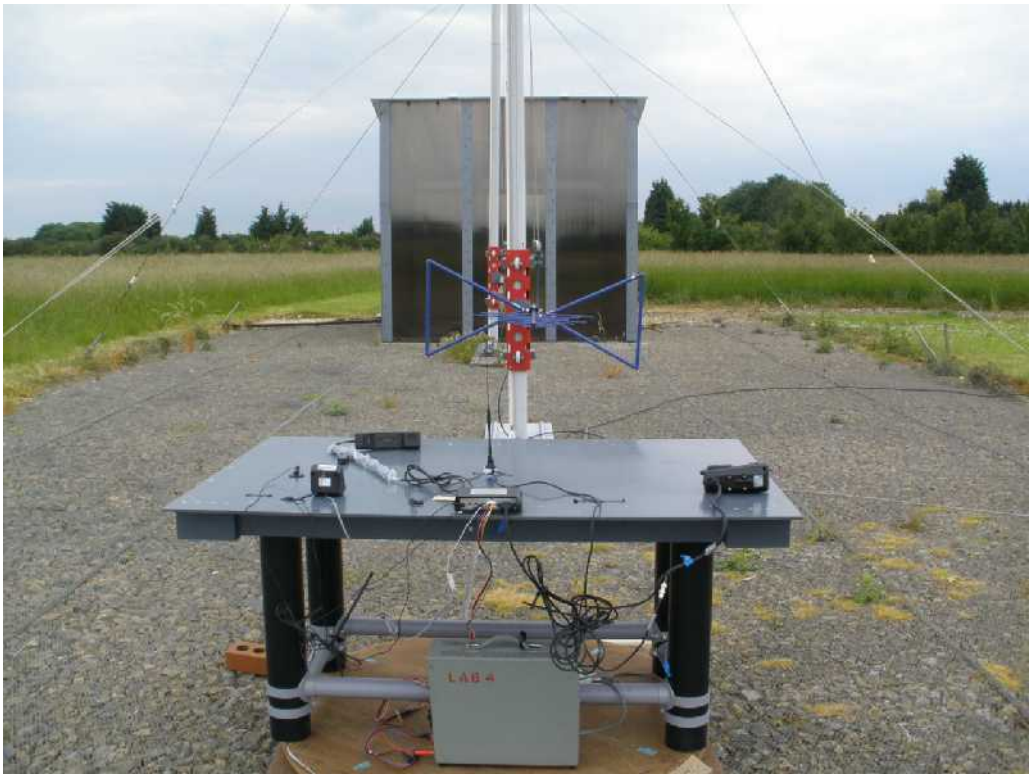
Photograph 4 With RSM: Radiated Emissions - Front



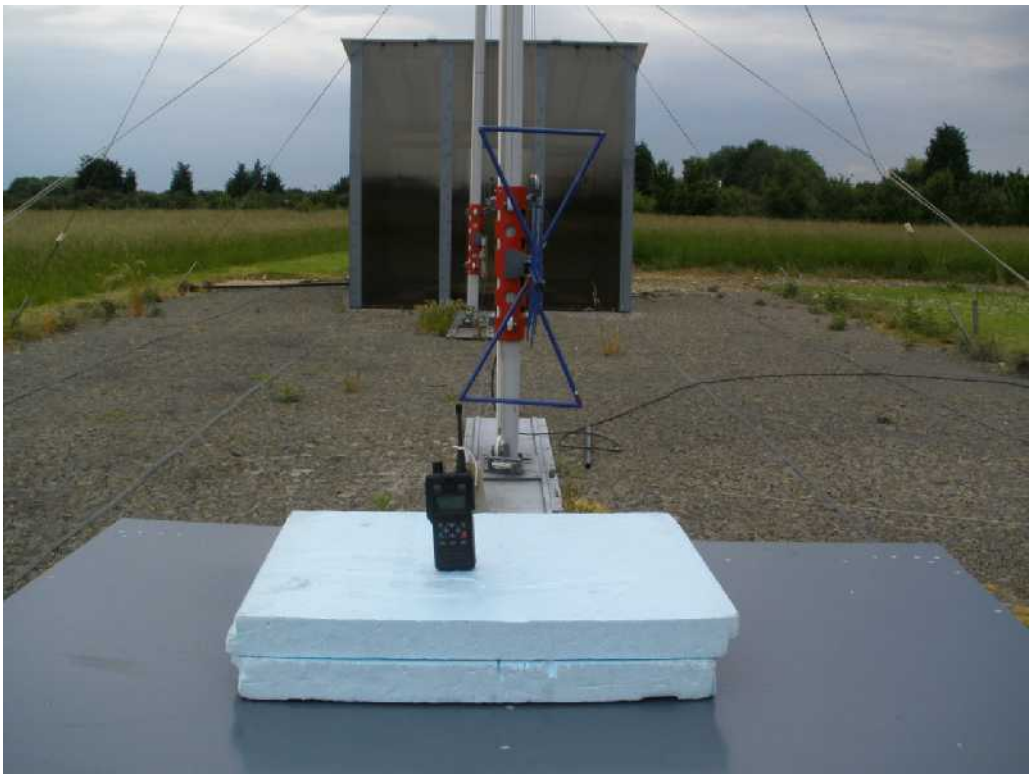
Photograph 5 With RSM: Radiated Emissions - Back



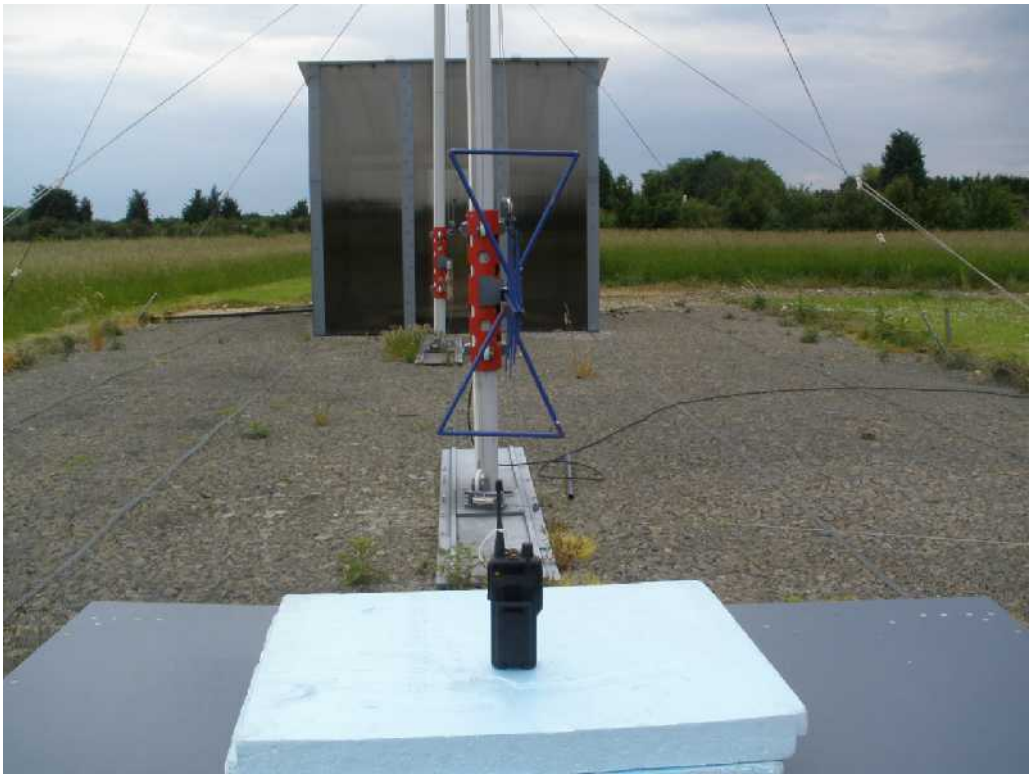
Photograph 6 Car Kit: Radiated Emissions - Front



Photograph 7 Car Kit: Radiated Emissions - Back



Photograph 8 STP8280: Radiated Emissions - Front



Photograph 9 STP8280: Radiated Emissions - Back

2 Test Equipment

The test equipment used during the tests was one or more of the items listed below. Individual test result sheets indicate which items were used.

Ref No:	Details	Serial Number	Cal Date	Cal Interval
A19	EMCO 3115 DR Guide (1-18GHz)	2431	23/01/2012	1 year
A23	EMCO 3115 DR Guide (1-18GHz)	9507-4525	31/01/2012	1 year
A24	Chase X-wing Bilog CBL6144 26MHz-3GHz	27590	18/11/2011	1 year
A30	Schwarzbeck MiniBicon (30MHz to 1GHz)	9115-180	21/01/2010	3 years
A5	Chase Bilog CBL6111A	1760	31/01/2012	1 year
PM6	Marconi 6960B RF Power Meter	236923/003	20/12/2011	1 year
PRE3	dB Tech 100M-20G 36dB pre-amp	03	08/01/2012	1 year
PS10	Marconi 6910 RF Power Sensor (-30dBm / +20dBm) 10MHz to 20GHz	5009	20/12/2011	1 year
R4	R&S ESVS10	843744/002	16/12/2011	1 year
R8	Agilent E7405A Spectrum Analyser	MY44212494	19/09/2011	1 year
R9	Agilent E7405A Spectrum Analyser	MY45110758	21/11/2011	1 year
RFF15	Band Pass Filter 1GHz to 2GHz	15	08/02/2012	1 year
RFF16	500MHz to 1GHz Notch Filter	FF204-3	08/02/2012	1 year
RFF17	Low Pass RF Filter 550MHz	17	08/02/2012	1 year
RFF22	High Pass Filter - 1.35GHz (10GHz) MicroTronics HPM13017	033	20/12/2011	1 year
SG16	Marconi 6203 Microwave Test Set (10MHz - 26.5GHz)	236252/025	08/02/2012	1 year
SG9	HP 8648C 9kHz-3.2GHz Signal Generator	3847A05254	08/02/2012	1 year
SEP1	R&S FSU Spectrum Analyser	200088	02/04/2009	3 years
TTS	IFR 2968 Tetra radio Test Set	296501/107	11/11/2011	1 year

The Tetra Test Set is owned by Sepura.

The calibration of the signal generator was not critical because its output frequency, level and modulation were measured with calibrated equipment during each test.

3 Test Methods

3.1 Antenna Conducted Carrier Power

The antenna output is connected to a spectrum analyser via a suitable PAD. The bandwidth on the spectrum analyser is set to greater than the EUT occupied bandwidth. A peak measurement is recorded. Additional measurements are made with antenna output connected to a power meter providing average measurements.

3.2 Antenna Conducted Transmitter Unwanted Emissions

Measurements are made with the antenna output connected to a spectrum analyser via a suitable PAD. Sweeps are made over the specified frequency ranges . The limit is set relative to the measured carrier power. A peak detector is used.

3.3 Antenna Conducted Occupied Bandwidth

Measurements are made with the antenna output connected to a spectrum analyser via a suitable PAD. Sweeps are made with a 300Hz Resolution Bandwidth and a 1kHz Video Bandwidth. A peak detector is used. Markers are used to determine the 99% power bandwidth.

3.4 Antenna Conducted Adjacent Channel Power

Measurements are made with the antenna output connected to an R&S FSU Spectrum Analyser via a suitable PAD. The Analyser is set to make adjacent channel power measurements using the pre-configured settings for Tetra with 25kHz channel spacing.

3.5 Frequency Stability

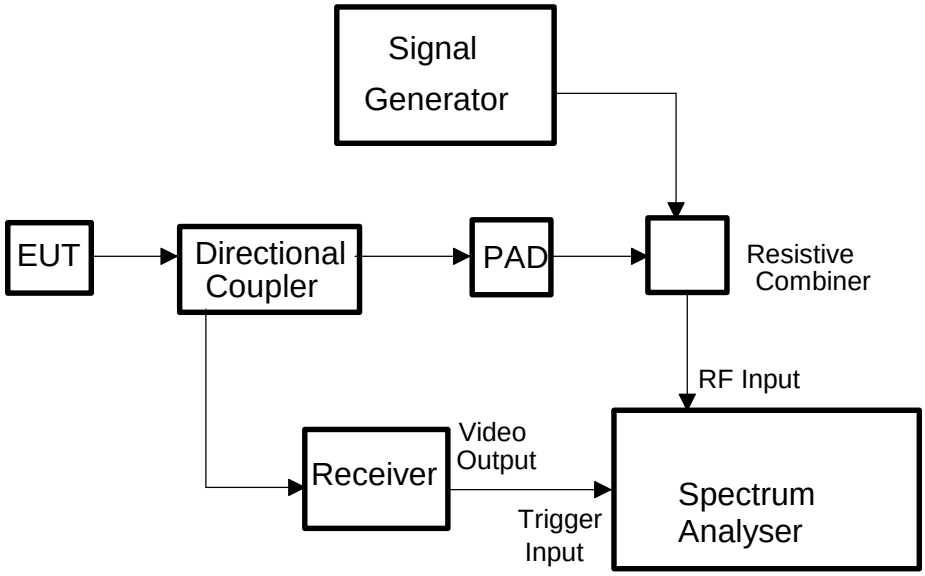
The EUT is placed in an environmental chamber. The temperature inside the chamber is set to the required level and allowed to stabilise.

For DMO mode the antenna output is connected to a spectrum analyser via a suitable PAD. The EUT is set to transmit with constant carrier (at a frequency 2.25kHz above channel centre frequency). The frequency is measured using the frequency counter function of the spectrum analyser.

For TMO mode the antenna output is connected to a Tetra Test Set. The EUT is set to transmit using normal burst operation. the frequency error, as indicated by the Tetra Test Set, is recorded.

Measurements are made at the specified temperature and over the required voltage supply range of the EUT.

3.6 Transient Frequency Behaviour



The test equipment was set up as shown above.

The spectrum analyser was set to 0Hz span with its inbuilt FM demodulation function activated.

Initially only the EUT was set to transmit an unmodulated signal and the centre frequency of the analyser adjusted to give 0Hz FM deviation.

The EUT transmitter was then switched off and the signal generator set to provide a carrier only output. The frequency of the signal generator was adjusted to again give 0Hz FM deviation on the spectrum analyser.

The signal generator FM modulation was then switched on and adjusted to give 25kHz FM deviation on the spectrum analyser.

The spectrum analyser was then set to trigger only on video output from the receiver. The directional coupler was used to feed an attenuated portion of the EUT transmitter into the receiver. The receiver was tuned to the transmit frequency and so produced a change on its video output when the transmitter was switched on and off. This signal was used to trigger the spectrum analyser.

FM deviation data was recorded from the spectrum analyser for both carrier switch on and switch off and at all three test frequencies.

3.7 Radiated Transmitter Emissions (Substitution Method)

Initial scans are performed in a semi-anechoic screened room at a distance of 3m. Scans are performed over the frequency range specified in the test standard with the antenna both horizontally and vertically polarised. During these scans the EUT and peripherals are rotated through 360°. Bench top EUTs are placed on a non-conducting bench at a height of 0.8m above the ground plane. Floor standing EUTs are placed 0.1m above the ground plane. The EUT cables were manipulated in an attempt to produce maximum emissions. The results of the scans are shown in the plots included at the end of the report.

Significant emissions identified by the scans are measured using a substitution method. Maximised emission readings are obtained by rotating the EUT through 360° and adjusting the height of the antenna from 1m to 4m. Measurements are made with the antenna both horizontally and vertically polarised and the results tabulated.

The EUT is then replaced with a calibrated reference antenna fed from a signal generator. The level fed into the reference antenna is measured with a power meter. Measurements are made to determine the power output of the signal generator required to give the same emission levels as were observed from the EUT.

The radiated power from the EUT is calculated as:

Signal Level fed into Reference Antenna	+ Gain of Reference Antenna	+ Radiated Level From EUT	- Radiated Level From Reference Antenna

For example, assuming following measurements:

Signal Level fed into Reference Antenna	=	-14.3dBm
Gain of Reference Antenna	=	7.1 dBi
Radiated Level from EUT (i.e. Level at Measuring Receiver)	=	37 dBuV
Radiated Level from Reference Antenna (i.e. Level at Measuring Receiver)	=	61.5 dBuV

Then the Radiated Power from the EUT = -14.3 + 7.1 +37 - 61.5 dBm (isotropic)
= - 31.7 dBm (isotropic)

3.8 Receiver Radiated Emissions

Initial scans are performed in a semi-anechoic screened room at a distance of 3m. Scans are performed over the frequency range specified in the test standard with the antenna both horizontally and vertically polarised. During these scans the EUT and peripherals are rotated through 360°. Bench top EUTs are placed on a non-conducting bench at a height of 0.8m above the ground plane. Floor standing EUTs are placed 0.1m above the ground plane. The EUT cables were manipulated in an attempt to produce maximum emissions. The results of the scans are shown in the plots included at the end of the report.

Significant emissions identified by the scans are measured on an open area test site at the appropriate test distance using a CISPR16 quasi-peak receiver. Maximised readings are obtained by rotating the EUT through 360° and adjusting the height of the antenna from 1m to 4m. Measurements are made with the antenna both horizontally and vertically polarised and the results tabulated.

Tabulated results show levels based on the following calculation:

Field Strength (dBuV) = receiver reading (dBuV) + CF (dB/m)

CF is the correction factor for the antenna and cable.

For example:

at 114MHz receiver reading was 17.9 dBuV, combined correction factor = 13.1 (dB/m).

Total field strength = 17.9 + 13.1 = 31.0 dBuV/m.

4 Test Results

The following sections contain tabulated test results. Plots of various scans are included at the back of this section.

4.1 Conducted Antenna Output Power

Factor Set 1:
Factor Set 2:
Factor Set 3:
Test Equipment: R9 PS10 PM6

Conducted Emissions (Signal)

Company:	**Sepura PLC**	***Product:***	**STP8080/STP8280**
Date:	**06/06/2012**	***Test Eng:***	**Dave Smith**
Ports:	**antenna**		
Test:	**90.205**	**using limits of**	**90.205(h)**
Ports:			
Test:		**using limits of**	

Notes	Comments and Observations

Spectrum anlayser results using a peak detector are shown in plots 1 to 4.

Measurements were also made using a power meter with an average detector.

Measurements were made with continuous modulation.

Taking into account the loss of the cable and attenuators the following measurements were made:

Channel	Peak dBm	Average dBm
817 MHz	36.0	33.02
824 MHz	36.2	33.08
862 MHz	35.7	33.09
869 MHz	35.8	33.06

4.2 Conducted Antenna Occupied Bandwidth

Factor Set 1:
Factor Set 2: - - - -
Factor Set 3: - - - -
Test Equipment: R9

Conducted Emissions (Signal)

Company:	Sepura PLC	*Product:*	STP8080/STP8280
Date:	07/06/2012	*Test Eng:*	Dave Smith
Ports:	antenna		
Test:	90.209	using limits of	90.209(b)(5)
Ports:			
Test:		using limits of	

Notes	Comments and Observations

Measurements were made with continuous modulation applied.
Spectrum analyser results are shown in plots 5 to 8.

Using the "Bandwidth Power" function of the spectrum analyser, the following measurements were recorded:

817MHz 20.97 kHz

824MHz 21.01 kHz

862MHz 21.03 kHz

869MHz 21.05 kHz

Limit:

Using note 6 in the "Tetra Waiver" (FCC11-63) the limit is 22kHz (providing Adjacent Channel Power requirements are met).

PASS

4.3 Frequency Stability - DMO Mode - Absolute Frequency Measurements

Factor Set 1:
Factor Set 2: - - - -
Factor Set 3: - - - -
Test Equipment: R9

FrequencyStability

Company:	Sepura PLC	*Product:*	STP8080/STP8280
Date:	12/06/2012	*Test Eng:*	Dave Smith
Ports:	antenna		
Test:	90.213	using limits of	90.213
Ports:			
Test:		using limits of	

Notes	Comments and Observations

DMO Frequency (as recorded from Spectrum Analyser Frequenct Counter)

		862MHz Channel	869MHz Channel
-30.0°C	6.4V	862.002618	869.002378
	7.4V	862.002612	869.002335
-20.0°C	6.4V	862.002598	869.002484
	7.4V	862.002579	869.002526
-10.0°C	6.4V	862.002396	869.002428
	7.4V	862.002407	869.002423
0.0°C	6.4V	862.002429	869.002450
	7.4V	862.002448	869.002450
10.0°C	6.4V	862.002399	869.002433
	7.4V	862.002430	869.002444
20.0°C	6.4V	862.002334	869.002333
	7.4V	862.002342	869.002353
30.0°C	6.4V	862.002310	869.002310
	7.4V	862.002317	869.002313
40.0°C	6.4V	862.002278	869.002227
	7.4V	862.002283	869.002280
50.0°C	6.4V	862.002279	869.002281
	7.4V	862.002273	869.002293
55.0°C	6.4V	862.002271	869.002274
	7.4V	862.002263	869.002280

See next page for deviation from nominal voltage/temperature.

4.4 Frequency Stability - DMO Mode - Deviations from Nominal Volt/Temp - ppm

Factor Set 1:
Factor Set 2: - - - -
Factor Set 3: - - - -
Test Equipment: R9

FrequencyStability

Company:	Sepura PLC	*Product:*	STP8080/STP8280
Date:	12/06/2012	*Test Eng:*	Dave Smith
Ports:	antenna		
Test:	90.213	using limits of	90.213
Ports:			
Test:		using limits of	

Notes	Comments and Observations

DMO Frequency deviation from nominal voltage/temperature - ppm

		862MHz Channel	869MHz Channel
-30.0°C	6.4V	0.320	0.029
	7.4V	0.313	-0.021
-20.0°C	6.4V	0.297	0.151
	7.4V	0.275	0.199
-10.0°C	6.4V	0.063	0.086
	7.4V	0.075	0.081
0.0°C	6.4V	0.101	0.112
	7.4V	0.123	0.112
10.0°C	6.4V	0.066	0.092
	7.4V	0.102	0.105
20.0°C	6.4V	-0.009	-0.023
	7.4V	0.000	0.000
30.0°C	6.4V	-0.037	-0.049
	7.4V	-0.029	-0.046
40.0°C	6.4V	-0.064	-0.126
	7.4V	-0.059	-0.073
50.0°C	6.4V	-0.073	-0.083
	7.4V	-0.080	-0.069
55.0°C	6.4V	-0.082	-0.091
	7.4V	-0.092	-0.084

The part 90 Limit for the 854MHz to 869MHz band is 2.5ppm **PASS**

4.5 Frequency Stability - TMO Mode - Frequency Error Hz

Factor Set 1:
Factor Set 2:
Factor Set 3:
Test Equipment: TTS

FrequencyStability

Company:	Sepura PLC	*Product:*	STP8080/STP8280
Date:	12/06/2012	*Test Eng:*	Dave Smith
Ports:	antenna		
Test:	90.213	using limits of	90.213
Ports:			
Test:		using limits of	

Notes	Comments and Observations

TMO Frequency Error (as recorded from Tetra Test Set) (Hz)

		817MHz Channel	824MHz Channel
-30.0°C	6.4V	-11.1	-1.5
	7.4V	-10.1	-0.9
-20.0°C	6.4V	-12.7	-3.2
	7.4V	-13.1	-4.7
-10.0°C	6.4V	-14.1	-4.1
	7.4V	-13.7	-6.6
0.0°C	6.4V	-16.1	-14.1
	7.4V	-14.6	-14.1
10.0°C	6.4V	-3.9	-13.2
	7.4V	-2.4	-14.4
20.0°C	6.4V	-5.7	-3.0
	7.4V	-6.7	0.2
30.0°C	6.4V	-11.2	-15.2
	7.4V	-11.5	-15.4
40.0°C	6.4V	-7.2	-12.4
	7.4V	-9.1	-14.5
50.0°C	6.4V	-4.7	-6.2
	7.4V	-4.5	-9.5
55.0°C	6.4V	-5.2	-4.6
	7.4V	-5.1	-7.8

See next page for deviation in ppm.

4.6 Frequency Stability - TMO Mode - Deviation from nominal volt/temp - ppm

Factor Set 1:
Factor Set 2:
Factor Set 3:
Test Equipment: TTS

FrequencyStability

Company:	Sepura PLC	*Product:*	STP8080/STP8280
Date:	12/06/2012	*Test Eng:*	Dave Smith
Ports:	antenna		
Test:	90.213	using limits of	90.213
Ports:			
Test:		using limits of	

Notes	Comments and Observations

TMO Frequency deviation - ppm

		817MHz Channel	824MHz Channel
-30.0°C	6.4V	-0.005	-0.002
	7.4V	-0.004	-0.001
-20.0°C	6.4V	-0.007	-0.004
	7.4V	-0.008	-0.006
-10.0°C	6.4V	-0.009	-0.005
	7.4V	-0.009	-0.008
0.0°C	6.4V	-0.012	-0.017
	7.4V	-0.010	-0.017
10.0°C	6.4V	0.003	-0.016
	7.4V	0.005	-0.018
20.0°C	6.4V	0.001	-0.004
	7.4V	0.000	0.000
30.0°C	6.4V	-0.006	-0.019
	7.4V	-0.006	-0.019
40.0°C	6.4V	-0.001	-0.015
	7.4V	-0.003	-0.018
50.0°C	6.4V	0.002	-0.008
	7.4V	0.003	-0.012
55.0°C	6.4V	0.002	-0.006
	7.4V	0.002	-0.010

The part 90 Limit for the 809MHz to 824MHz band is 2.5ppm **PASS**

4.7 Conducted Emissions Antenna Adjacent Channel Power

Factor Set 1:
Factor Set 2: - - - -
Factor Set 3: - - - -
Test Equipment: SEP1

Conducted Emissions (Signal)

Company:	Sepura PLC	*Product:*	STP8080/STP8280
Date:	07/06/2012	*Test Eng:*	Dave Smith
Ports:	antenna		
Test:	90.213	using limits of	90.213
Ports:			
Test:		using limits of	

Notes	Comments and Observations

Using the R&S FSU Spectrum analyser with the appropriate Tetra adjacent channel power settings. Captured results are shown in plots 9 to 12.

Readings in dBc

	Channel					
	-75kHz	-50kHz	-25kHz	+ 25kHz	+ 50kHz	+ 75kHz
817MHz	-77.41	-74.68	-63.83	-63.56	-74.62	-77.39
824MHz	-77.62	-74.85	-63.66	-63.57	-74.88	-77.50
862MHz	-76.73	-73.79	-62.22	-62.26	-73.24	-76.60
869MHz	-76.46	-73.29	-61.47	-61.46	-73.24	-76.73
Limit (dBc)	-65	-65	-55	-55	-65	-65

Limit shown is the maximum allowed level (dBc) for a product with output power less than 15 W and operating at a frequency above 700MHz (Part 90.221(c)

PASS

4.8 Transmitter Transient Frequency Behaviour - Results

Factor Set 1:
Factor Set 2:
Factor Set 3:
Test Equipment: R9 R4 SG9

Conducted Emissions (Signal)

Company:	**Sepura PLC**	***Product:***	**STP8080/STP8280**
Date:	**06/06/2012**	***Test Eng:***	**Dave Smith**
Ports:	**antenna**		
Test:	**90.214**	**using limits of**	**90.214**
Ports:			
Test:		**using limits of**	

Notes	Comments and Observations

The output of the antenna port of the EUT was fed through a Directional Coupler and then combined with the output of a signal generator.

The spectrum analyser has an FM demodulation function.

The EUT was initially set to produce a constant carrier output and the tuning of the spectrum analyser adjusted to give 0Hz FM deviation.

The output of the EUT was turned off and a carrier only signal output from the signal generator set at approximately the same frequency as the EUT. This frequency was adjusted to again give 0Hz FM deviation on the spectrum analyser.

The signal generator was then set to give 25kHz FM deviation (with 1kHz signal).

The forward power output of the directional coupler was fed into a receiver tuned to the carrier frequency. The video output of this receiver was used to trigger the spectrum analyser when the EUT RF is turned on or off.

The results of sweeps captured from the spectrum analyser are shown in plots 13 to 20.

All of the plots show the EUT comfortably meets the Transient Frequency Behaviour limits for a 25kHz channel spacing transmitter as shown below:

	Frequency	Duration
t1	± 25 kHz	10 msec
t2	± 12.5 kHz	25 msec
t3	± 25 kHz	10 msec

4.9 Conducted Emissions Antenna Spurious Emissions

Factor Set 1:
Factor Set 2: - - - -
Factor Set 3: - - - -
Test Equipment: R9 RFF17 RFF15 RFF22

Conducted Emissions (Signal)

Company:	**Sepura PLC**	***Product:***	**STP8080/STP8280**
Date:	**07/06/2012**	***Test Eng:***	**Dave Smith**
Ports:	**antenna**		
Test:	**90.213**	**using limits of**	**90.213**
Ports:			
Test:		**using limits of**	

Notes	Comments and Observations
	Results of scans shown in plots 21 to 28. **The limit line shown on the plots is at -13dBm.** **All spurious emissions were below this limit.** **PASS**

4.10 Radiated Emissions - Transmit Carrier ERP - Standalone

Factor Set 1: A30_dBi_10A - - -
Factor Set 2: - - - -
Factor Set 3: - - - -
Test Equipment: R9 A24 A30 SG16 PM6 PS10

Substitution_Emissions

Company: Sepura PLC *Product:* STP8080/STP8280
Date: 29/05/2012 *Test Eng:* Dave Smith
Ports:
Test: 90.205 using limits of 90.205(h)
Ports:
Test: using limits of

Op Mode	Mod State	CF Set	Freq. MHz	Cable Loss Sig Gen Level Cable dBm	Cable Loss Rec'vr Level Cable dBm	Ant Pol	Rec'vr Level EUT dBuV	Sig Gen Level Sub'n Ant dBm	Rec'vr Level Sub'n Ant dBuV	Sub'n Ant Gain dBi	ERP dBm	Limit dBm	Margin dB	Note
1	1	1	817.000	0.0	0.0	V	108.1	-16.5	48.9	-6.1	36.6			
1	1	1	817.000	0.0	0.0	H	96.2	-16.5	48.7	-6.1	24.9			
1	1	1	824.000	0.0	0.0	V	107.4	-16.5	48.6	-6.1	36.2			
1	1	1	824.000	0.0	0.0	H	93.7	-16.5	48.8	-6.1	22.4			
1	1	1	862.000	0.0	0.0	V	107.3	-16.6	47.5	-6.1	37.1			
1	1	1	862.000	0.0	0.0	H	93.6	-16.6	48.0	-6.1	22.8			
1	1	1	869.000	0.0	0.0	V	106.5	-16.6	47.4	-6.2	36.2			
1	1	1	869.000	0.0	0.0	H	95.7	-16.6	48.2	-6.2	24.6			
Results				Minimum Margin PASS/FAIL					N/A	dB				

Notes

Standalone
The results above are radiated measurements using the substitution method.

There are no specific limits in the standard for this test.

4.11 Radiated Emissions - Transmit Carrier ERP - With RSM

Factor Set 1: A30_dBi_10A - - -
Factor Set 2: - - - -
Factor Set 3: - - - -
Test Equipment: R9 A24 A30 SG16 PM6 PS10

Substitution_Emissions

Company: Sepura PLC *Product:* STP8080/STP8280
Date: 29/05/2012 *Test Eng:* Dave Smith
Ports:
Test: 90.205 using limits of 90.205(h)
Ports:
Test: using limits of

Op Mode	Mod State	CF Set	Freq. MHz	Cable Loss Sig Gen Level Cable dBm	Cable Loss Rec'vr Level Cable dBm	Ant Pol	Rec'vr Level EUT dBuV	Sig Gen Level Sub'n Ant dBm	Rec'vr Level Sub'n Ant dBuV	Sub'n Ant Gain dBi	ERP dBm	Limit dBm	Margin dB	Note
1	1	1	817.000	0.0	0.0	V	102.7	-16.5	48.9	-6.1	31.2			
1	1	1	817.000	0.0	0.0	H	98.9	-16.5	48.7	-6.1	27.6			
1	1	1	824.000	0.0	0.0	V	102.2	-16.5	48.6	-6.1	31.0			
1	1	1	824.000	0.0	0.0	H	98.4	-16.5	48.8	-6.1	27.1			
1	1	1	862.000	0.0	0.0	V	102.4	-16.6	47.5	-6.1	32.2			
1	1	1	862.000	0.0	0.0	H	96.5	-16.6	48.0	-6.1	25.7			
1	1	1	869.000	0.0	0.0	V	101.7	-16.6	47.4	-6.2	31.4			
1	1	1	869.000	0.0	0.0	H	98.1	-16.6	48.2	-6.2	27.1			
Results				**Minimum Margin PASS/FAIL**					**N/A dB**					

Notes

RSM
The results above are radiated measurements using the substitution method.

There are no specific limits in the standard for this test.

4.12 Radiated Emissions - Transmit Carrier ERP - with Car Kit

Factor Set 1: A30_dBi_10A - - -
Factor Set 2: - - - -
Factor Set 3: - - - -
Test Equipment: R9 A24 A30 SG16 PM6 PS10

Substitution_Emissions

Company: Sepura PLC *Product:* STP8080/STP8280
Date: 01/06/2012 *Test Eng:* Dave Smith
Ports:
Test: 90.205 using limits of 90.205(h)
Ports:
Test: using limits of

Op Mode	Mod State	CF Set	Freq. MHz	Cable Loss Sig Gen Level Cable dBm	Cable Loss Rec'vr Level Cable dBm	Ant Pol	Rec'vr Level EUT dBuV	Sig Gen Level Sub'n Ant dBm	Rec'vr Level Sub'n Ant dBuV	Sub'n Ant Gain dBi	ERP dBm	Limit dBm	Margin dB	Note
1	1	1	817.000	0.0	0.0	V	107.8	-16.5	48.9	-6.1	36.3			
1	1	1	817.000	0.0	0.0	H	103.8	-16.5	48.7	-6.1	32.5			
1	1	1	824.000	0.0	0.0	V	108.1	-16.5	48.6	-6.1	36.9			
1	1	1	824.000	0.0	0.0	H	103.7	-16.5	48.8	-6.1	32.3			
1	1	1	862.000	0.0	0.0	V	106.8	-16.6	47.5	-6.1	36.6			
1	1	1	862.000	0.0	0.0	H	101.1	-16.6	48.0	-6.1	30.3			
1	1	1	869.000	0.0	0.0	V	106.2	-16.6	47.4	-6.2	35.9			
1	1	1	869.000	0.0	0.0	H	101.0	-16.6	48.2	-6.2	29.9			
Results				Minimum Margin PASS/FAIL					N/A	dB				

Notes

Car Kit
The results above are radiated measurements using the substitution method.

There are no specific limits in the standard for this test.

4.13 Radiated Emissions - Transmit Spur - Standalone - 806MHz to 824MHz band

Factor Set 1: A19_dbi_11A - - -
Factor Set 2: - - - -
Factor Set 3: - - - -
Test Equipment: R9 A24 A23 A19 SG16 PM6 PS10 PRE3 RFF15 RFF16 RFF17 RFF22

Substitution_Emissions

Company: Sepura PLC *Product:* STP8080/STP8280
Date: 29/05/2012 *Test Eng:* Dave Smith
Ports:
Test: 90.210 using limits of 90.221(d)
Ports:
Test: using limits of

Op Mode	Mod State	CF Set	Freq. MHz	Cable Loss Sig Gen Level Cable dBm	Cable Loss Rec'vr Level Cable dBm	Ant Pol	Rec'vr Level EUT dBuV	Sig Gen Level Sub'n Ant dBm	Rec'vr Level Sub'n Ant dBuV	Sub'n Ant Gain dBi	ERP dBm	Limit dBm	Margin dB	Note
1	1	1	1634.000	0.0	0.0	V	61.4	-19.2	92.5	9.0	-41.3	-13.0	28.3	#1
1	1	1	1634.000	0.0	0.0	H	59.1	-19.2	92.8	9.0	-43.9	-13.0	30.9	#1
1	1	1	2451.000	0.0	0.0	V	72.2	-21.5	88.7	9.7	-28.2	-13.0	15.2	#1
1	1	1	2451.000	0.0	0.0	H	73.3	-21.5	91.2	9.7	-29.7	-13.0	16.7	#1
1	1	1	4085.000	0.0	0.0	V	65.4	-25.1	82.3	10.3	-31.8	-13.0	18.8	#1
1	1	1	4085.000	0.0	0.0	H	65.1	-25.1	83.5	10.3	-33.3	-13.0	20.3	#1
1	1	1	1648.000	0.0	0.0	V	61.0	-19.2	92.5	9.0	-41.8	-13.0	28.8	#2
1	1	1	1648.000	0.0	0.0	H	59.1	-19.2	92.9	9.0	-44.0	-13.0	31.0	#2
1	1	1	2472.000	0.0	0.0	V	72.5	-21.6	88.4	9.7	-27.8	-13.0	14.8	#2
1	1	1	2472.000	0.0	0.0	H	72.8	-21.6	91.4	9.7	-30.4	-13.0	17.4	#2
1	1	1	4120.000	0.0	0.0	V	65.8	-25.3	82.9	10.5	-32.0	-13.0	19.0	#2
1	1	1	4120.000	0.0	0.0	H	65.6	-25.3	83.8	10.5	-33.0	-13.0	20.0	#2

Results	Minimum Margin PASS/FAIL	14.8 dB PASS

Notes

Results of prescans shown in plots 29 to 40.

Standalone. 3m test distance. #1: Tx @ 817MHz, #2: Tx @824MHz
Lmits set at -13dBm.

4.14 Radiated Emissions - Transmit Spur - Standalone - 851MHz to 869MHz band

Factor Set 1: A19_dbi_11A - - -
Factor Set 2: - - - -
Factor Set 3: - - - -
Test Equipment: R9 A24 A23 A19 SG16 PM6 PS10 PRE3 RFF15 RFF16 RFF17 RFF22

Substitution_Emissions

Company: Sepura PLC *Product:* STP8080/STP8280
Date: 29/05/2012 *Test Eng:* Dave Smith
Ports:
Test: 90.210 using limits of 90.221(d)
Ports:
Test: using limits of

Op Mode	Mod State	CF Set	Freq. MHz	Cable Loss Sig Gen Level Cable dBm	Cable Loss Rec'vr Level Cable dBm	Ant Pol	Rec'vr Level EUT dBuV	Sig Gen Level Sub'n Ant dBm	Rec'vr Level Sub'n Ant dBuV	Sub'n Ant Gain dBi	ERP dBm	Limit dBm	Margin dB	Note
1	1	1	1149.330	0.0	0.0	V	32.1	-17.6	58.5	6.8	-37.2	-13.0	24.2	#1
1	1	1	1149.330	0.0	0.0	H	27.5	-17.6	55.7	6.8	-39.1	-13.0	26.1	#1
1	1	1	2586.000	0.0	0.0	V	70.0	-21.8	88.6	9.9	-30.5	-13.0	17.5	#1
1	1	1	2586.000	0.0	0.0	H	72.3	-21.8	90.8	9.9	-30.4	-13.0	17.4	#1
1	1	1	3448.000	0.0	0.0	V	44.8	-24.9	83.1	10.0	-53.2	-13.0	40.2	#1
1	1	1	3448.000	0.0	0.0	H	46.8	-24.9	85.3	10.0	-53.5	-13.0	40.5	#1
1	1	1	1158.664	0.0	0.0	V	38.9	-17.6	58.2	6.9	-30.1	-13.0	17.1	#2
1	1	1	1158.664	0.0	0.0	H	30.9	-17.6	56.0	6.9	-35.8	-13.0	22.8	#2
1	1	1	2607.000	0.0	0.0	V	68.7	-21.8	88.2	9.9	-31.4	-13.0	18.4	#2
1	1	1	2607.000	0.0	0.0	H	69.2	-21.8	90.9	9.9	-33.6	-13.0	20.6	#2
1	1	1	3476.000	0.0	0.0	V	46.8	-24.5	83.9	10.0	-51.5	-13.0	38.5	#2
1	1	1	3476.000	0.0	0.0	H	46.8	-24.5	85.6	10.0	-53.2	-13.0	40.2	#2

Results	Minimum Margin PASS/FAIL	17.1 dB PASS			

Notes

Results of prescans shown in plots 29 to 40.

Standalone. 3m test distance. #1: Tx @ 862MHz, #2: Tx @869MHz
Lmits set at -13dBm.

4.15 Radiated Emissions - Transmit Spurious - RSM - 806MHz to 824MHz band

Factor Set 1: A19_dbi_11A - - -
Factor Set 2: - - - -
Factor Set 3: - - - -
Test Equipment: R9 A24 A23 A19 SG16 PM6 PS10 PRE3 RFF15 RFF16 RFF17 RFF22

Substitution_Emissions

Company: Sepura PLC *Product:* STP8080/STP8280
Date: 29/05/2012 *Test Eng:* Dave Smith
Ports:
Test: 90.210 using limits of 90.221(d)
Ports:
Test: using limits of

Op Mode	Mod State	CF Set	Freq. MHz	Cable Loss Sig Gen Level Cable dBm	Cable Loss Rec'vr Level Cable dBm	Ant Pol	Rec'vr Level EUT dBuV	Sig Gen Level Sub'n Ant dBm	Rec'vr Level Sub'n Ant dBuV	Sub'n Ant Gain dBi	ERP dBm	Limit dBm	Margin dB	Note
1	1	1	1634.000	0.0	0.0	V	73.8	-19.2	92.5	9.0	-28.9	-13.0	15.9	#1
1	1	1	1634.000	0.0	0.0	H	67.0	-19.2	92.8	9.0	-36.0	-13.0	23.0	#1
1	1	1	2451.000	0.0	0.0	V	63.8	-21.5	88.7	9.7	-36.7	-13.0	23.7	#1
1	1	1	2451.000	0.0	0.0	H	67.2	-21.5	91.2	9.7	-35.8	-13.0	22.8	#1
1	1	1	1648.000	0.0	0.0	V	70.6	-19.2	92.5	9.0	-32.2	-13.0	19.2	#2
1	1	1	1648.000	0.0	0.0	H	67.8	-19.2	92.9	9.0	-35.3	-13.0	22.3	#2
1	1	1	2472.000	0.0	0.0	V	63.2	-21.6	88.4	9.7	-37.1	-13.0	24.1	#2
1	1	1	2472.000	0.0	0.0	H	60.6	-21.6	91.4	9.7	-42.6	-13.0	29.6	#2

Results	Minimum Margin PASS/FAIL	15.9 dB PASS			

Notes

Results of prescans shown in plots 41 to 52.

RSM. 3m test distance. #1: Tx @ 817MHz, #2: Tx @824MHz
Lmits set at -13dBm.

4.16 Radiated Emissions - Transmit Spurious - RSM - 851MHz to 869MHz band

Factor Set 1: A19_dbi_11A - - -
Factor Set 2: - - - -
Factor Set 3: - - - -
Test Equipment: R9 A24 A23 A19 SG16 PM6 PS10 PRE3 RFF15 RFF16 RFF17 RFF22

Substitution_Emissions

Company: Sepura PLC *Product:* STP8080/STP8280
Date: 29/05/2012 *Test Eng:* Dave Smith
Ports:
Test: 90.210 using limits of 90.221(d)
Ports:
Test: using limits of

Op Mode	Mod State	CF Set	Freq. MHz	Cable Loss Sig Gen Level Cable dBm	Cable Loss Rec'vr Level Cable dBm	Ant Pol	Rec'vr Level EUT dBuV	Sig Gen Level Sub'n Ant dBm	Rec'vr Level Sub'n Ant dBuV	Sub'n Ant Gain dBi	ERP dBm	Limit dBm	Margin dB	Note
1	1	1	1724.000	0.0	0.0	V	66.0	-19.5	91.0	9.0	-35.6	-13.0	22.6	#1
1	1	1	1724.000	0.0	0.0	H	62.0	-19.5	90.7	9.0	-39.2	-13.0	26.2	#1
1	1	1	1738.000	0.0	0.0	V	64.0	-19.5	90.2	9.0	-36.7	-13.0	23.7	#2
1	1	1	1738.000	0.0	0.0	H	59.3	-19.5	89.6	9.0	-40.8	-13.0	27.8	#2

Results	Minimum Margin PASS/FAIL	22.6 dB PASS

Notes

Results of prescans shown in plots 41 to 52.

RSM. 3m test distance. #1: Tx @ 862MHz, #2: Tx @869MHz
Lmits set at -13dBm.

4.17 Radiated Emissions - Transmit Spurious - Car Kit

Factor Set 1: A19_dbi_11A - - -
Factor Set 2: - - - -
Factor Set 3: - - - -
Test Equipment: R9 A24 A23 A19 SG16 PM6 PS10 PRE3 RFF15 RFF16 RFF17 RFF22

Substitution_Emissions

Company: Sepura PLC *Product:* STP8080/STP8280
Date: 29/05/2012 *Test Eng:* Dave Smith
Ports:
Test: 90.210 using limits of 90.221(d)
Ports:
Test: using limits of

Op Mode	Mod State	CF Set	Freq. MHz	Cable Loss Sig Gen Level Cable dBm	Cable Loss Rec'vr Level Cable dBm	Ant Pol	Rec'vr Level EUT dBuV	Sig Gen Level Sub'n Ant dBm	Rec'vr Level Sub'n Ant dBuV	Sub'n Ant Gain dBi	ERP dBm	Limit dBm	Margin dB	Note
1	1	1	3476.000	0.0	0.0	V	44.3	-24.5	83.9	10.0	-54.0	-13.0	41.0	#1
1	1	1	3476.000	0.0	0.0	H	49.2	-24.5	85.6	10.0	-50.8	-13.0	37.8	#1
Results				Minimum Margin PASS/FAIL					37.8 dB PASS					

Notes

Results of prescans shown in plots 53 to 64.

Car Kit. 3m test distance. #1: Tx @ 869MHz
Lmits set at -13dBm.

4.18 Radiated Emissions - Receive Mode - Standalone - below 1GHz

Factor Set 1: A5_FS_10C CBL015_11A - -
Factor Set 2: - - - -
Factor Set 3: - - - -
Test Equipment: R4 A5

Radiated_Emissions

Company: Sepura PLC *Product:* STP8080/STP8280
Date: 20/06/2012 *Test Eng:* Dave Smith
Ports:
Test: ANSI C63.4:2003 using limits of FCC_B
Ports:
Test: using limits of

Plot	Op Mode	Mod State	Dist m	Fact Set	Freq. MHz	Ant Pol	Rec. Level dBuV	Corr'n Factor dB/m	Corr'n Factor dB	Total Level dBuV/m	Limit FCC_B dBuV/m	Margin FCC_B dB	Notes
862MHz Rx channel													
66	1	0	3	1	931.250	V	-5.2	31.0		25.8	46.0	20.2	#1
66	1	0	3	1	931.250	H	0.5	31.0		31.5	46.0	14.5	
869MHz Rx channel													
66	1	0	3	1	938.250	V	1.2	31.5		32.7	46.0	13.3	#1
66	1	0	3	1	938.250	H	-8.0	31.5		23.5	46.0	22.5	#1

Results	Minimum Margin PASS/FAIL	13.3 dB PASS	

Notes	Comments and Observations
#1	Results of scans shown in plots 65 to 66. Standalone Measured with 10kHz average detector because of high ambient. Measurements in screened room show less than 2dB difference between 120kHz Quasi Peak reading and 10kHz Average reading for this emission All other measurements made with 120kHz bandwidth Quasi Peak detector.

4.19 Radiated Emissions - Receive Mode - Standalone - above 1GHz

Factor Set 1:	A23_3m_10A CBL049_11A PRE3_11A RFF22_11A	1 m cable
Factor Set 2:	- - - -	
Factor Set 3:	- - - -	
Test Equipment:	R9 A23 PRE3	

Radiated_Emissions

Company:	Sepura PLC	*Product:*	STP8080/STP8280
Date:	31/05/2012	*Test Eng:*	Dave Smith
Ports:			
Test:	ANSI C63.4:2003 using limits of	FCC_B	
Ports:			
Test:	using limits of		

Plot	Op Mode	Mod State	Dist m	Fact Set	Freq. MHz	Ant Pol	Rec. Level dBuV	Corr'n Factor dB/m	Corr'n Factor dB	Total Level dBuV/m	Limit FCC_B dBuV/m	Margin FCC_B dB	Notes
	862MHz Rx channel												
69	Rx	1	3	1	5587.450	V	44.9	1.6		46.5	54.0	7.5	PK
69	Rx	1	3	1	5587.450	H	47.8	1.6		49.4	74.0	24.6	PK
69	Rx	1	3	1	5587.450	H	42.1	1.6		43.7	54.0	10.3	AV
69	Rx	1	3	1	6518.750	V	42.7	2.9		45.6	54.0	8.4	PK
69	Rx	1	3	1	6518.750	H	41.7	2.9		44.6	54.0	9.4	PK
	869MHz Rx channel												
69	Rx	1	3	1	5629.513	V	44.8	1.7		46.4	54.0	7.6	PK
69	Rx	1	3	1	5629.513	H	46.9	1.7		48.6	74.0	25.4	PK
69	Rx	1	3	1	5629.513	H	42.1	1.7		43.8	54.0	10.2	PK
69	Rx	1	3	1	6567.750	V	43.0	3.1		46.0	54.0	8.0	PK
69	Rx	1	3	1	6567.750	H	42.1	3.1		45.1	54.0	8.9	PK

Results	Minimum Margin	7.5 dB	
	PASS/FAIL	PASS	

Notes	Comments and Observations
	Results of scans shown in plots 67 to 68. Standalone. Where peak measurements were comfortably below the average limit only the peak reading is recorded - in this case the average limit is show. Otherwise separate peak and average measurements were made and show against the corresponding limits.

4.20 Radiated Emissions - Receive Mode - RSM - below 1GHz

Factor Set 1: A5_FS_10C CBL015_11A - -
Factor Set 2: - - - -
Factor Set 3: - - - -
Test Equipment: R4 A5

Radiated_Emissions

Company: Sepura PLC *Product:* STP8080/STP8280
Date: 20/06/2012 *Test Eng:* Dave Smith
Ports:
Test: ANSI C63.4:2003 using limits of FCC_B
Ports:
Test: using limits of

Plot	Op Mode	Mod State	Dist m	Fact Set	Freq. MHz	Ant Pol	Rec. Level dBuV	Corr'n Factor dB/m	Corr'n Factor dB	Total Level dBuV/m	Limit FCC_B dBuV/m	Margin FCC_B dB	Notes
862MHz Rx channel													
71	1	0	3	1	931.250	V	-5.3	31.0		25.7	46.0	20.3	#1
71	1	0	3	1	931.250	H	-13.1	31.0		17.9	46.0	28.1	
869MHz Rx channel													
71	1	0	3	1	938.250	V	1.2	31.5		32.7	46.0	13.3	#1
71	1	0	3	1	938.250	H	-9.1	31.5		22.4	46.0	23.6	#1

Results	Minimum Margin PASS/FAIL	13.3 dB PASS	

Notes	Comments and Observations
#1	Results of scans shown in plots 69 and 70. RSM Measured with 10kHz average detector because of high ambient. Measurements in screened room show less than 2dB difference between 120kHz Quasi Peak reading and 10kHz Average reading for this emission All other measurements made with 120kHz bandwidth Quasi Peak detector.

4.21 Radiated Emissions - Receive Mode - RSM - above 1GHz

Factor Set 1:	A23_3m_10A CBL049_11A PRE3_11A RFF22_11A	1 m cable
Factor Set 2:	- - - -	
Factor Set 3:	- - - -	
Test Equipment:	R9 A23 PRE3	

Radiated_Emissions

Company:	Sepura PLC	*Product:*	STP8080/STP8280
Date:	31/05/2012	*Test Eng:*	Dave Smith
Ports:			
Test:	ANSI C63.4:2003 using limits of	FCC_B	
Ports:			
Test:	using limits of		

Plot	Op Mode	Mod State	Dist m	Fact Set	Freq. MHz	Ant Pol	Rec. Level dBuV	Corr'n Factor dB/m	Corr'n Factor dB	Total Level dBuV/m	Limit FCC_B dBuV/m	Margin FCC_B dB	Notes
	862MHz Rx channel												
73	Rx	1	3	1	5587.450	V	45.7	1.6		47.3	54.0	6.7	PK
73	Rx	1	3	1	5587.450	H	46.4	1.6		48.0	54.0	6.0	PK
73	Rx	1	3	1	5587.450	H	41.8	1.6		43.4	54.0	10.6	AV
73	Rx	1	3	1	6518.750	V	43.2	2.9		46.2	54.0	7.8	PK
73	Rx	1	3	1	6518.750	H	43.8	2.9		46.7	54.0	7.3	PK
	869MHz Rx channel												
73	Rx	1	3	1	5629.513	V	45.9	1.7		47.6	54.0	6.4	PK
73	Rx	1	3	1	5629.513	H	46.6	1.7		48.3	54.0	5.7	PK
73	Rx	1	3	1	5629.513	H	42.1	1.7		43.8	54.0	10.2	AV
73	Rx	1	3	1	6567.750	V	42.9	3.1		46.0	54.0	8.0	PK
73	Rx	1	3	1	6567.750	H	43.6	3.1		46.7	54.0	7.3	PK

Results	Minimum Margin PASS/FAIL	5.7 dB PASS	

Notes	Comments and Observations
	Results of scans shown in plots 71 and 72. RSM Where peak measurements were comfortably below the average limit only the peak reading is recorded - in this case the average limit is show. Otherwise separate peak and average measurements were made and show against the corresponding limits.

4.22 Radiated Emissions - Receive Mode- Car Kit - below 1GHz

Factor Set 1: A5_FS_10C CBL015_11A - -
Factor Set 2: - - - -
Factor Set 3: - - - -
Test Equipment: R4 A5

Radiated_Emissions

Company: Sepura PLC *Product:* STP8080/STP8280
Date: 20/06/2012 *Test Eng:* Dave Smith
Ports:
Test: ANSI C63.4:2003 using limits of FCC_B
Ports:
Test: using limits of

Plot	Op Mode	Mod State	Dist m	Fact Set	Freq. MHz	Ant Pol	Rec. Level dBuV	Corr'n Factor dB/m	Corr'n Factor dB	Total Level dBuV/m	Limit FCC_B dBuV/m	Margin FCC_B dB	Notes
	862MHz Rx channel												
74	1	0	3	1	35.630	V	13.3	16.0		29.3	40.0	10.7	
74	1	0	3	1	35.630	H	8.0	16.0		24.0	40.0	16.0	
74	1	0	3	1	118.700	V	6.6	13.3		19.9	43.5	23.6	
74	1	0	3	1	118.700	H	3.4	13.3		16.7	43.5	26.8	
75	1	0	3	1	366.189	V	6.1	18.0		24.1	46.0	21.9	
75	1	0	3	1	366.189	H	7.6	18.0		25.6	46.0	20.4	
75	1	0	3	1	640.000	V	3.2	25.3		28.5	46.0	17.5	
75	1	0	3	1	640.000	H	2.0	25.3		27.3	46.0	18.7	
	869MHz Rx channel												
75	1	0	3	1	931.250	V	-6.0	31.0		25.0	46.0	21.0	#1
75	1	0	3	1	931.250	H	3.3	31.0		34.3	46.0	11.7	
75	1	0	3	1	938.250	V	-4.3	31.5		27.2	46.0	18.8	#1
75	1	0	3	1	938.250	H	1.0	31.5		32.5	46.0	13.5	#1

Results	Minimum Margin PASS/FAIL	10.7 dB PASS	

Notes	Comments and Observations
#1	Results of scans shown in plots 73 and 74. Car Kit Measured with 10kHz average detector because of high ambient. Measurements in screened room show less than 2dB difference between 120kHz Quasi Peak reading and 10kHz Average reading for this emission All other measurements made with 120kHz bandwidth Quasi Peak detector.

4.23 Radiated Emissions - Receive Mode - Car Kit - above 1GHz

Factor Set 1:	A23_3m_10A CBL049_11A PRE3_11A RFF22_11A	1 m cable
Factor Set 2:	- - - -	
Factor Set 3:	- - - -	
Test Equipment:	R9 A23 PRE3	

Radiated_Emissions

Company:	Sepura PLC	*Product:*	STP8080/STP8280
Date:	31/05/2012	*Test Eng:*	Dave Smith
Ports:			
Test:	ANSI C63.4:2003 using limits of	FCC_B	
Ports:			
Test:	using limits of		

Plot	Op Mode	Mod State	Dist m	Fact Set	Freq. MHz	Ant Pol	Rec. Level dBuV	Corr'n Factor dB/m	Corr'n Factor dB	Total Level dBuV/m	Limit FCC_B dBuV/m	Margin FCC_B dB	Notes
	862MHz Rx channel												
77	Rx	1	3	1	5587.450	V	44.0	1.6		45.7	54.0	8.3	PK
77	Rx	1	3	1	5587.450	H	45.1	1.6		46.7	54.0	7.3	PK
77	Rx	1	3	1	6518.750	V	42.0	2.9		45.0	54.0	9.0	PK
77	Rx	1	3	1	6518.750	H	43.3	2.9		46.2	54.0	7.8	PK
	869MHz Rx channel												
77	Rx	1	3	1	5629.513	V	43.7	1.7		45.4	54.0	8.6	PK
77	Rx	1	3	1	5629.513	H	45.1	1.7		46.8	54.0	7.2	PK
77	Rx	1	3	1	6567.750	V	43.1	3.1		46.1	54.0	7.9	PK
77	Rx	1	3	1	6567.750	H	42.6	3.1		45.7	54.0	8.3	PK

Results	Minimum Margin PASS/FAIL	7.2 dB PASS	

Notes	Comments and Observations
	Results of scans shown in plots 75 and 76. Car Kit Where peak measurements were comfortably below the average limit only the peak reading is recorded - in this case the average limit is show. Otherwise separate peak and average measurements were made and show against the corresponding limits.

4.24 Radiated Emissions - Receive Mode - STP8280 - below 1GHz

Factor Set 1: A5_FS_10C CBL015_11A - -
Factor Set 2: - - - -
Factor Set 3: - - - -
Test Equipment: R4 A5

Radiated_Emissions

Company: Sepura PLC *Product:* STP8080/STP8280
Date: 20/06/2012 *Test Eng:* Dave Smith
Ports:
Test: ANSI C63.4:2003 using limits of FCC_B
Ports:
Test: using limits of

Plot	Op Mode	Mod State	Dist m	Fact Set	Freq. MHz	Ant Pol	Rec. Level dBuV	Corr'n Factor dB/m	Corr'n Factor dB	Total Level dBuV/m	Limit FCC_B dBuV/m	Margin FCC_B dB	Notes
862MHz Rx channel													
79	1	0	3	1	931.250	V	-7.6	31.0		23.4	46.0	22.6	#1
79	1	0	3	1	931.250	H	1.2	31.0		32.2	46.0	13.8	
869MHz Rx channel													
79	1	0	3	1	938.250	V	2.2	31.5		33.7	46.0	12.3	#1
79	1	0	3	1	938.250	H	-7.0	31.5		24.5	46.0	21.5	#1

Results	Minimum Margin PASS/FAIL	12.3 dB PASS	

Notes	Comments and Observations
#1	Results of scans shown in plots 77 and 78. STP8280 Measured with 10kHz average detector because of high ambient. Measurements in screened room show less than 2dB difference between 120kHz Quasi Peak reading and 10kHz Average reading for this emission All other measurements made with 120kHz bandwidth Quasi Peak detector.

4.25 Radiated Emissions - Receive Mode - STP8280 - above 1GHz - Vertical

Factor Set 1:	A23_3m_10A CBL049_11A PRE3_11A RFF22_11A	1 m cable
Factor Set 2:	- - - -	
Factor Set 3:	- - - -	
Test Equipment:	R9 A23 PRE3	

Radiated_Emissions

Company:	Sepura PLC	*Product:*	STP8080/STP8280
Date:	31/05/2012	*Test Eng:*	Dave Smith
Ports:			
Test:	ANSI C63.4:2003 using limits of	FCC_B	
Ports:			
Test:	using limits of		

Plot	Op Mode	Mod State	Dist m	Fact Set	Freq. MHz	Ant Pol	Rec. Level dBuV	Corr'n Factor dB/m	Corr'n Factor dB	Total Level dBuV/m	Limit FCC_B dBuV/m	Margin FCC_B dB	Notes
	862MHz Rx channel												
81	Rx	1	3	1	5587.450	V	48.7	1.6		50.3	74.0	23.7	PK
81	Rx	1	3	1	5587.450	V	46.5	1.6		48.1	54.0	5.9	AV
81	Rx	1	3	1	6518.750	V	42.2	2.9		45.1	74.0	28.9	PK
81	Rx	1	3	1	6518.750	V	38.5	2.9		41.4	54.0	12.6	AV
81	Rx	1	3	1	7450.000	V	39.9	5.8		45.7	74.0	28.3	PK
81	Rx	1	3	1	7450.000	V	31.6	5.8		37.4	54.0	16.6	AV
	869MHz Rx channel												
81	Rx	1	3	1	5629.513	V	48.9	1.7		50.6	74.0	23.4	PK
81	Rx	1	3	1	5629.513	V	46.7	1.7		48.4	54.0	5.6	AV
81	Rx	1	3	1	6567.750	V	43.9	3.1		47.0	74.0	27.0	PK
81	Rx	1	3	1	6567.750	V	40.0	3.1		43.0	54.0	11.0	AV
81	Rx	1	3	1	7506.000	V	40.1	5.7		45.8	74.0	28.2	PK
81	Rx	1	3	1	7506.000	V	32.3	5.7		38.0	54.0	16.0	AV

Results	Minimum Margin PASS/FAIL	5.6 dB PASS	

Notes	Comments and Observations
	Results of scans shown in plots 79 and 80. STP 8280 Where peak measurements were comfortably below the average limit only the peak reading is recorded - in this case the average limit is shown. Otherwise separate peak and average measurements were made and shown against the corresponding limits.

4.26 Radiated Emissions - Receive Mode - STP8280 - above 1GHz - Horizontal

Factor Set 1:	A23_3m_10A CBL049_11A PRE3_11A RFF22_11A	1 m cable
Factor Set 2:	- - - -	
Factor Set 3:	- - - -	
Test Equipment:	R9 A23 PRE3	

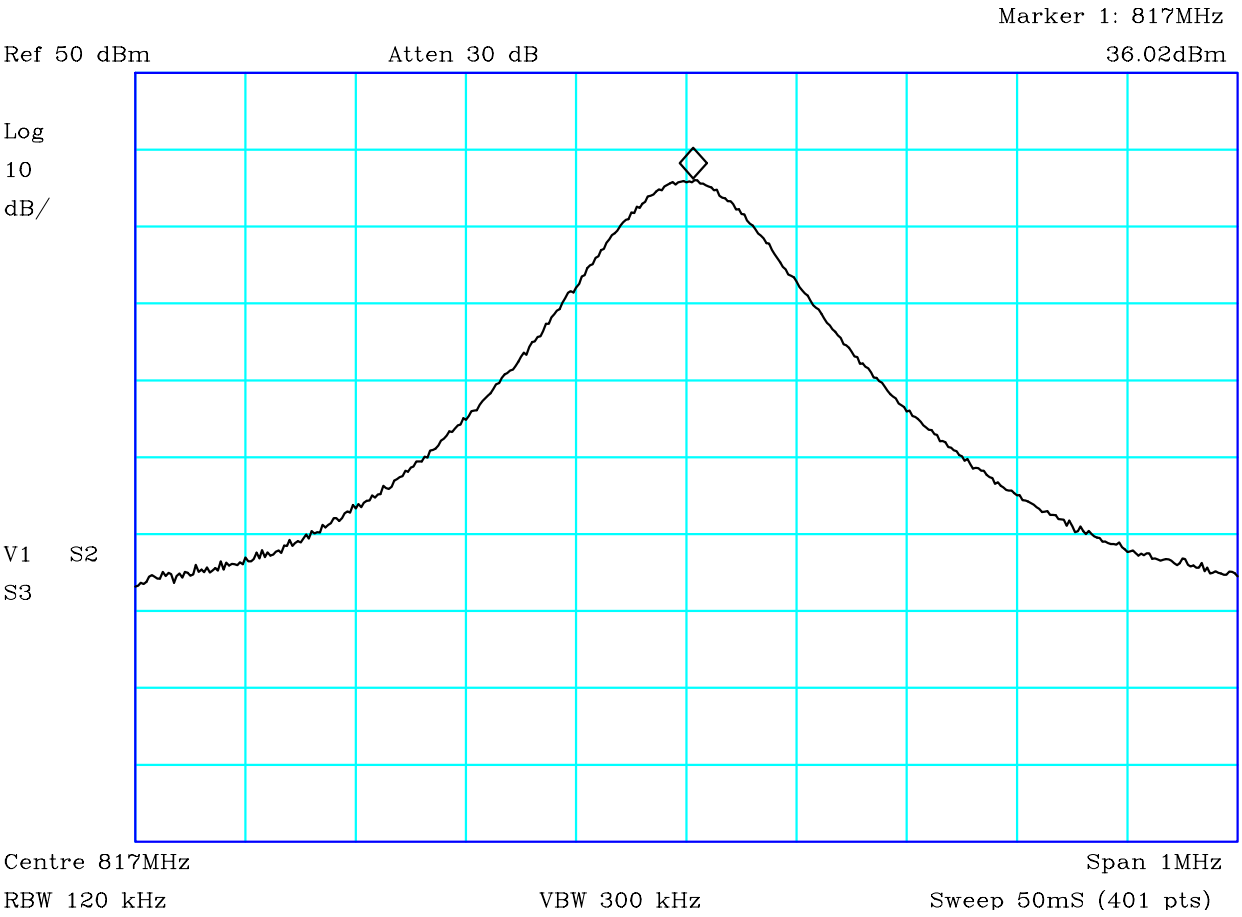
Radiated_Emissions

Company:	Sepura PLC	*Product:*	STP8080/STP8280
Date:	31/05/2012	*Test Eng:*	Dave Smith
Ports:			
Test:	ANSI C63.4:2003 using limits of		FCC_B
Ports:			
Test:	using limits of		

Plot	Op Mode	Mod State	Dist m	Fact Set	Freq. MHz	Ant Pol	Rec. Level dBuV	Corr'n Factor dB/m	Corr'n Factor dB	Total Level dBuV/m	Limit FCC_B dBuV/m	Margin FCC_B dB	Notes
	862MHz Rx channel												
81	Rx	1	3	1	5587.450	H	48.1	1.6		49.7	74.0	24.3	PK
81	Rx	1	3	1	5587.450	H	45.8	1.6		47.4	54.0	6.6	AV
81	Rx	1	3	1	6518.750	H	44.1	2.9		47.0	74.0	27.0	PK
81	Rx	1	3	1	6518.750	H	39.8	2.9		42.8	54.0	11.2	AV
81	Rx	1	3	1	7450.000	H	43.9	5.8		49.7	74.0	24.3	PK
81	Rx	1	3	1	7450.000	H	38.8	5.8		44.6	54.0	9.4	AV
	869MHz Rx channel												
81	Rx	1	3	1	5629.513	H	48.0	1.7		49.7	74.0	24.3	PK
81	Rx	1	3	1	5629.513	H	45.2	1.7		46.9	54.0	7.1	AV
81	Rx	1	3	1	6567.750	H	43.5	3.1		46.6	74.0	27.4	PK
81	Rx	1	3	1	6567.750	H	39.1	3.1		42.2	54.0	11.8	AV
81	Rx	1	3	1	7506.000	H	44.0	5.7		49.7	74.0	24.3	PK
81	Rx	1	3	1	7506.000	H	39.0	5.7		44.8	54.0	9.2	AV

Results	Minimum Margin PASS/FAIL	6.6 dB PASS	

Notes	Comments and Observations
	Results of scans shown in plots 79 and 80. STP 8280 Where peak measurements were comfortably below the average limit only the peak reading is recorded - in this case the average limit is shown. Otherwise separate peak and average measurements were made and shown against the corresponding limits.



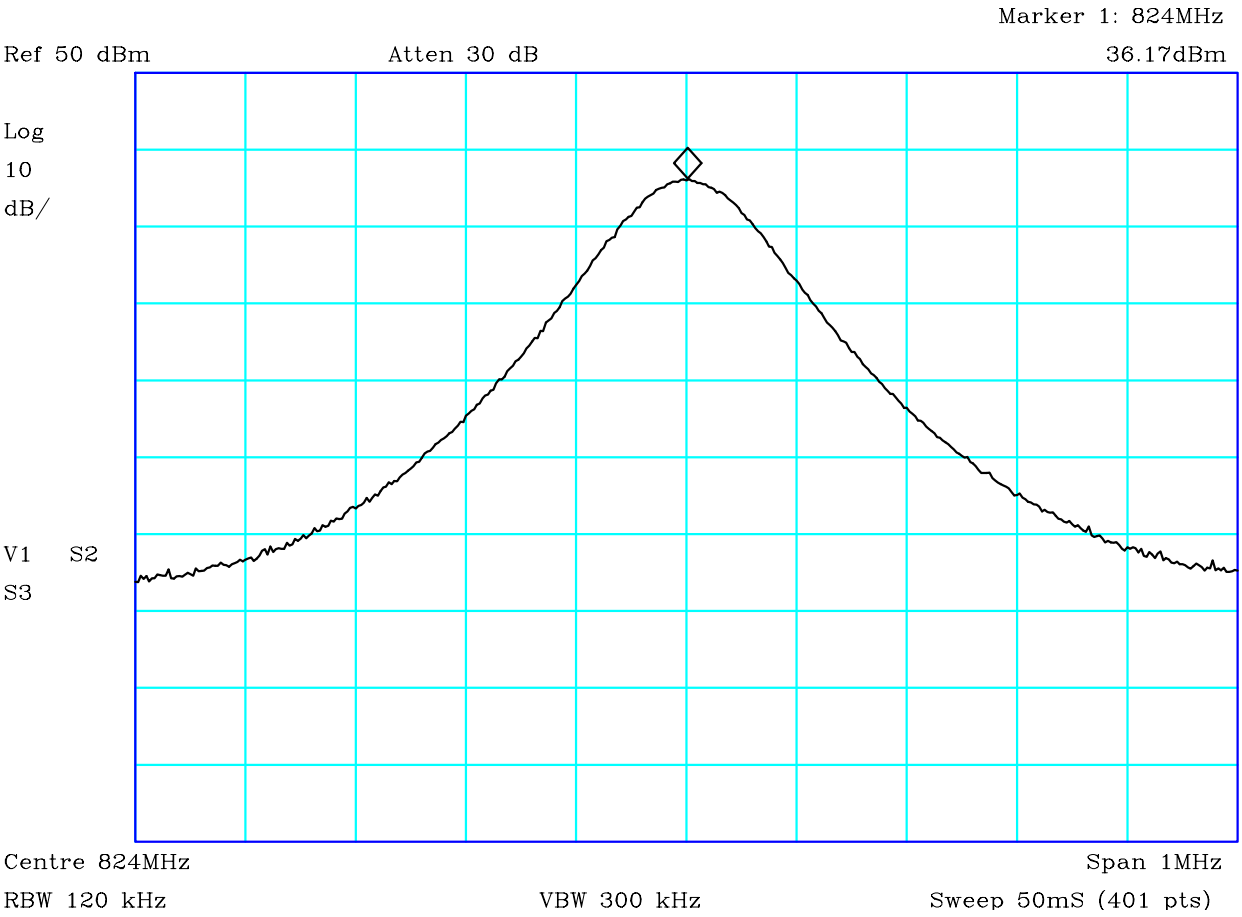
CF1:30dB PAD + cable

PLOT 1 Conducted Antenna Output Power (817MHz)

Company:	Sepura	Product:	STP8080
Date:	06/06/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:		Limit2:	
Limit3:		Limit4:	

Peak: 36.02 dBm
Average (measured with power meter): 33.09 dBm

Facility:	Anech_2	Mode:	1
		Modification State:	1
File:	H2506782		



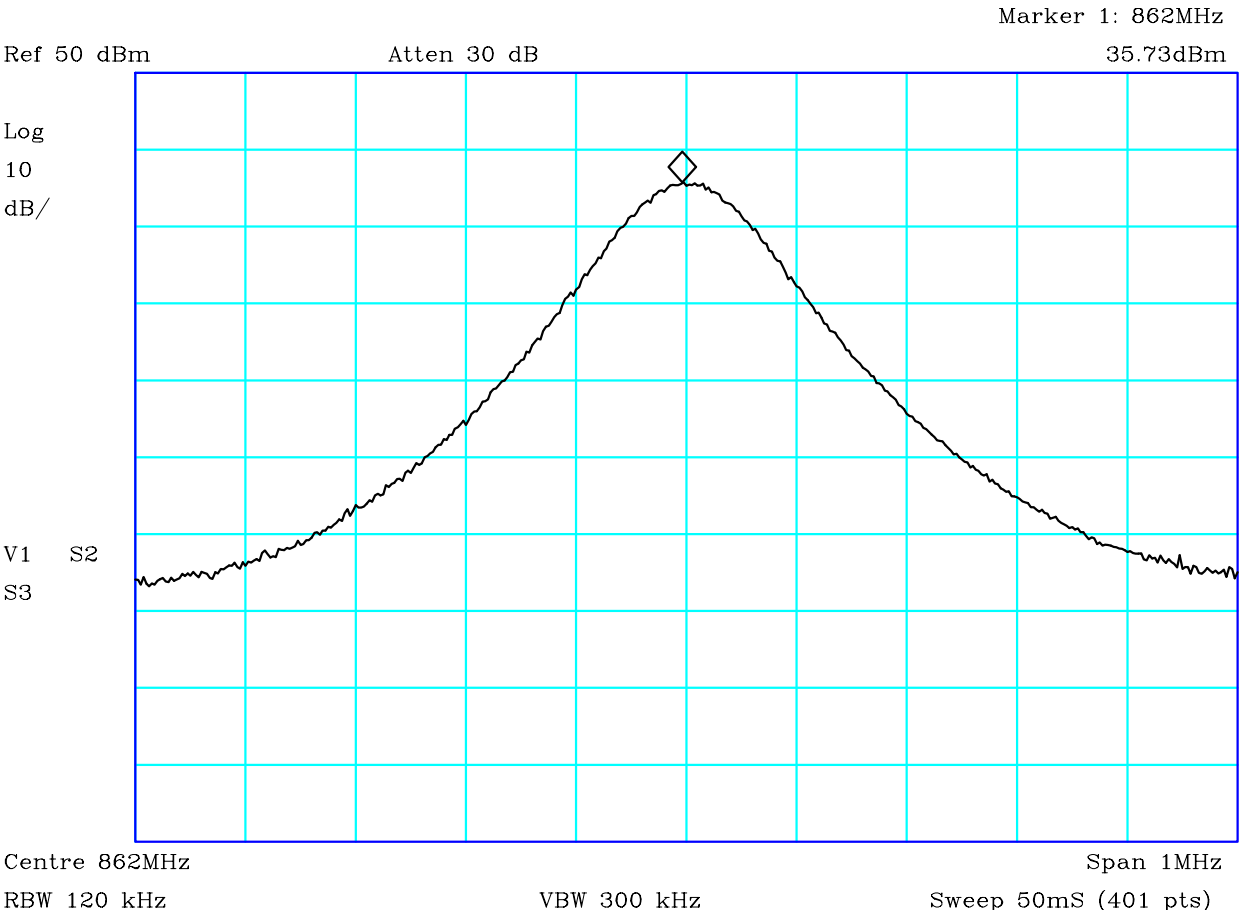
CF1:30dB PAD + cable

PLOT 2 Conducted Antenna Output Power (824MHz)

Company:	Sepura	Product:	STP8080
Date:	06/06/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:		Limit2:	
Limit3:		Limit4:	

Peak: 36.17 dBm
Average (measured with power meter): 33.08 dBm

Facility:	Anech_2	Mode:	1
		Modification State:	1
File:	H2506784		



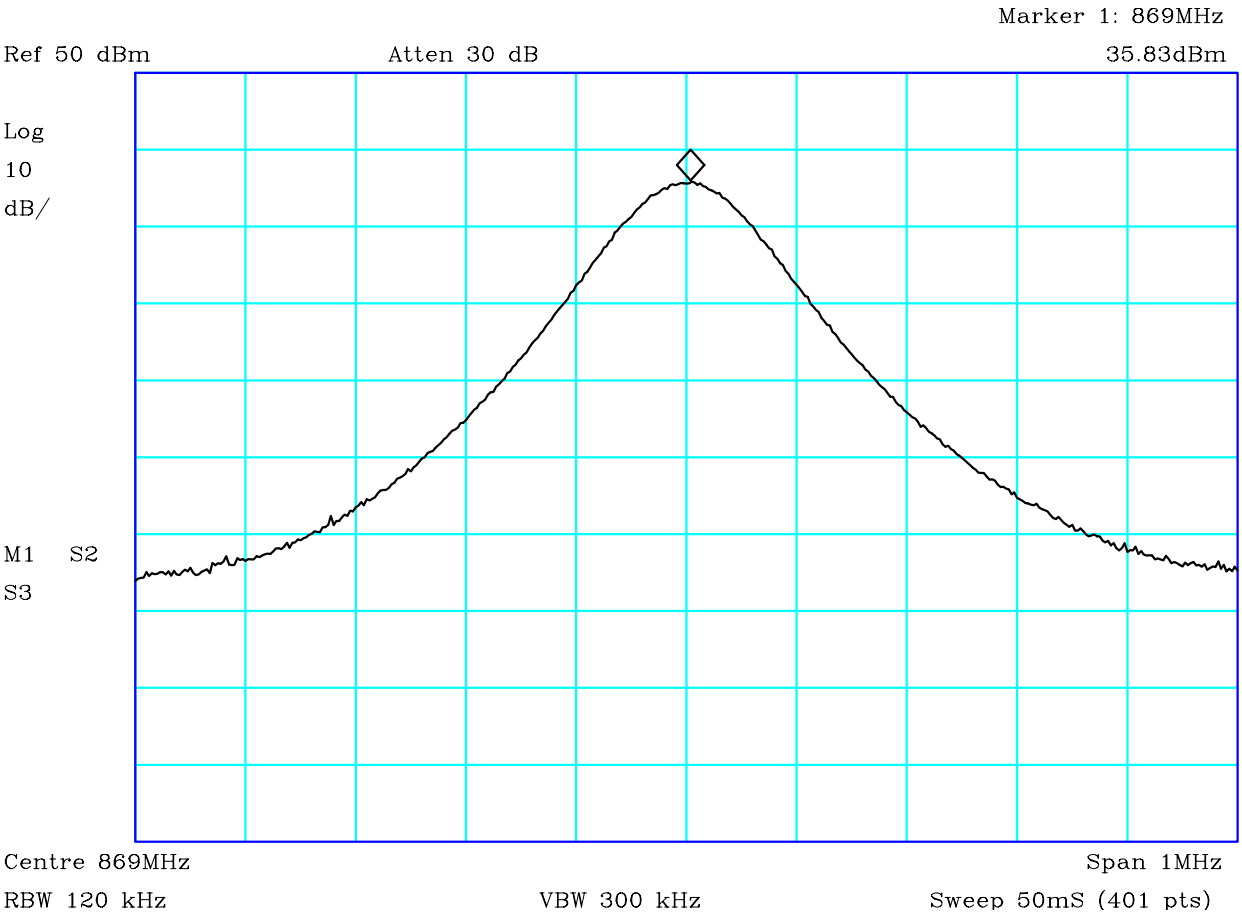
CF1:30dB PAD + cable

PLOT 3 Conducted Antenna Output Power (862MHz)

Company:	Sepura	Product:	STP8080
Date:	06/06/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:		Limit2:	
Limit3:		Limit4:	

Peak: 35.73 dBm
Average (measured with power meter): 33.09 dBm

Facility:	Anech_2	Mode:	1
		Modification State:	1
File:	H2506789		



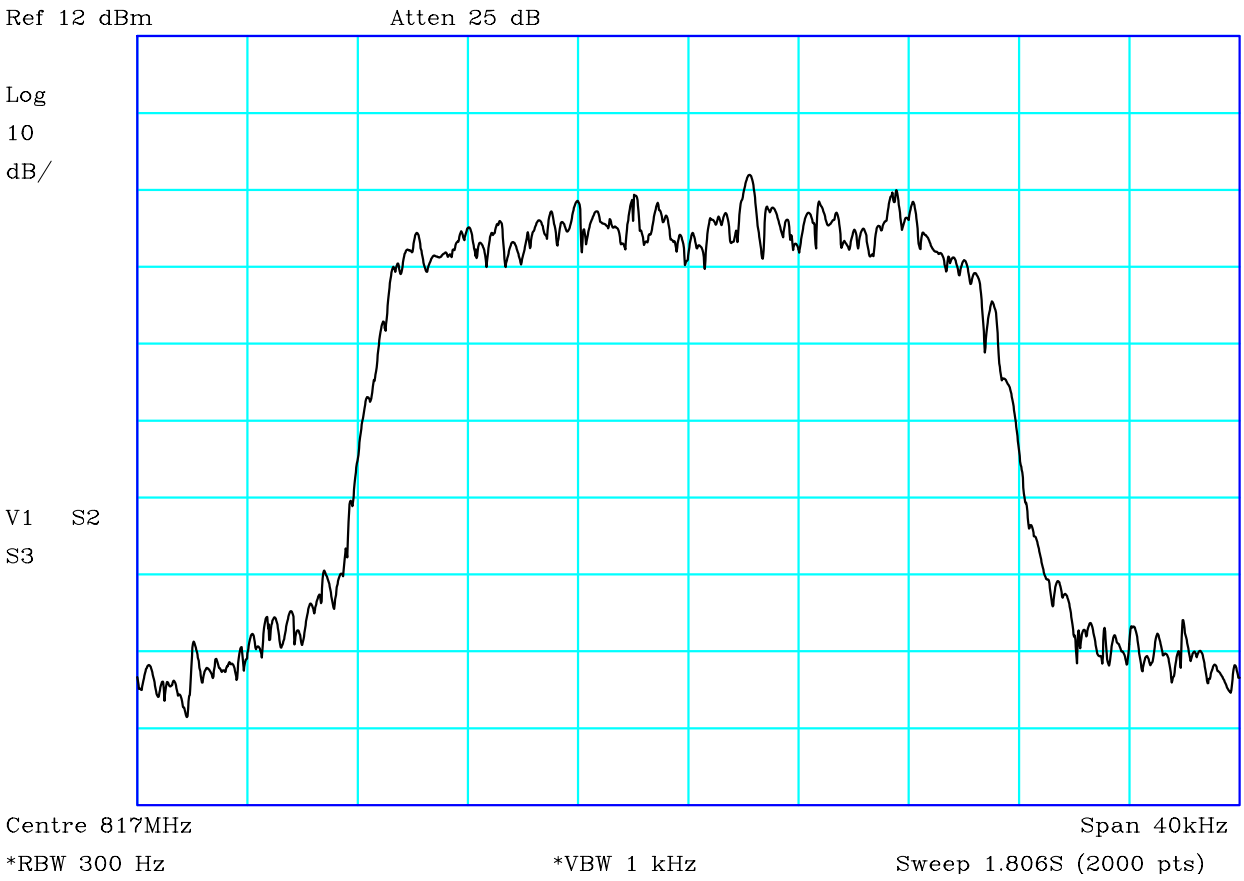
CF1:30dB PAD + cable

PLOT 4 Conducted Antenna Output Power (869MHz)

Company:	Sepura	Product:	STP8080
Date:	06/06/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:		Limit2:	
Limit3:		Limit4:	

Peak: 35.83 dBm
Average (measured with power meter): 33.06 dBm

Facility:	Anech_2	Mode:	1
		Modification State:	1
File:	H250677B		

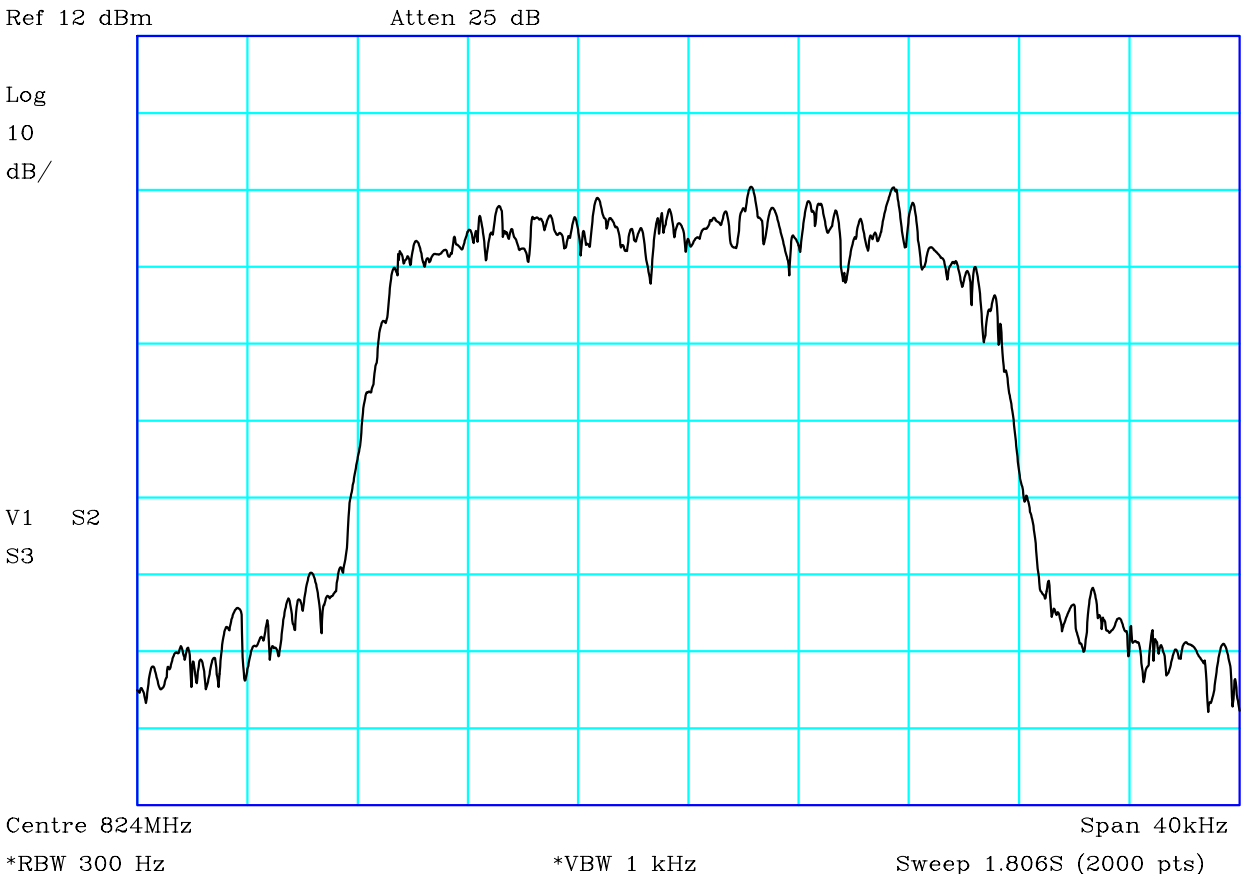


PLOT 5 Occupied Bandwidth (817MHz)

Company:	Sepura	Product:	STP8080
Date:	07/06/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:		Limit2:	
Limit3:		Limit4:	

817MHz
99% Occupied bandwidth measurement: 20.97kHz

Facility:	Environ	Mode:	1
		Modification State:	1
	File: H25255E5		

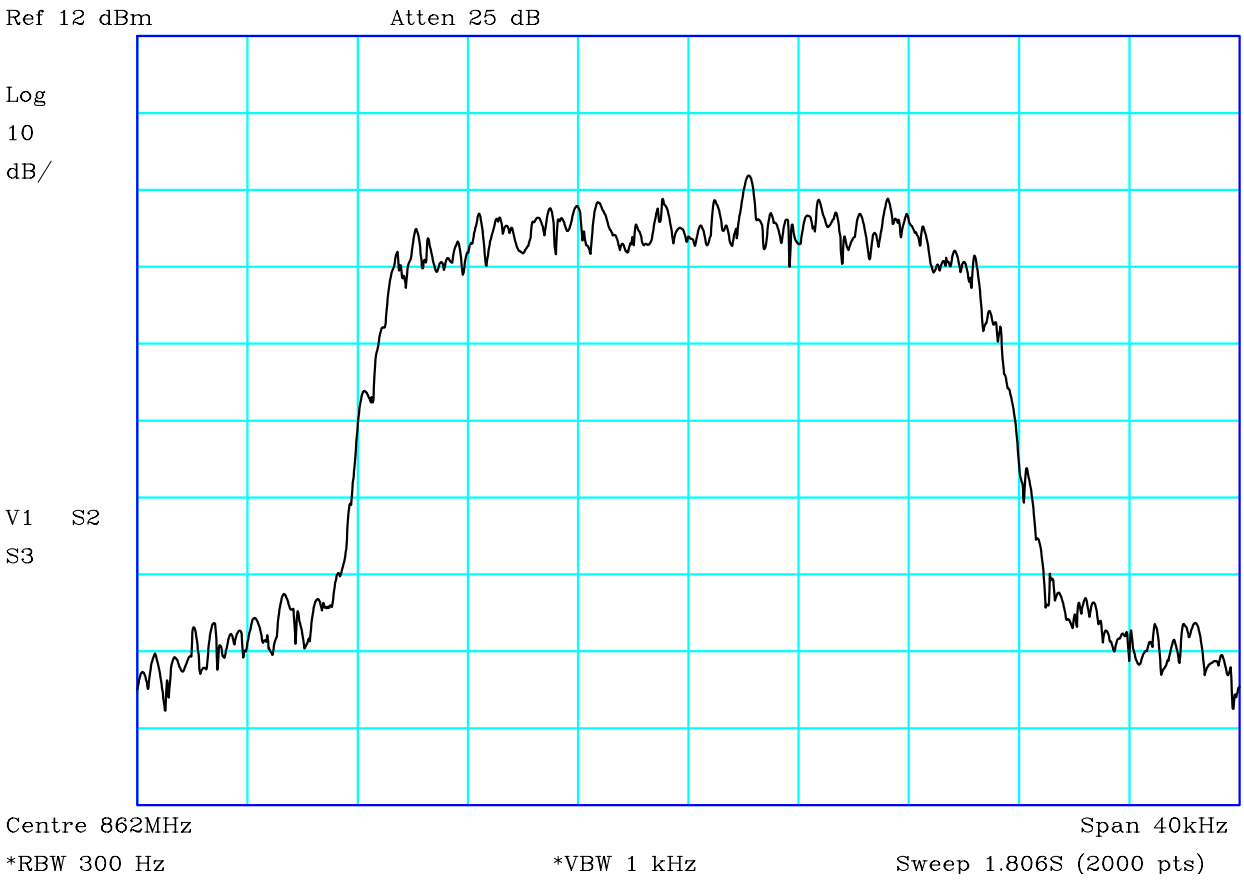


PLOT 6 Occupied Bandwidth (824MHz)

Company:	Sepura	Product:	STP8080
Date:	07/06/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:		Limit2:	
Limit3:		Limit4:	

824MHz
99% Occupied bandwidth measurement: 21.01kHz

Facility:	Environ	Mode:	1
		Modification State:	1
	File: H25255EA		

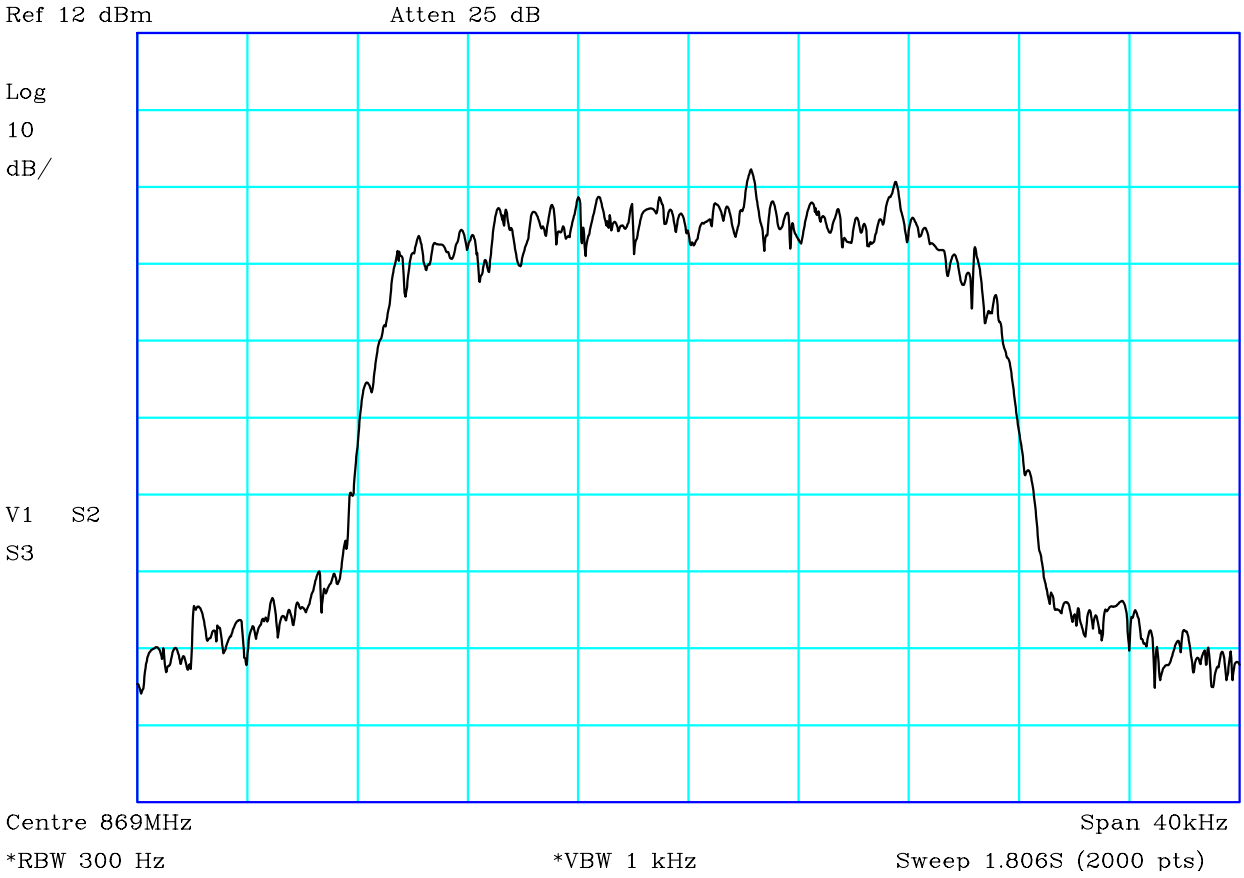


PLOT 7 Occupied Bandwidth (862MHz)

Company:	Sepura	Product:	STP8080
Date:	07/06/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:		Limit2:	
Limit3:		Limit4:	

862MHz
99% Occupied bandwidth measurement: 21.03kHz

Facility:	Environ	Mode:	1
		Modification State:	1
	File: H25255F3		

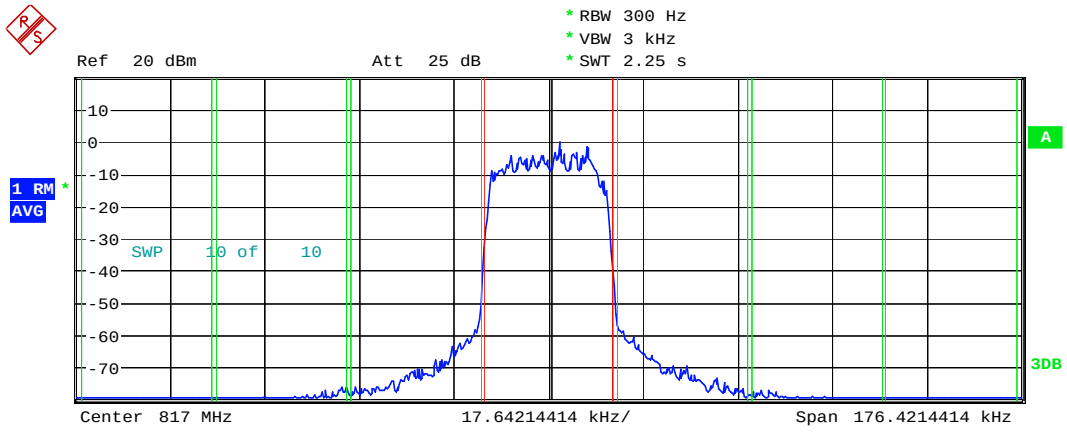


PLOT 8 Occupied Bandwidth (869MHz)

Company:	Sepura	Product:	STP8080
Date:	07/06/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:		Limit2:	
Limit3:		Limit4:	

869MHz
99% Occupied bandwidth measurement: 21.05kHz

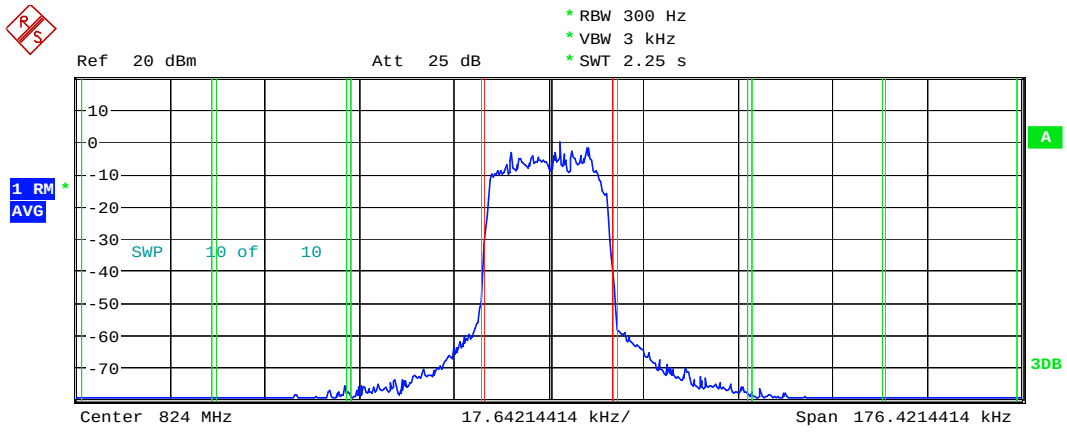
Facility:	Environ	Mode:	1
		Modification State:	1
	File: H25255D8		



Tx Channel		**TETRA**	
Bandwidth	24.3 kHz	Power	11.49 dBm
Adjacent Channel			
Bandwidth	24.3 kHz	Lower	-63.83 dB
Spacing	25 kHz	Upper	-63.56 dB
Alternate Channel			
Bandwidth	24.3 kHz	Lower	-74.68 dB
Spacing	50 kHz	Upper	-74.62 dB
2nd Alternate Channel			
Bandwidth	24.3 kHz	Lower	-77.41 dB
Spacing	75 kHz	Upper	-77.39 dB

Date: 12.JUN.2012 13:29:33

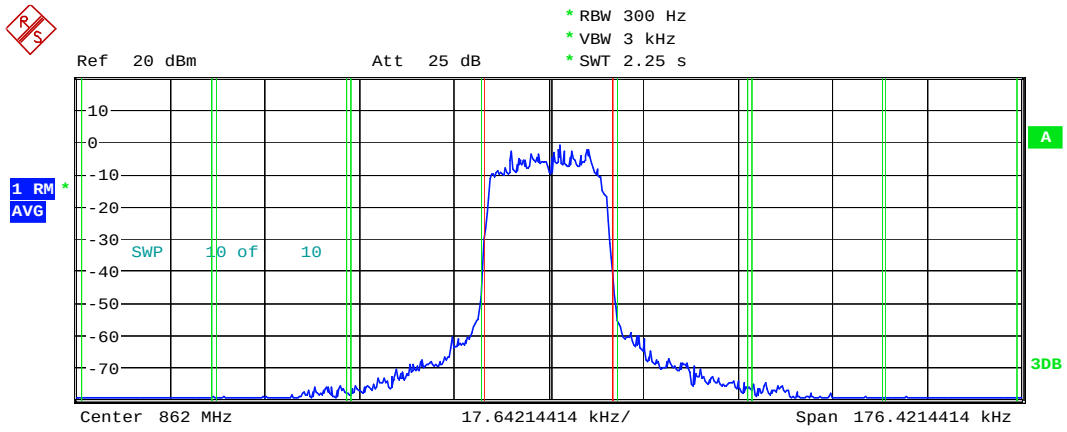
PLOT 9 Adjacent Channel Power (817MHz)



Tx Channel		**TETRA**	
Bandwidth	24.3 kHz	Power	11.43 dBm
Adjacent Channel			
Bandwidth	24.3 kHz	Lower	-63.66 dB
Spacing	25 kHz	Upper	-63.57 dB
Alternate Channel			
Bandwidth	24.3 kHz	Lower	-74.85 dB
Spacing	50 kHz	Upper	-74.88 dB
2nd Alternate Channel			
Bandwidth	24.3 kHz	Lower	-77.62 dB
Spacing	75 kHz	Upper	-77.50 dB

Date: 12.JUN.2012 13:30:14

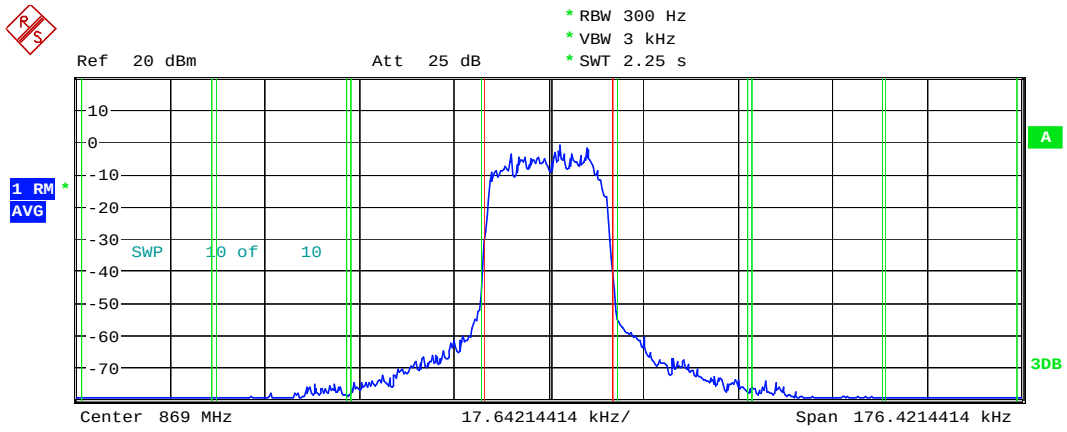
PLOT 10 Adjacent Channel Power (824MHz)



Tx Channel		**TETRA**	
Bandwidth	24.3 kHz	Power	11.49 dBm
Adjacent Channel			
Bandwidth	24.3 kHz	Lower	-62.22 dB
Spacing	25 kHz	Upper	-62.26 dB
Alternate Channel			
Bandwidth	24.3 kHz	Lower	-73.79 dB
Spacing	50 kHz	Upper	-73.24 dB
2nd Alternate Channel			
Bandwidth	24.3 kHz	Lower	-76.73 dB
Spacing	75 kHz	Upper	-76.60 dB

Date: 12.JUN.2012 13:31:34

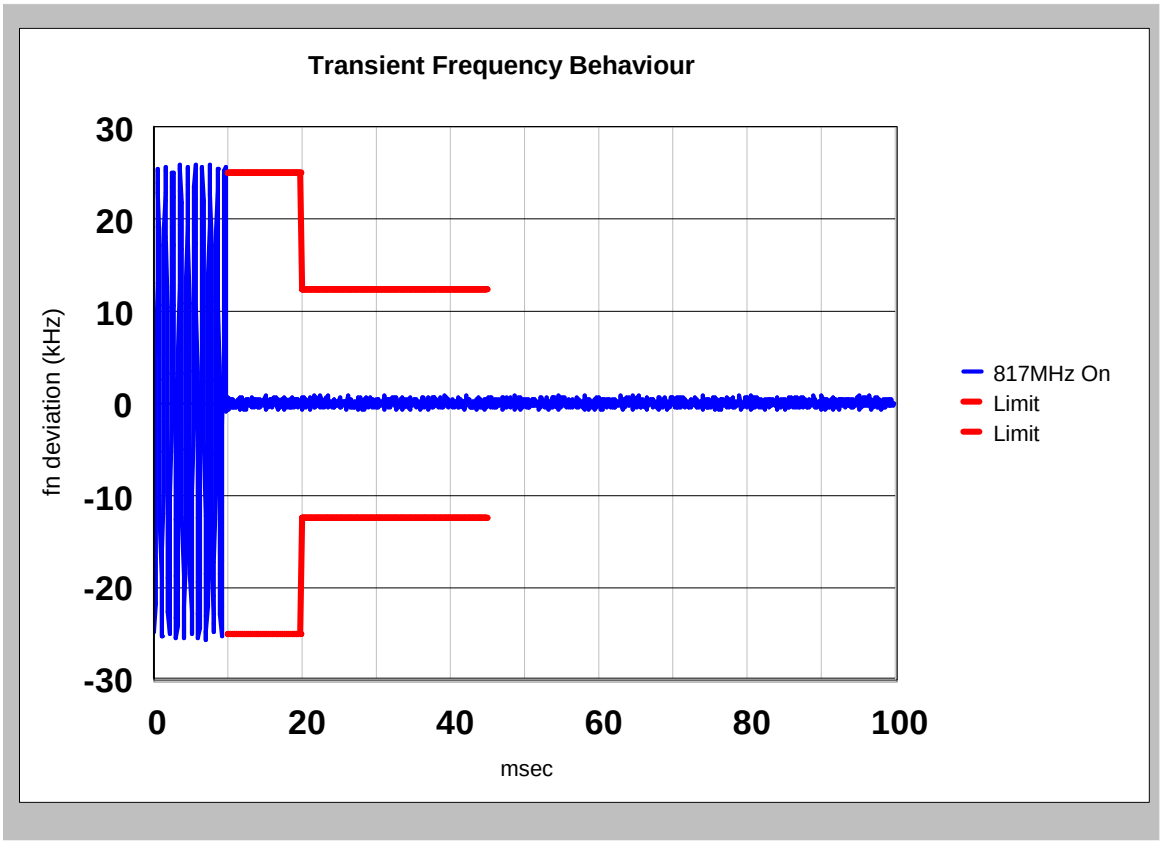
PLOT 11 Adjacent Channel Power (862MHz)



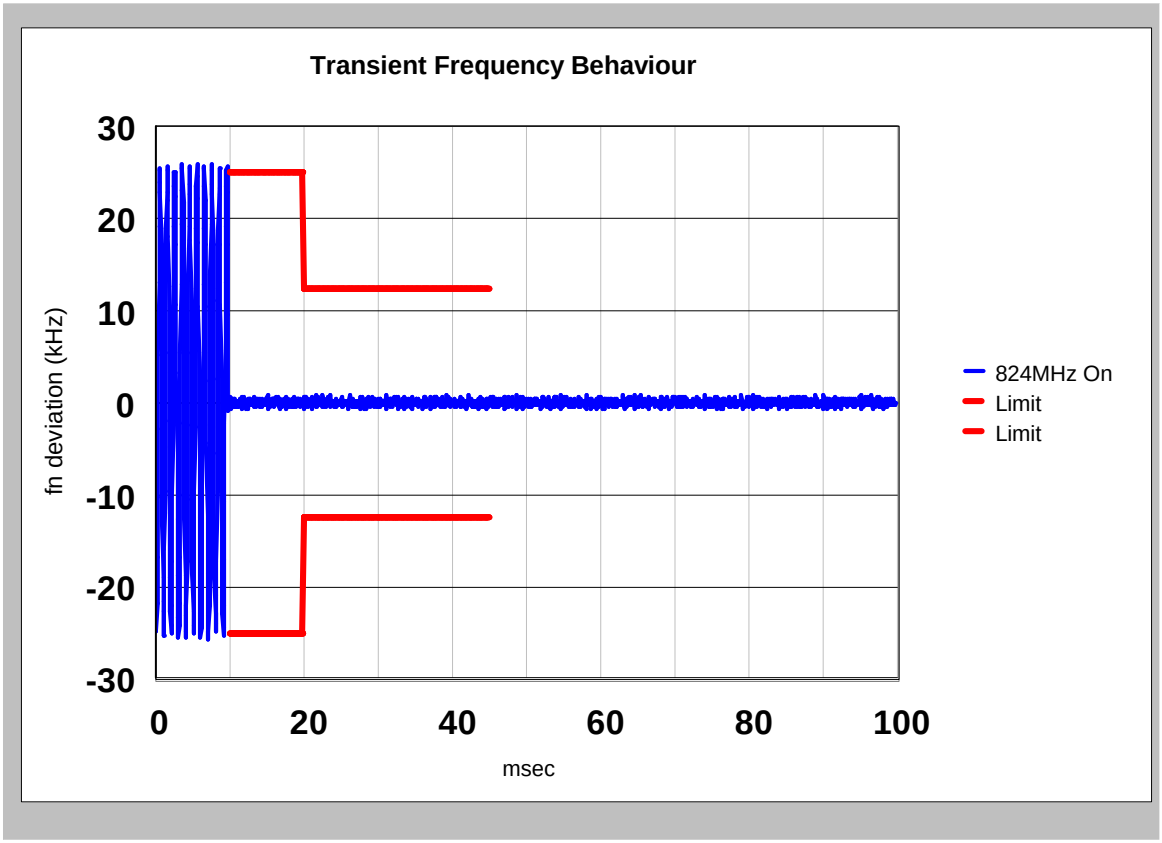
Tx Channel		**TETRA**	
Bandwidth	24.3 kHz	Power	11.30 dBm
Adjacent Channel		Lower	-61.47 dB
Bandwidth	24.3 kHz	Upper	-61.46 dB
Spacing	25 kHz		
Alternate Channel		Lower	-73.29 dB
Bandwidth	24.3 kHz	Upper	-73.24 dB
Spacing	50 kHz		
2nd Alternate Channel		Lower	-76.46 dB
Bandwidth	24.3 kHz	Upper	-76.73 dB
Spacing	75 kHz		

Date: 12.JUN.2012 13:32:13

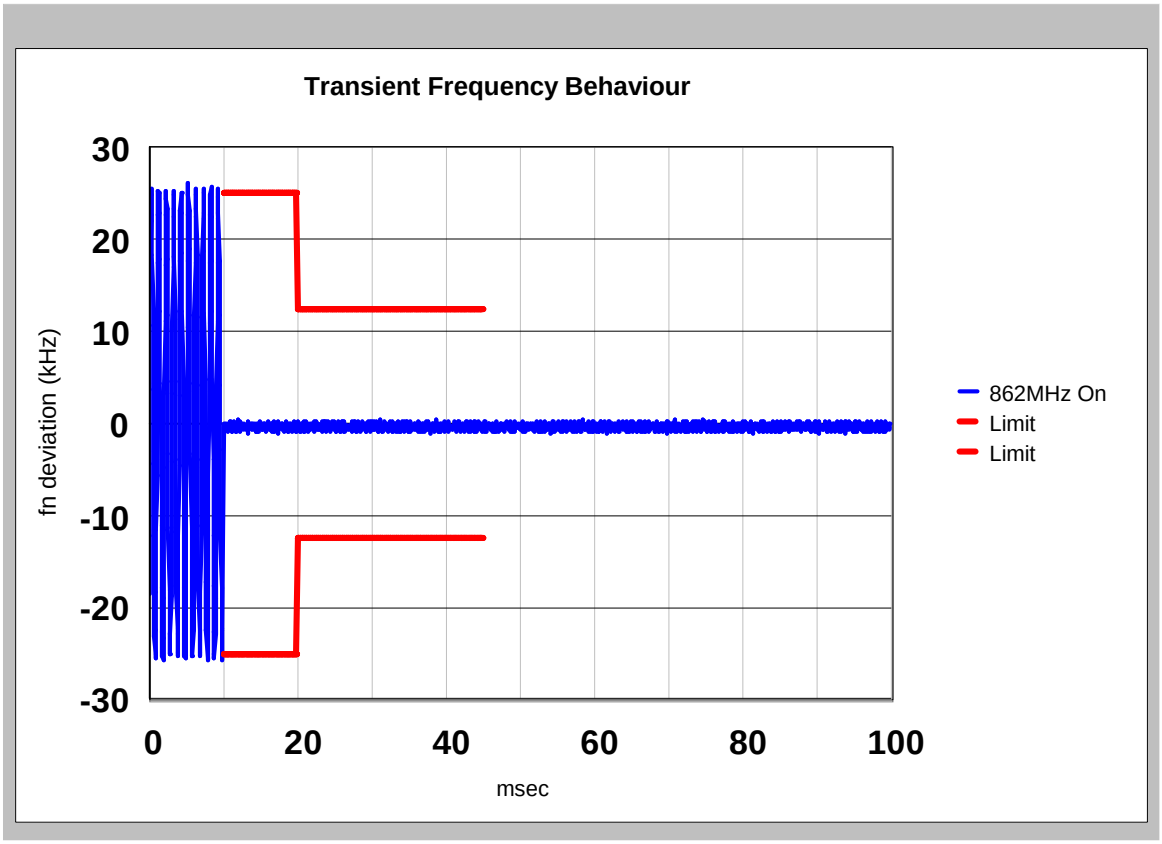
PLOT 12 Adjacent Channel Power (869MHz)



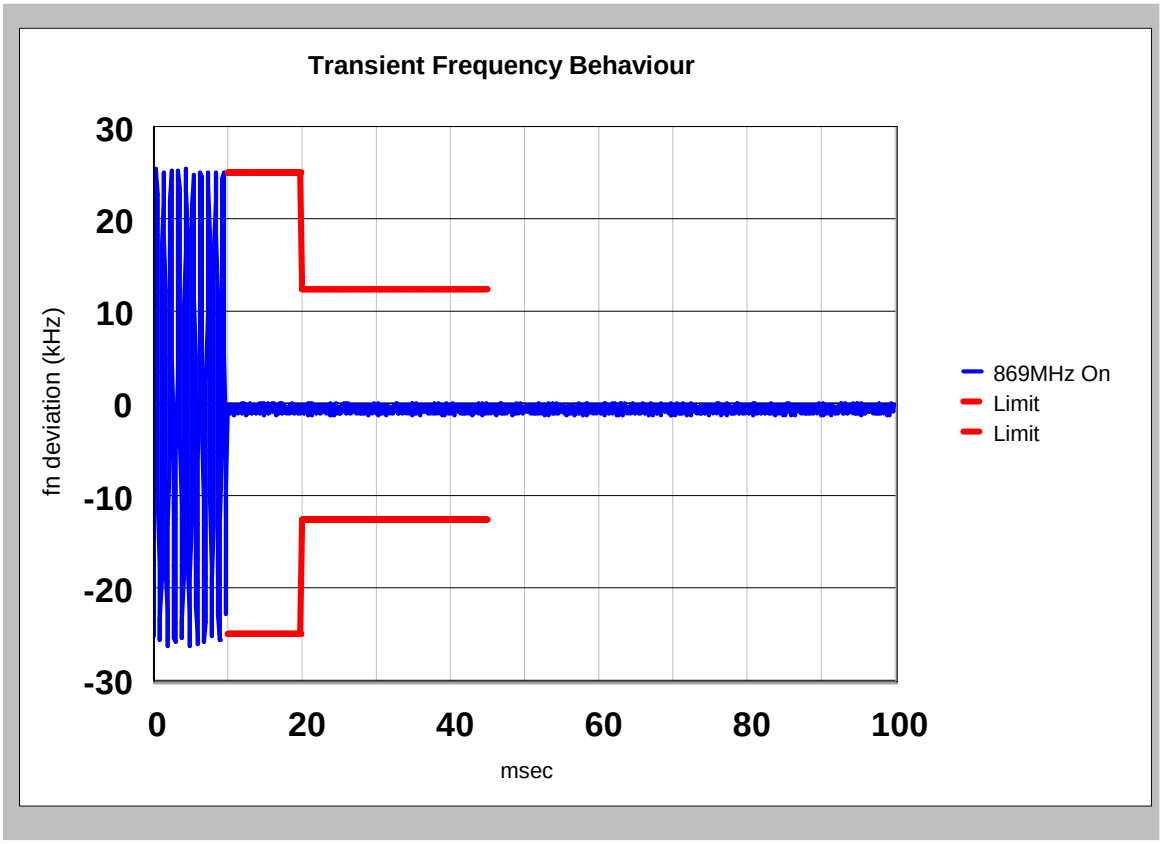
PLOT 13 Transient Frequency - 817MHz - On



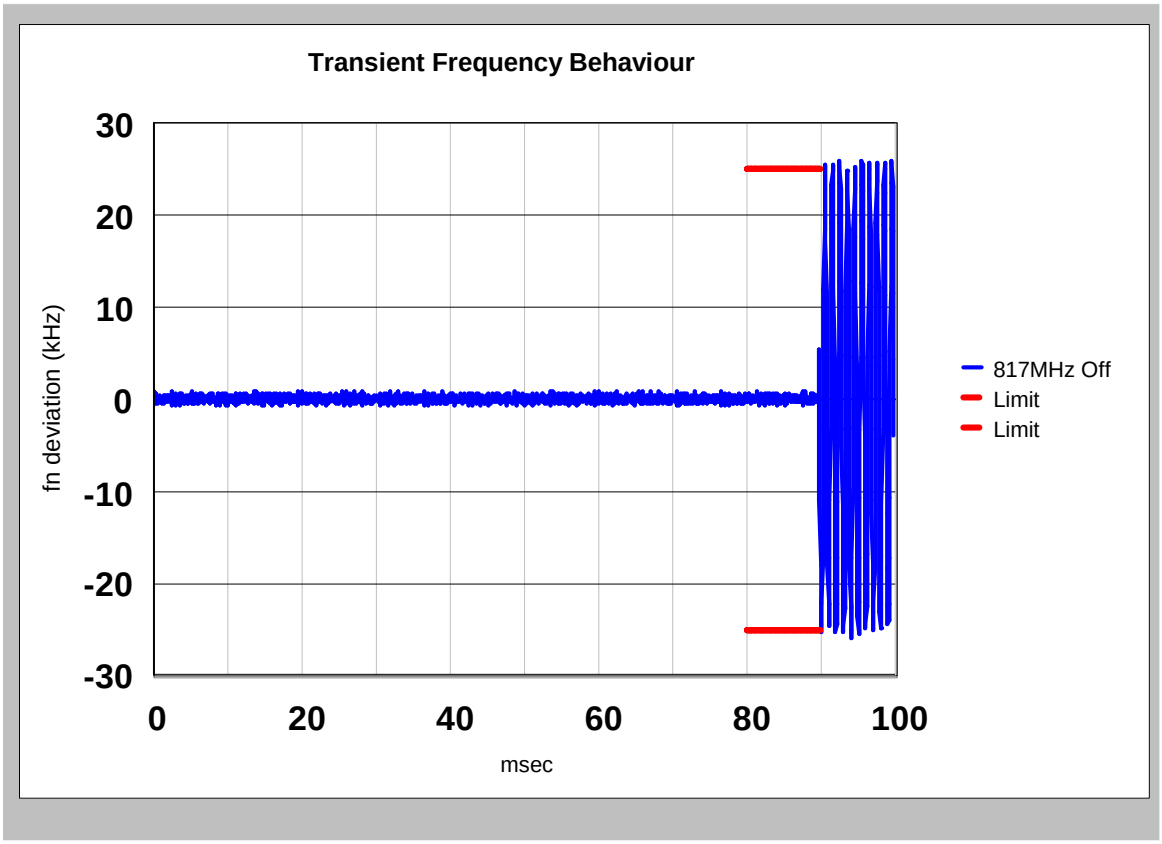
PLOT 14 Transient Frequency - 824MHz - On



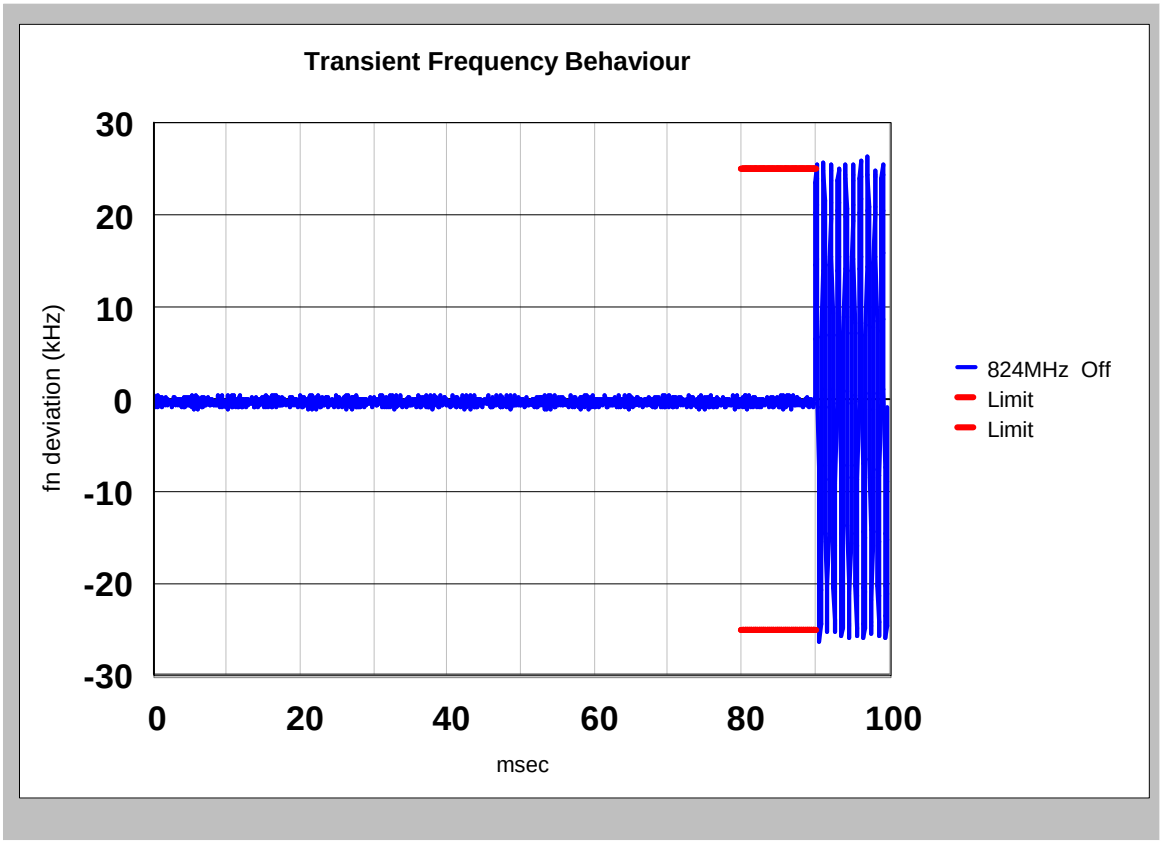
PLOT 15 Transient Frequency - 862MHz - On



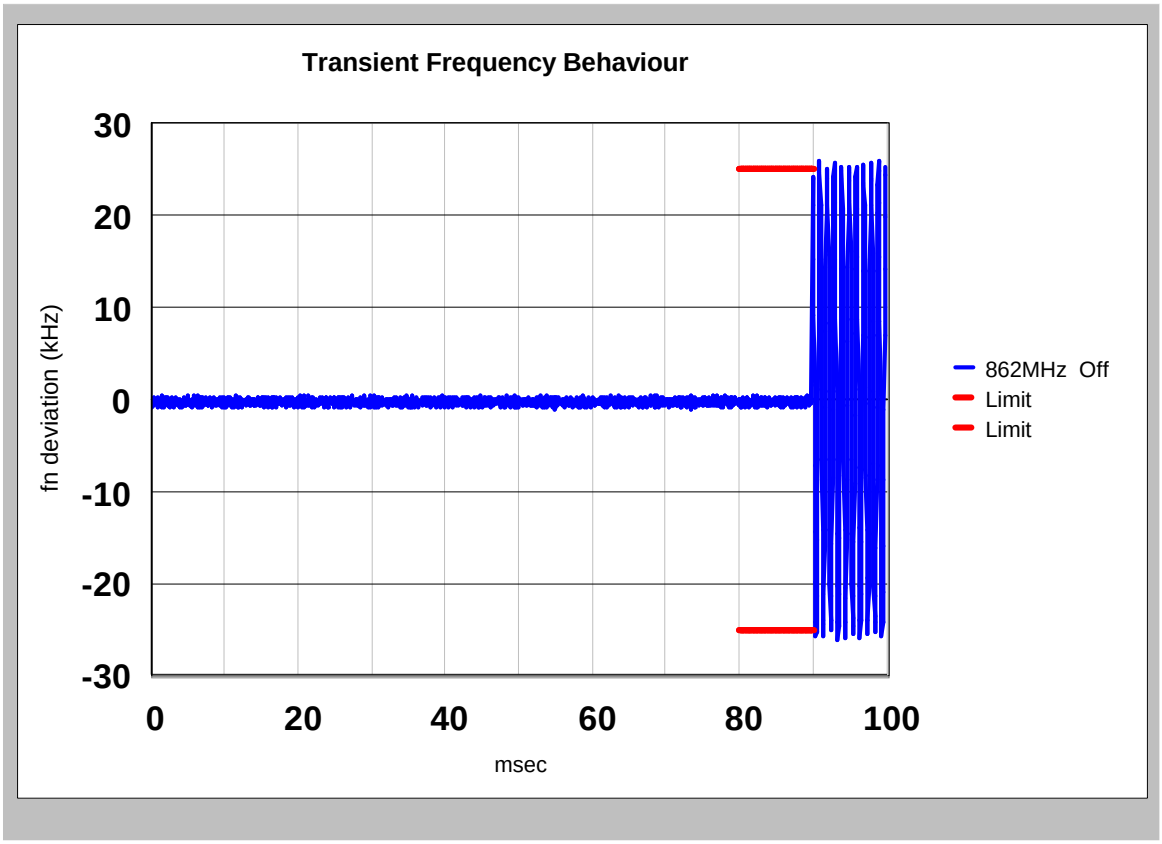
PLOT 16 Transient Frequency - 869MHz - On



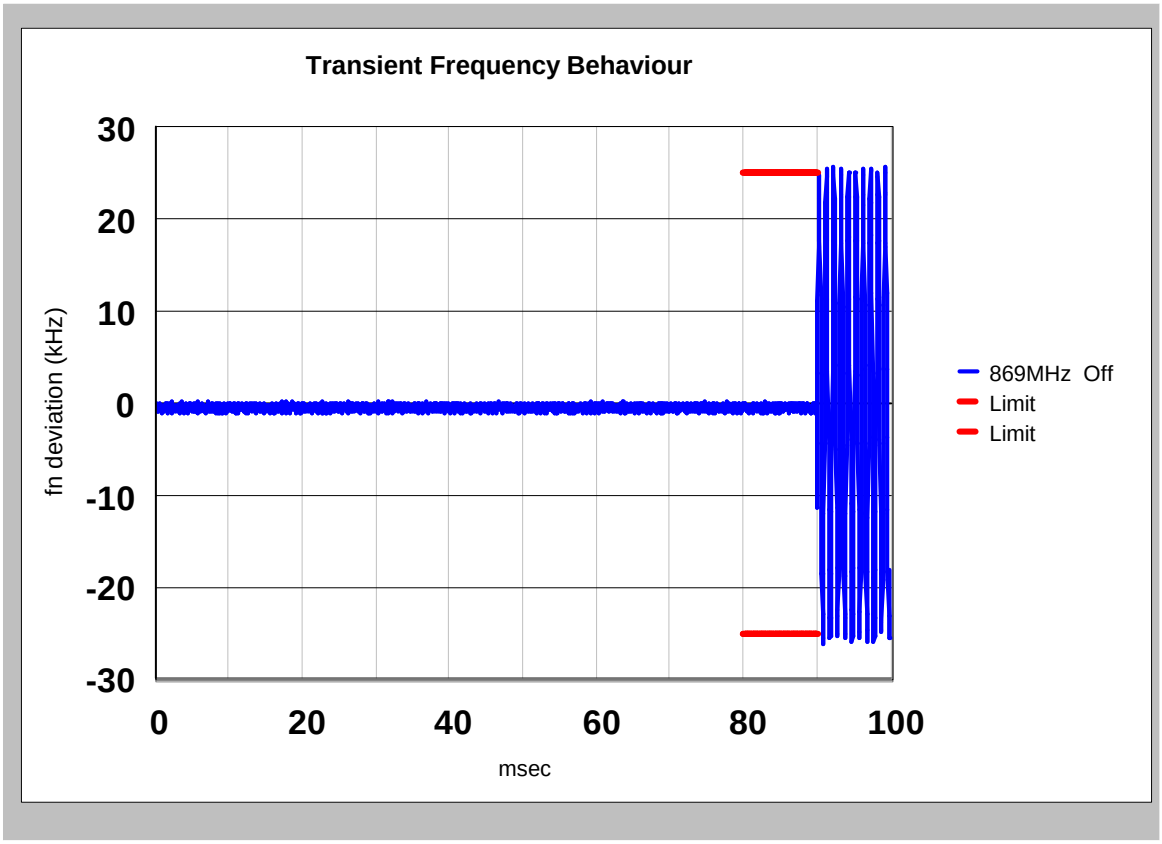
PLOT 17 Transient Frequency - 817MHz - Off



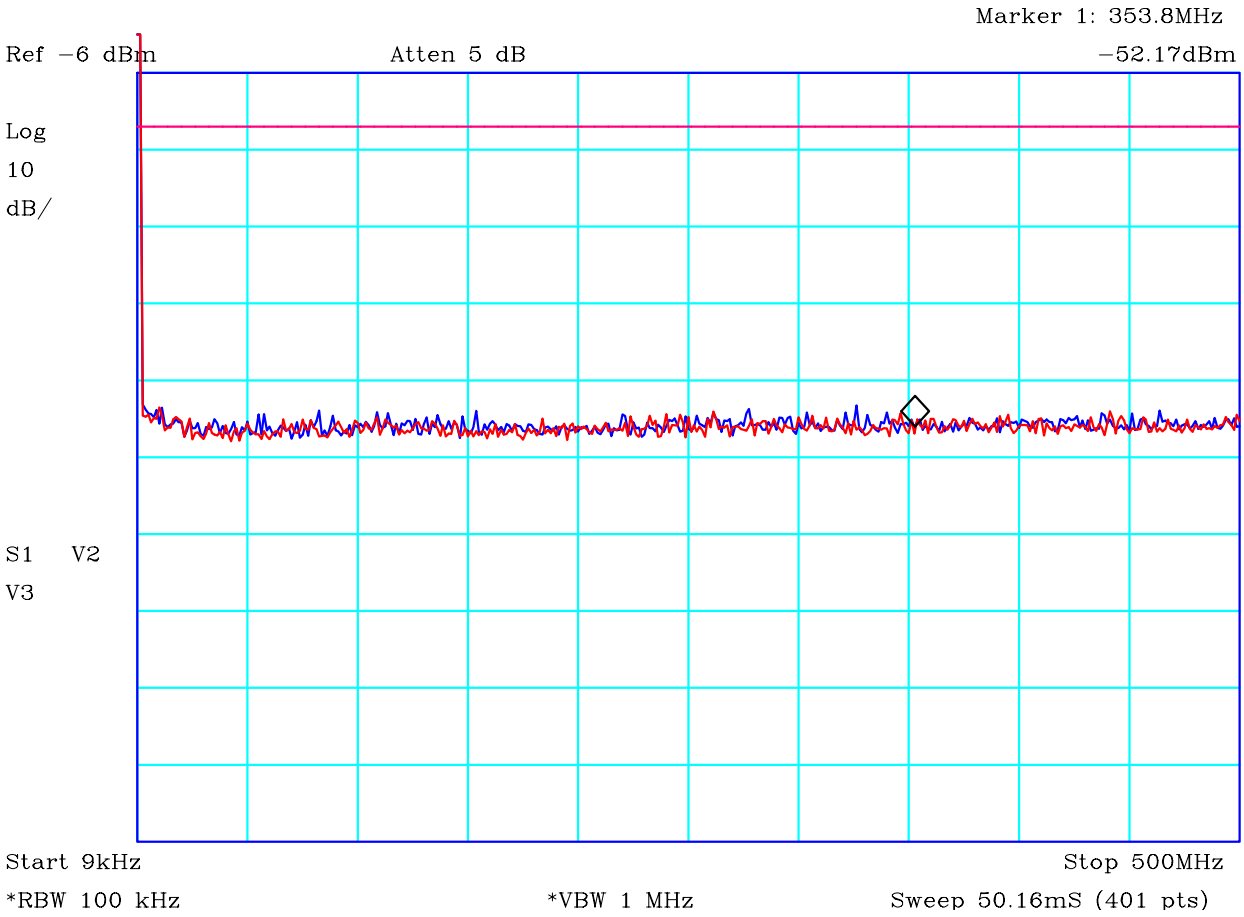
PLOT 18 Transient Frequency - 824MHz - Off



PLOT 19 Transient Frequency - 862MHz - Off



PLOT 20 Transient Frequency - 869MHz - Off



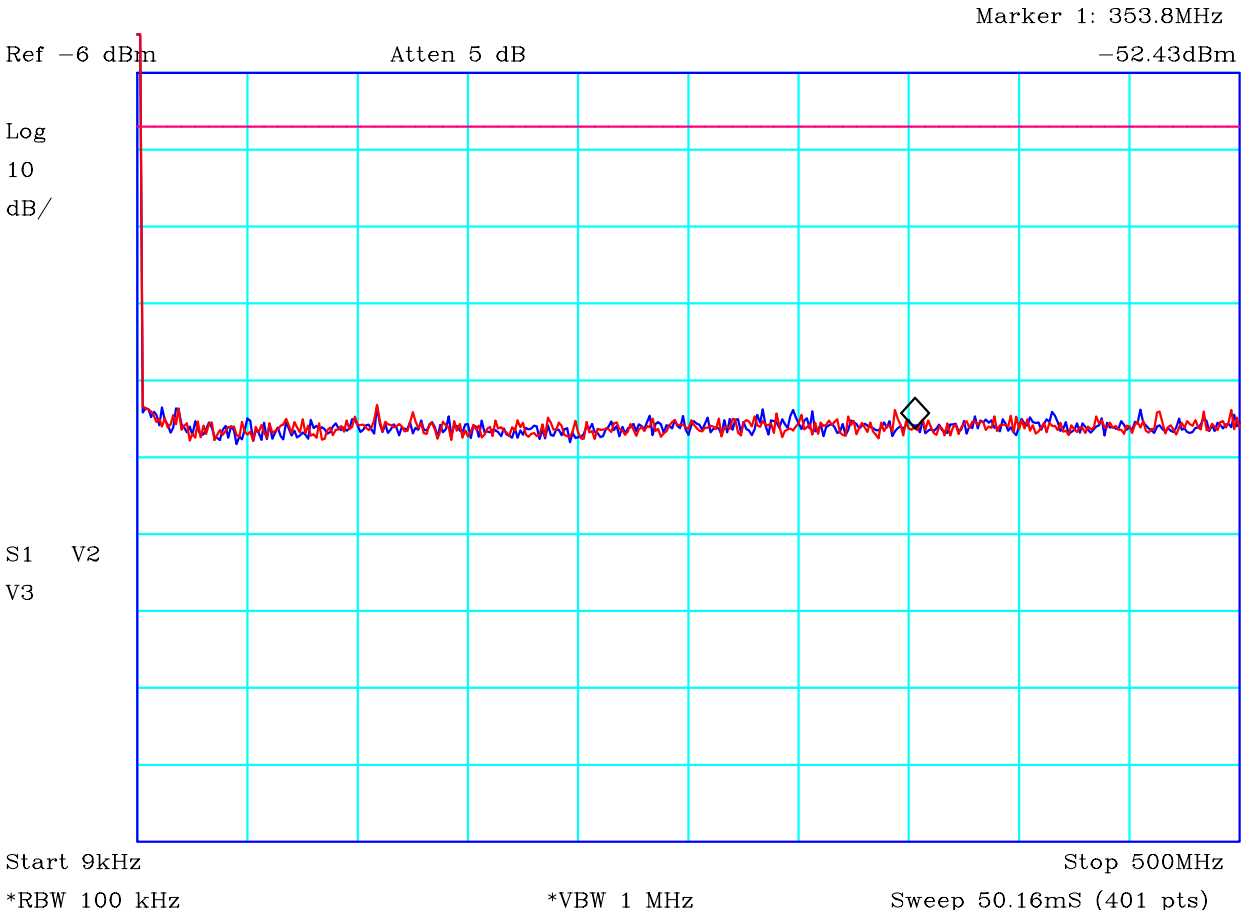
CF1:30dB pad + cable CF2:RFF17_110221

PLOT 21 Antenna Conducted Spur Emissions - 817 to 824 Band - 9kHz to 500MHz

Company:	Sepura	Product:	STP8080
Date:	07/06/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	-13dBm	Limit2:	
Limit3:		Limit4:	

Blue: 862MHz
Red 869MHz
Limit -13dBm

Facility:	Environ	Height		Mode:	1
Distance		Polarisation		Modification State:	1
Angle		File:	H2521475		



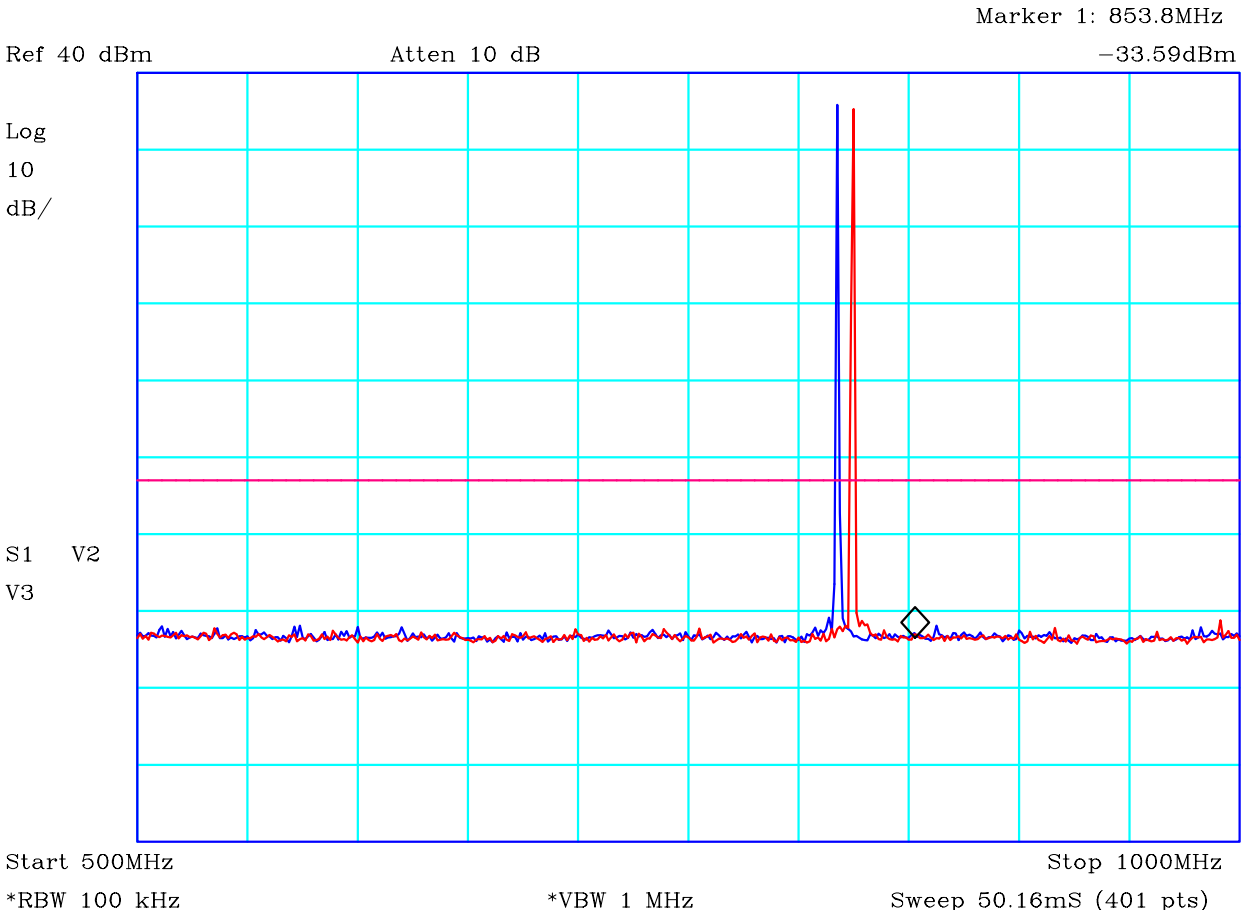
CF1:30dB pad + cable CF2:RFF17_110221

PLOT 22 Antenna Conducted Spur Emissions - 862 to 869 Band - 9kHz to 500MHz

Company:	Sepura	Product:	STP8080
Date:	07/06/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	-13dBm	Limit2:	
Limit3:		Limit4:	

Blue: 862MHz
Red 869MHz
Limit -13dBm

Facility:	Environ	Mode:	1
		Modification State:	1
	File: H25076D5		



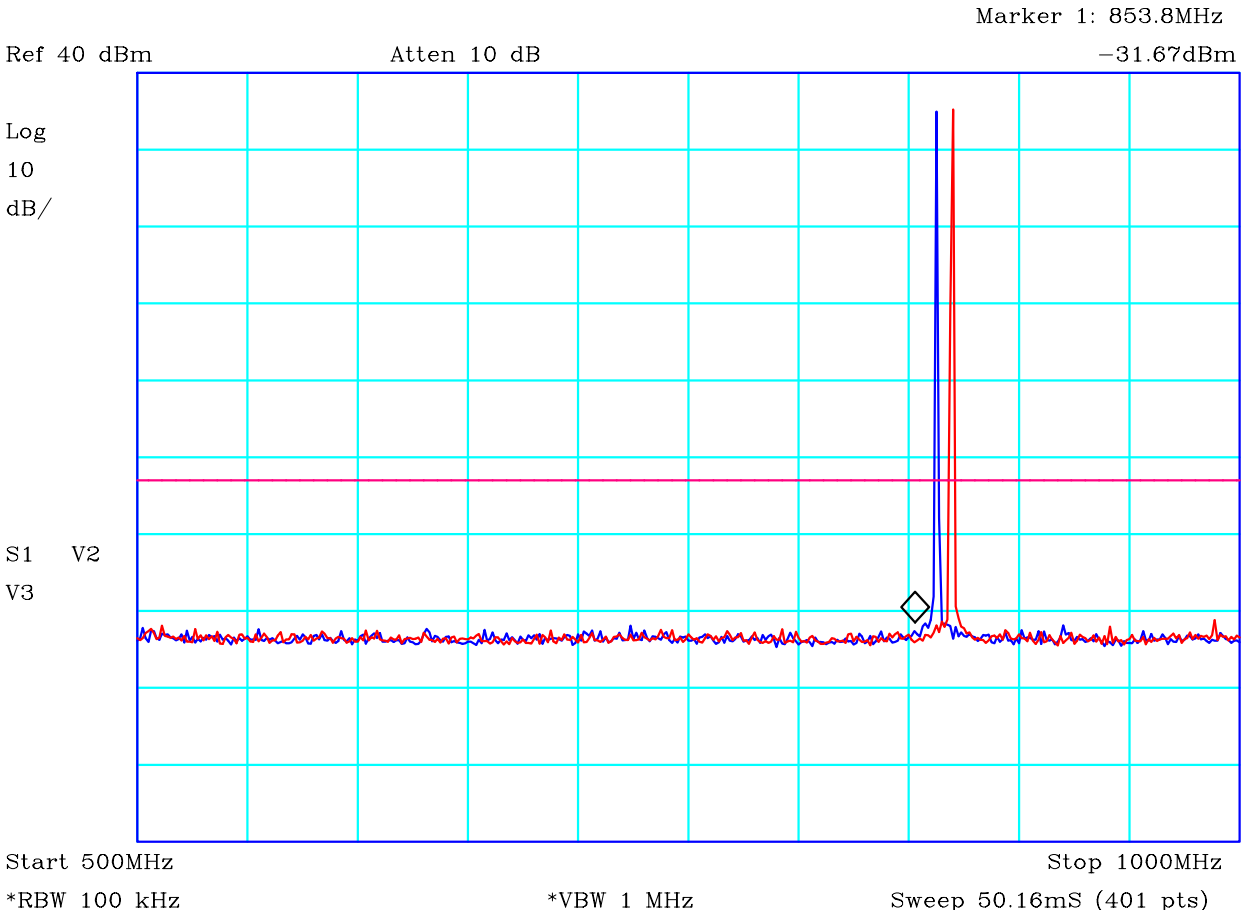
CF1:30dB pad + cable

PLOT 23 Antenna Conducted Spur Emissions - 817 to 824 Band - 500MHz to 1GHz

Company:	Sepura	Product:	STP8080
Date:	07/06/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	-13dBm	Limit2:	
Limit3:		Limit4:	

Blue: 817MHz
Red 824MHz
Limit -13dBm

Facility:	Environ	Mode:	1
		Modification State:	1
	File: H2507731		



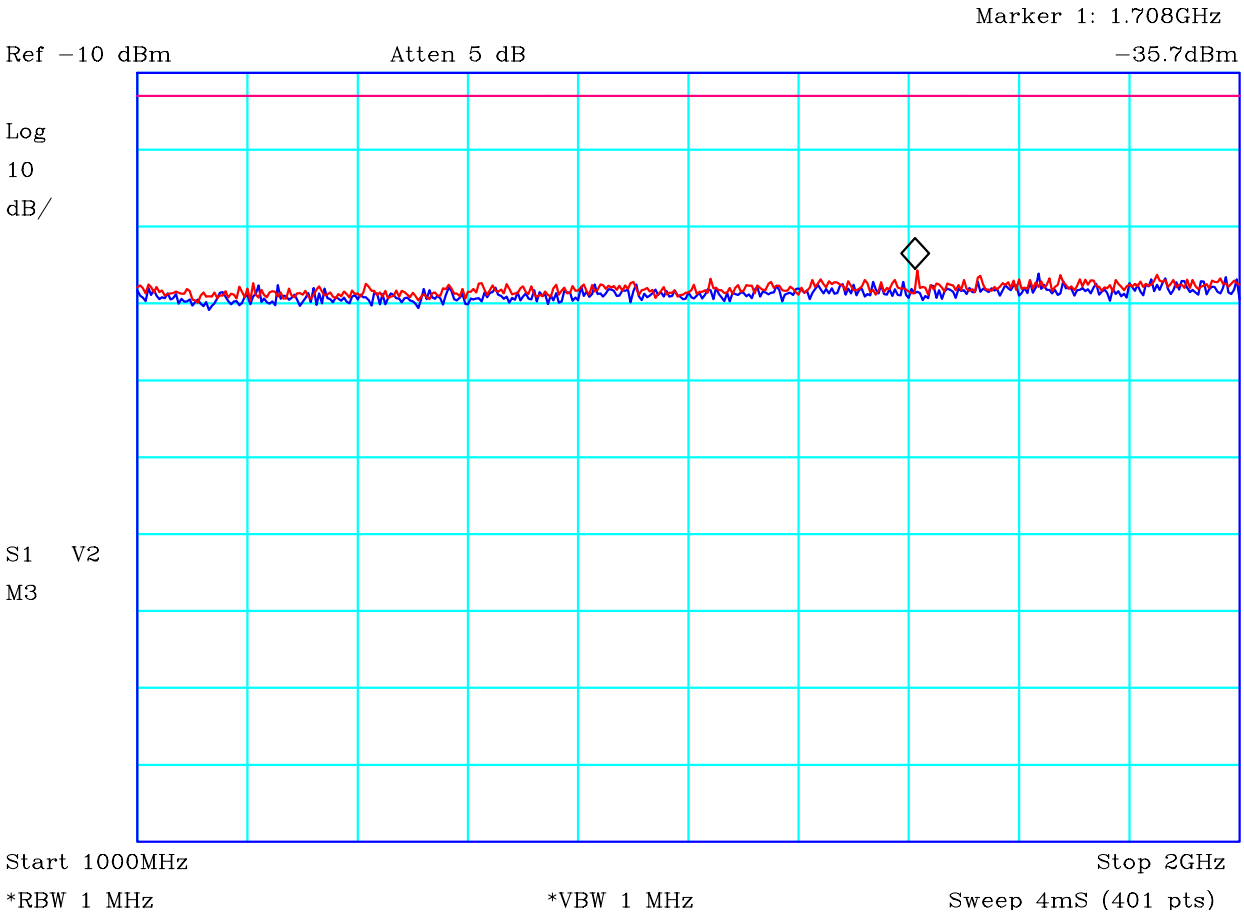
CF1:30dB pad + cable

PLOT 24 Antenna Conducted Spur Emissions - 862 to 869 Band - 500MHz to 1GHz

Company:	Sepura	Product:	STP8080
Date:	07/06/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	-13dBm	Limit2:	
Limit3:		Limit4:	

Blue: 862MHz
Red 869MHz
Limit -13dBm

Facility:	Environ	Mode:	1
		Modification State:	1
	File: H2507738		



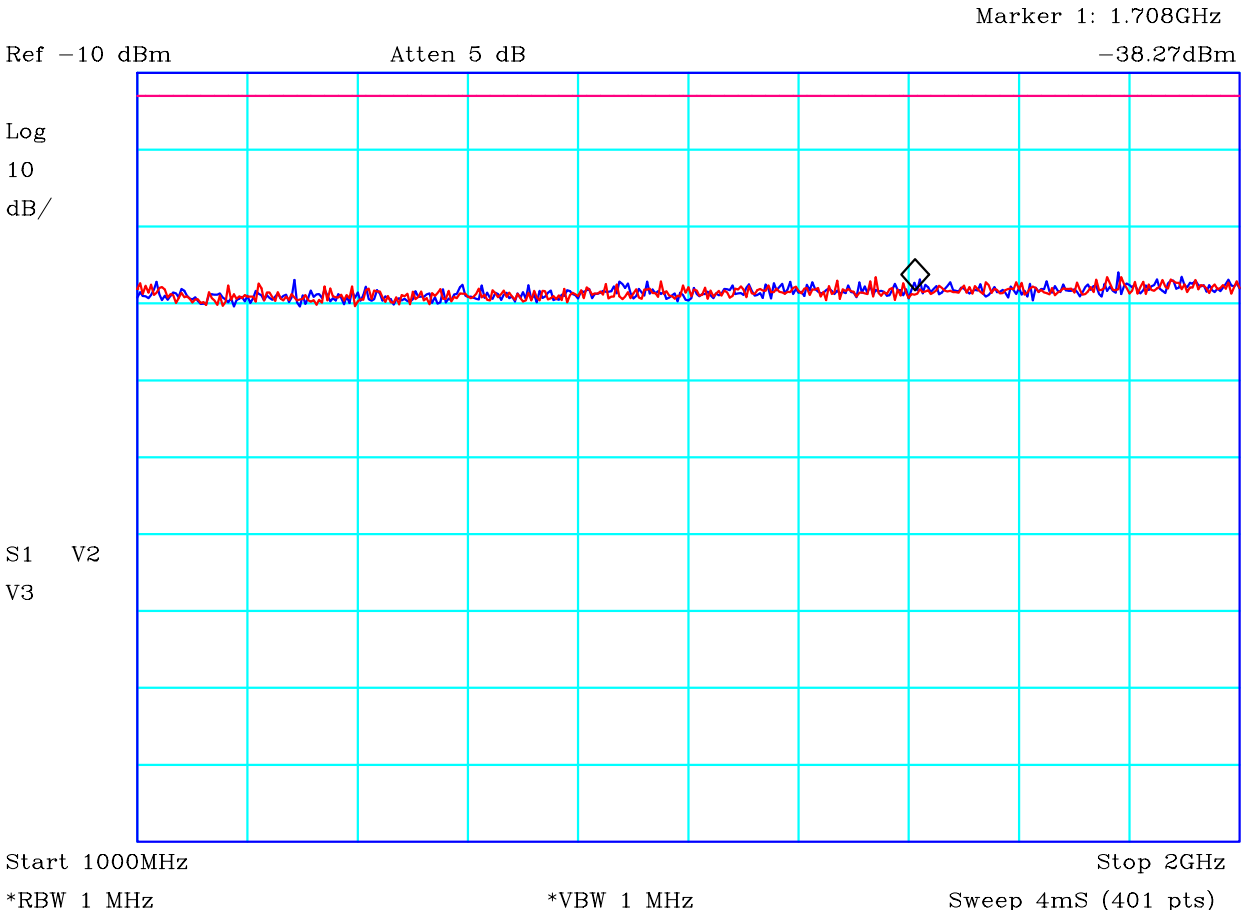
CF1:30dB pad + cable CF2:RFF15_110112

PLOT 25 Antenna Conducted Spur Emissions - 817 to 824 Band - 1GHz to 2GHz

Company:	Sepura	Product:	STP8080
Date:	07/06/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	-13dBm	Limit2:	
Limit3:		Limit4:	

Blue: 817MHz
Red 824MHz
Limit -13dBm

Facility:	Environ	Mode:	1
		Modification State:	1
	File: H2507759		



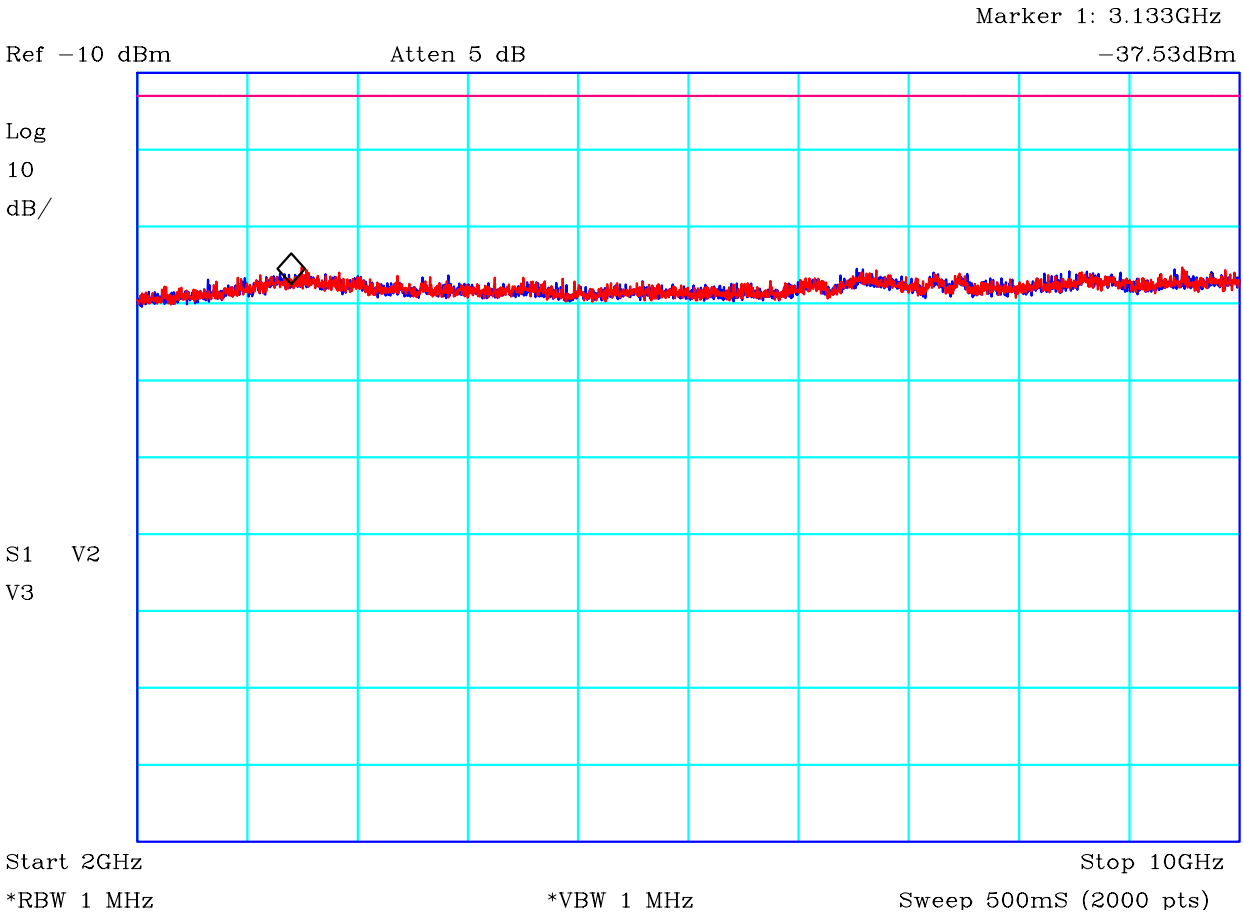
CF1:30dB pad + cable CF2:RFF15_110112

PLOT 26 Antenna Conducted Spur Emissions - 862 to 869 Band - 1GHz to 2GHz

Company:	Sepura	Product:	STP8080
Date:	07/06/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	-13dBm	Limit2:	
Limit3:		Limit4:	

Blue: 862MHz
Red 869MHz
Limit -13dBm

Facility:	Environ	Mode:	1
		Modification State:	1
	File: H2507761		



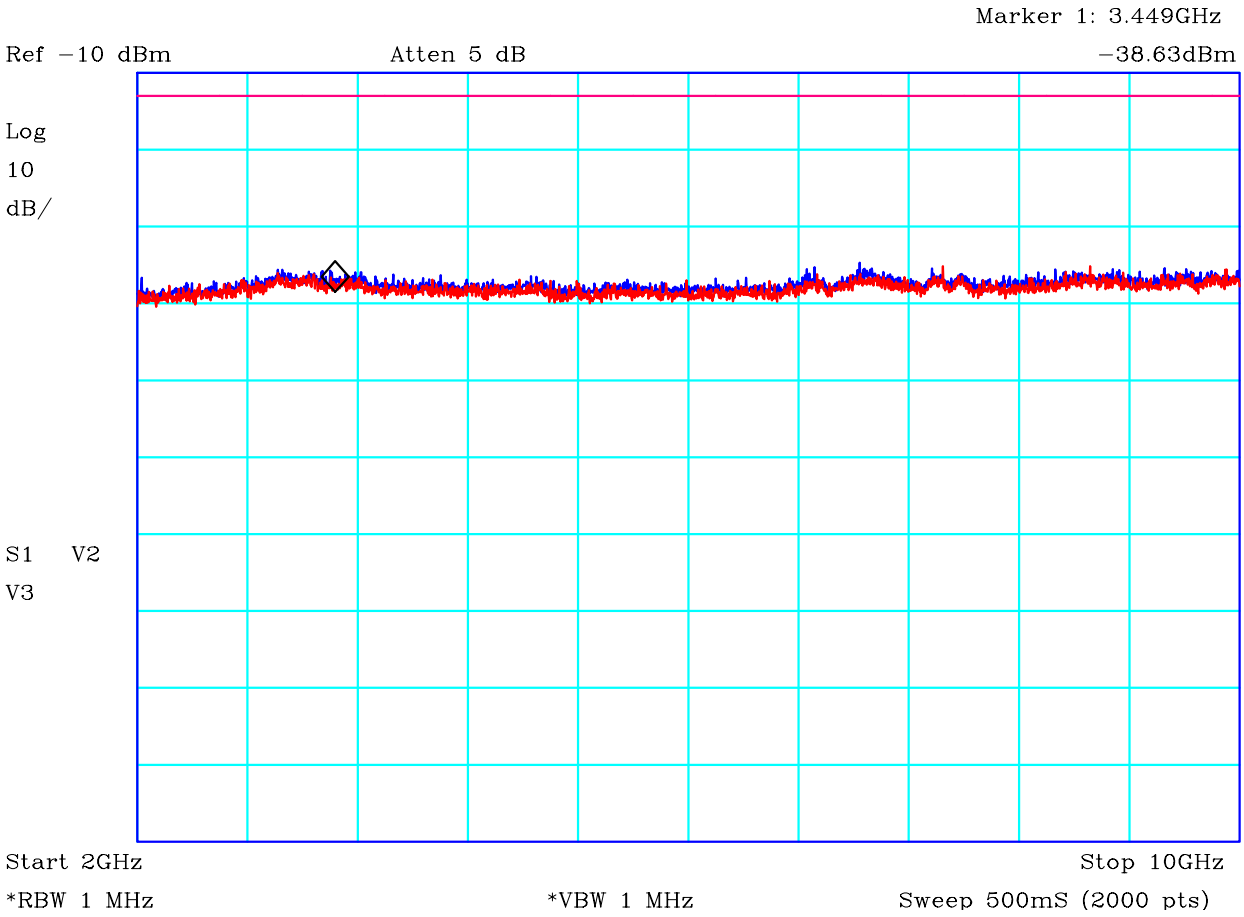
CF1:30dB pad + cable CF2:RFF22_110221

PLOT 27 Antenna Conducted Spur Emissions - 817 to 824 Band - 2GHz to 10GHz

Company:	Sepura	Product:	STP8080
Date:	07/06/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	-13dBm	Limit2:	
Limit3:		Limit4:	

Blue: 817MHz
Red 824MHz
Limit -13dBm

Facility:	Environ	Mode:	1
		Modification State:	1
	File: H25077D4		



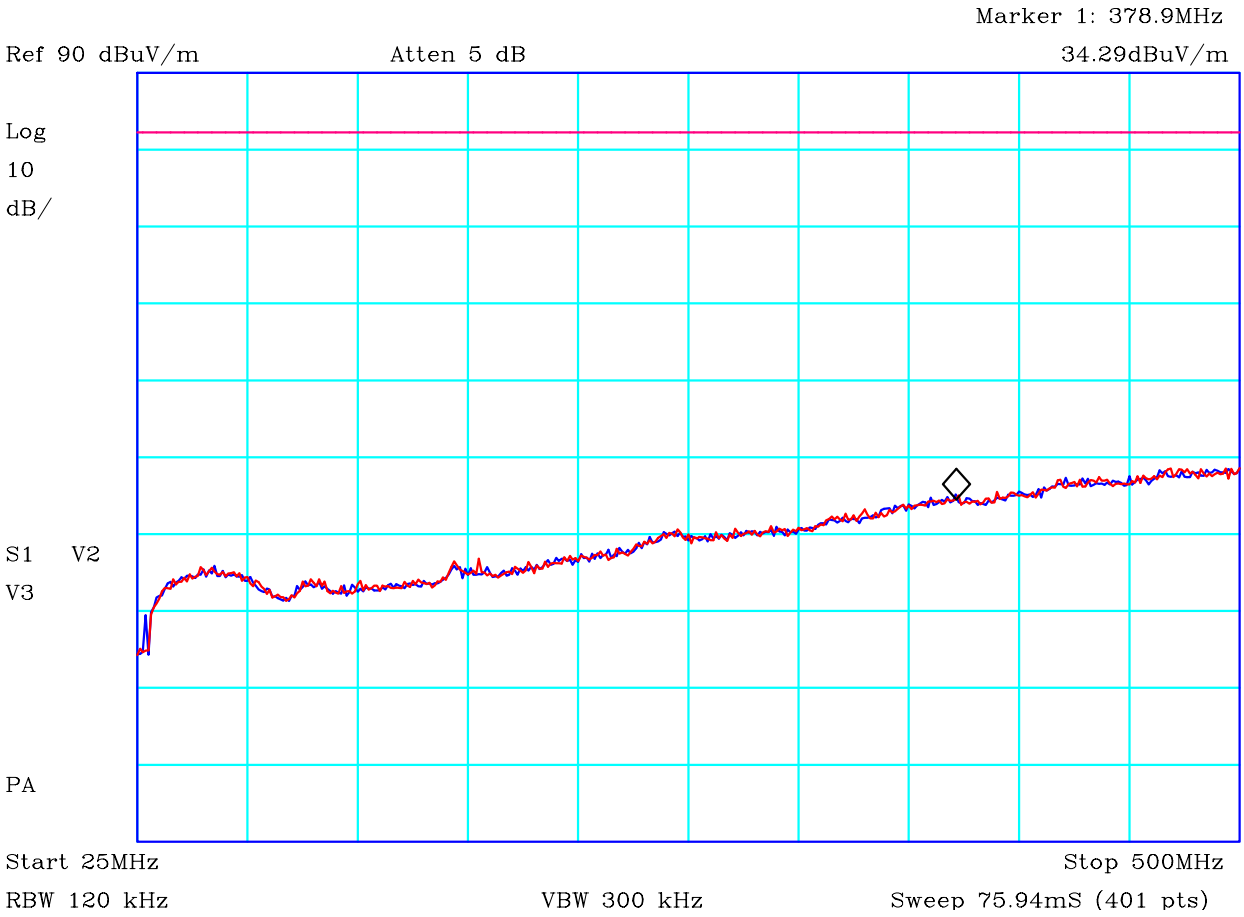
CF1:30dB pad + cable CF2:RFF22_110221

PLOT 28 Antenna Conducted Spur Emissions - 862 to 869 Band - 2GHz to 10GHz

Company:	Sepura	Product:	STP8080
Date:	07/06/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	-13dBm	Limit2:	
Limit3:		Limit4:	

Blue: 862MHz
Red 869MHz
Limit -13dBm

Facility:	Environ	Mode:	1
		Modification State:	1
	File: H25077DE		



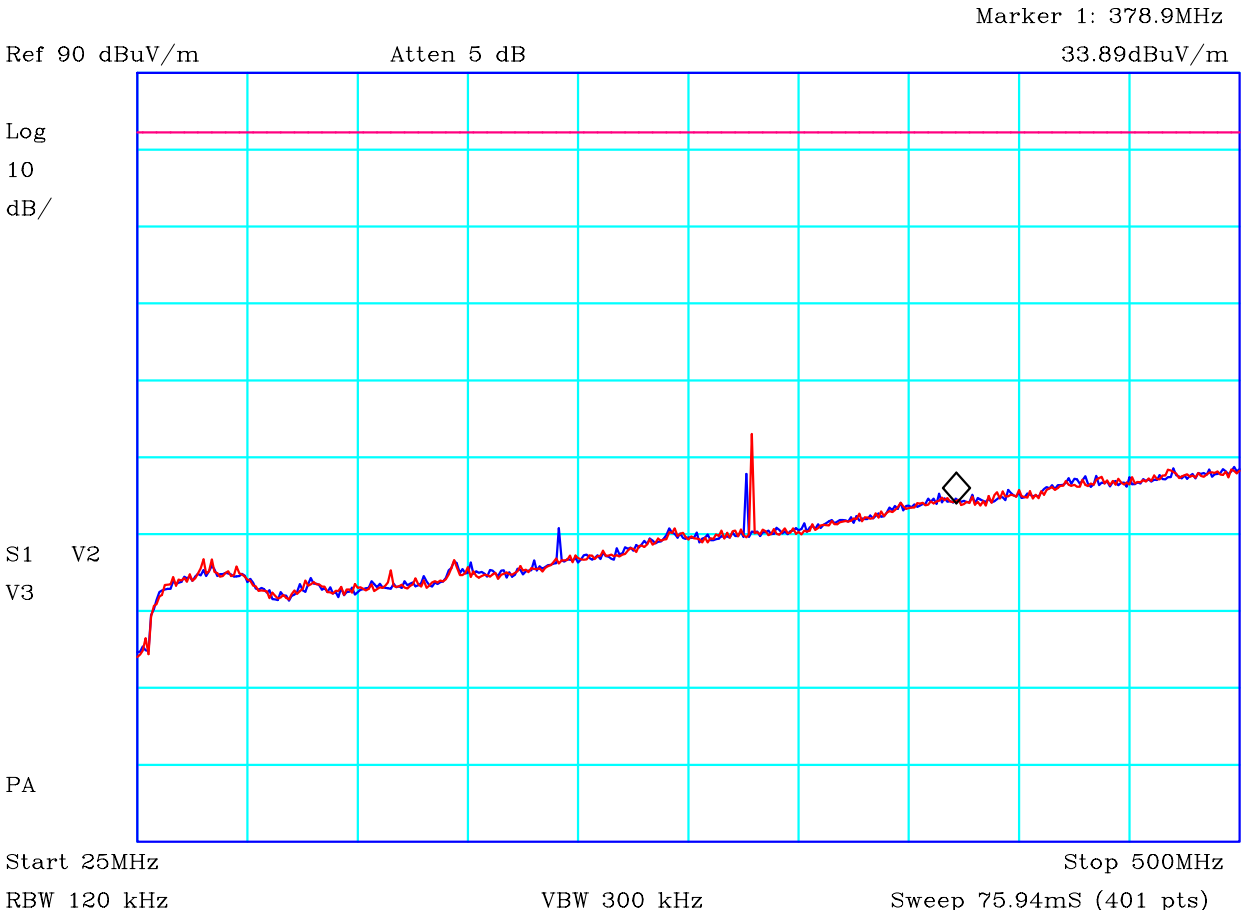
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:RFF17_110221

PLOT 29 Radiated Emission - Standalone - 817 - 824 band Tx - 25MHz to 500MHz

Company:	Sepura	Product:	STP8080
Date:	18/05/2012	Test Eng:	Dave Smith
Method:	FCC part 90	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

Standalone
Transmit mode. Maximum of both horizontal and vertical.
Blue: 817MHz
Red 824MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1.5	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H2418723		



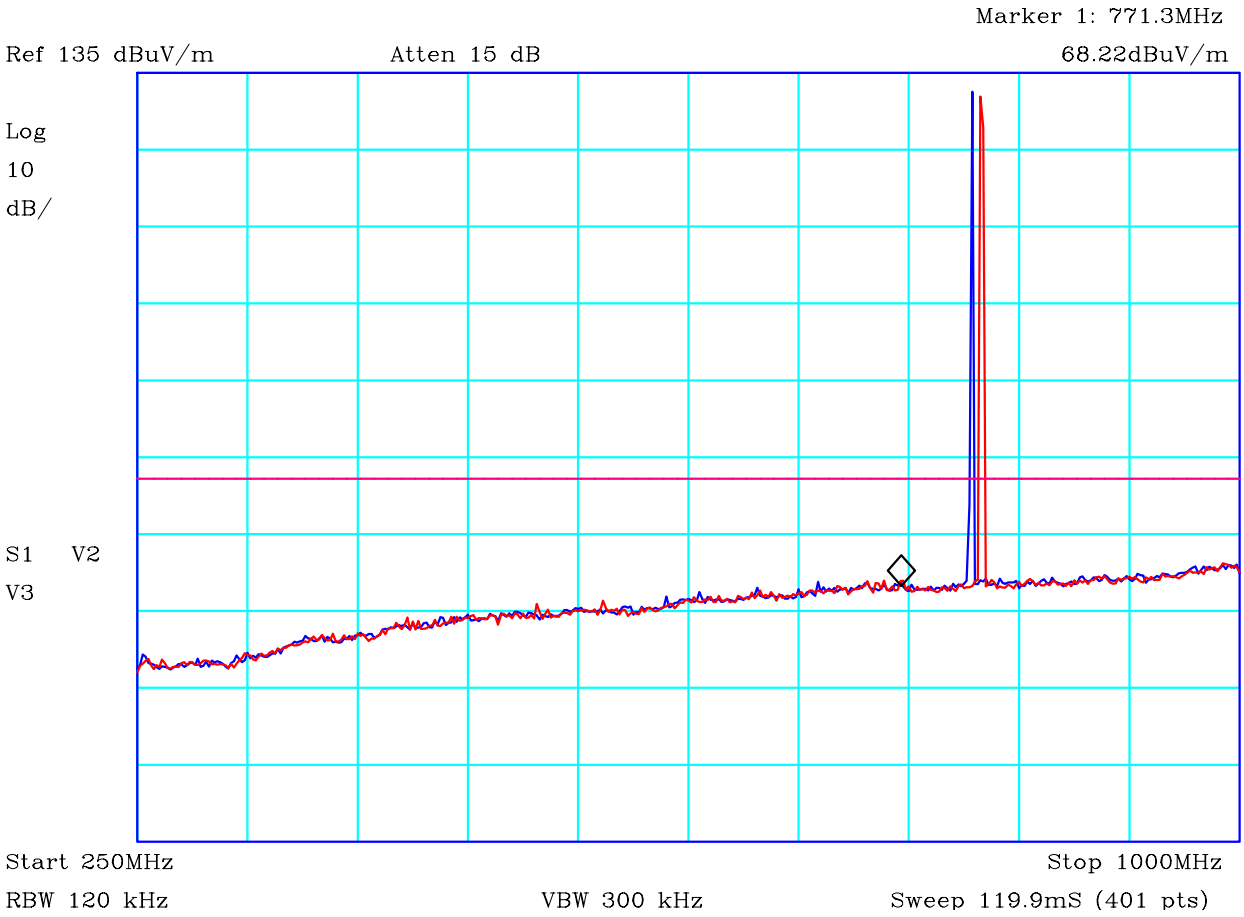
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:RFF17_110221

PLOT 30 Radiated Emission - Standalone - 862 - 869 band Tx - 25MHz to 500MHz

Company:	Sepura	Product:	STP8080
Date:	18/05/2012	Test Eng:	Dave Smith
Method:	RSS_GEN	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

Standalone
Transmit mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1.5	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H2418740		



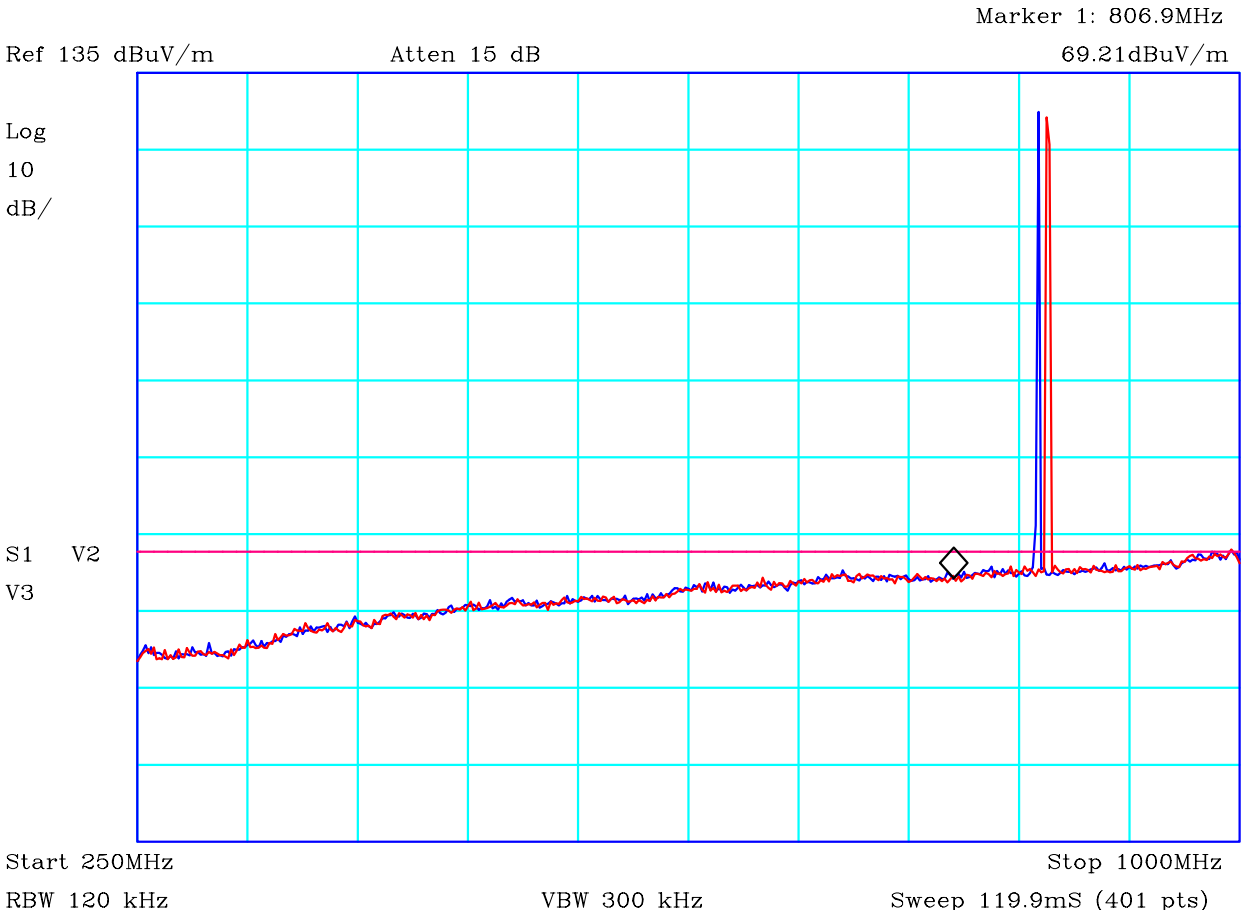
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806

PLOT 31 Radiated Emissions - Standalone - 817 - 824 Band Tx - 250MHz to 1GHz

Company:	Sepura	Product:	STP8080
Date:	10/05/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

Standalone
Transmit mode. Maximum of both horizontal and vertical.
Blue: 817MHz
Red 824MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1.5	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H2410781		



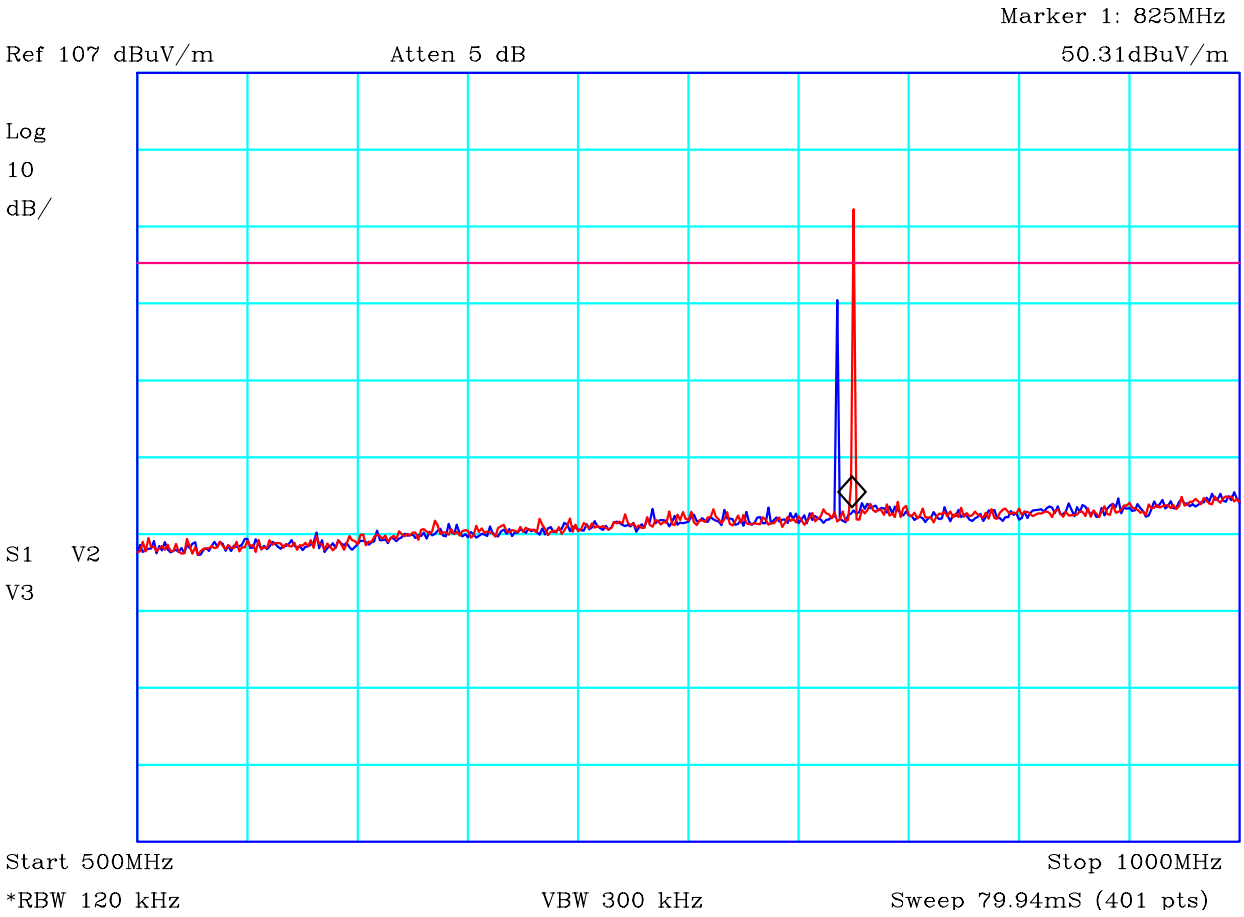
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806

PLOT 32 Radiated Emissions - Standalone - 862 - 869 Band Tx - 250MHz to 1GHz

Company:	Sepura	Product:	STP8080
Date:	10/05/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

Standalone
Transmit mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1.5	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H241077E		



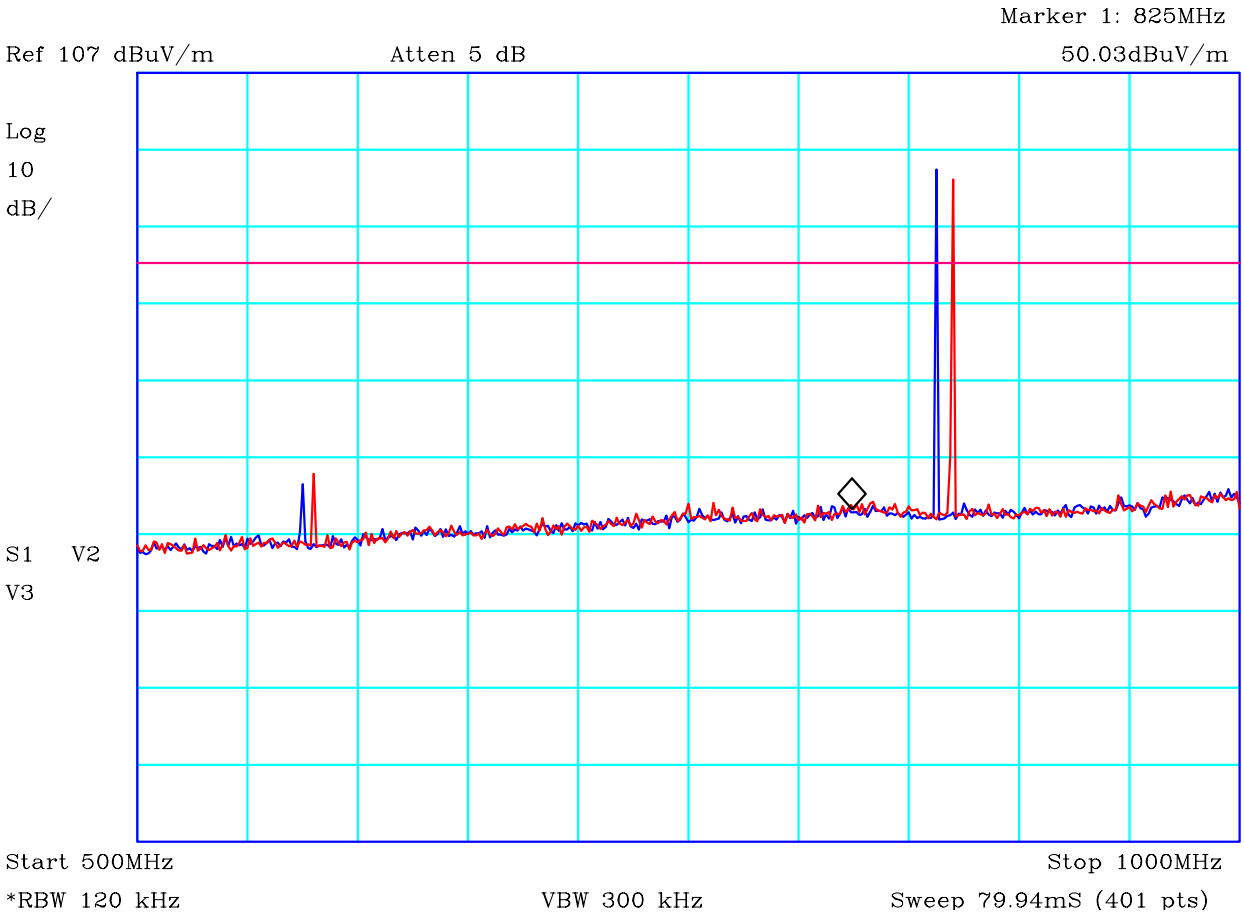
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:RFF16_110112

PLOT 33 Radiated Emissions - Standalone - 817 - 824 band Tx - 500MHz to 1GHz - with notch filter

Company:	Sepura	Product:	STP8080
Date:	18/05/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

Standalone. Using notch filter.
Transmit mode. Maximum of both horizontal and vertical.
Blue: 817MHz
Red 824MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1.5	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H2418671		



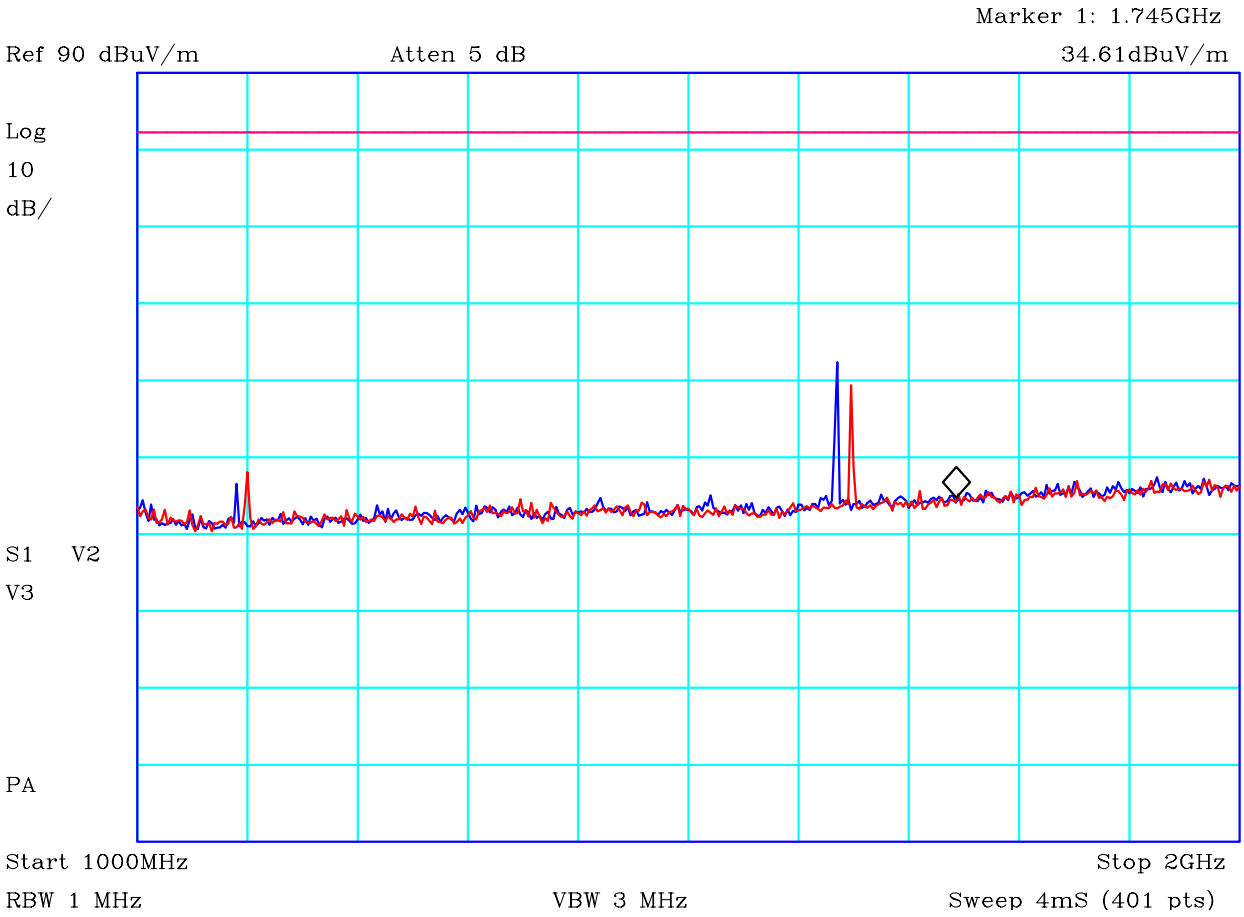
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:RFF16_110112

PLOT 34 Radiated Emissions - Standalone - 862 - 869 band Tx - 500MHz to 1GHz - with notch filter

Company:	Sepura	Product:	STP8080
Date:	18/05/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

Standalone. Using notch filter.
Transmit mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1.5	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H2418685		



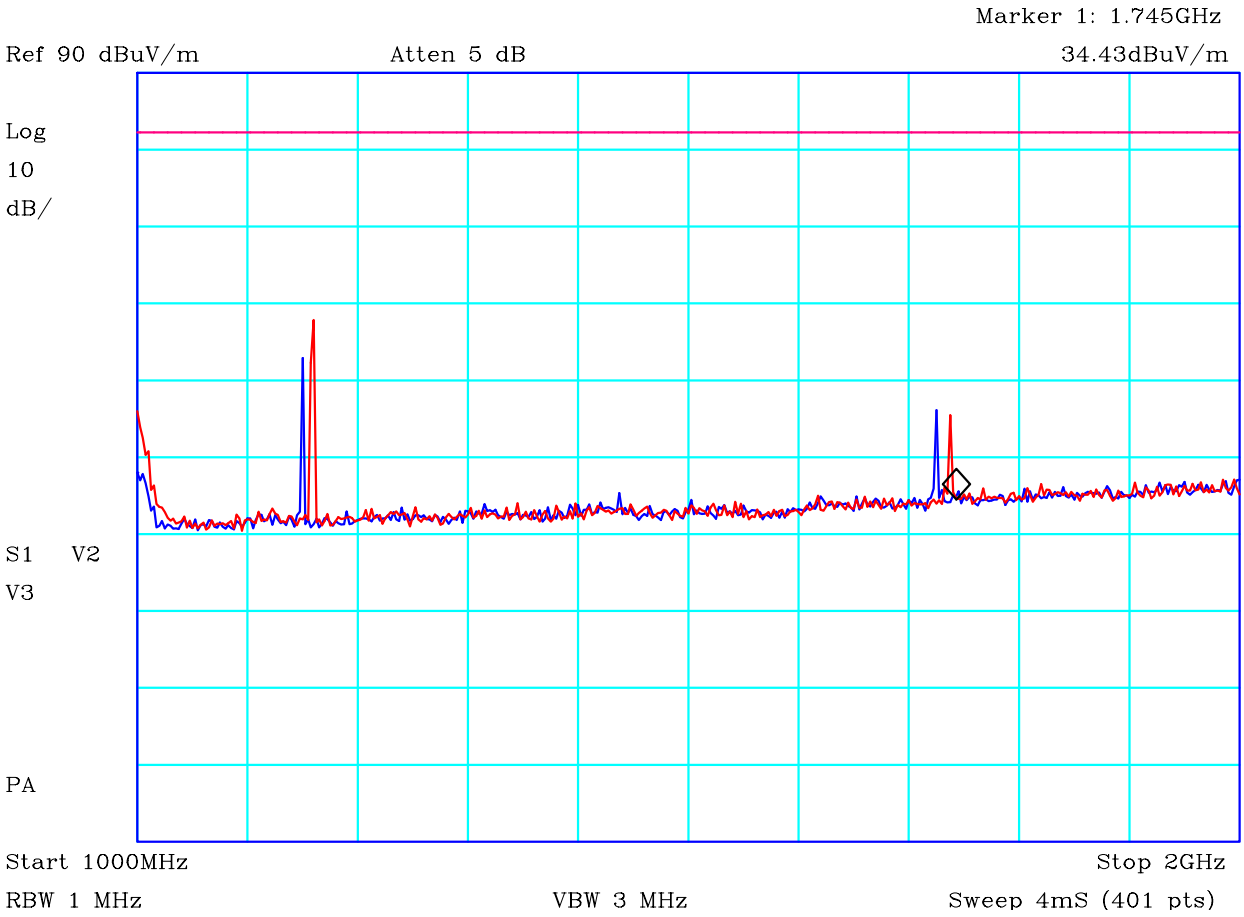
CF1:A23_3m_100806 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:PRE3_110113 CF4:RFF15_110112

PLOT 35 Radiated Emissions - Standalone - 817 - 824 band Tx - 1GHz to 2GHz

Company:	Sepura	Product:	STP8080
Date:	21/05/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

Standalone
Transmit mode. Maximum of both horizontal and vertical.
Blue: 817MHz
Red 824MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1m	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H242169C		



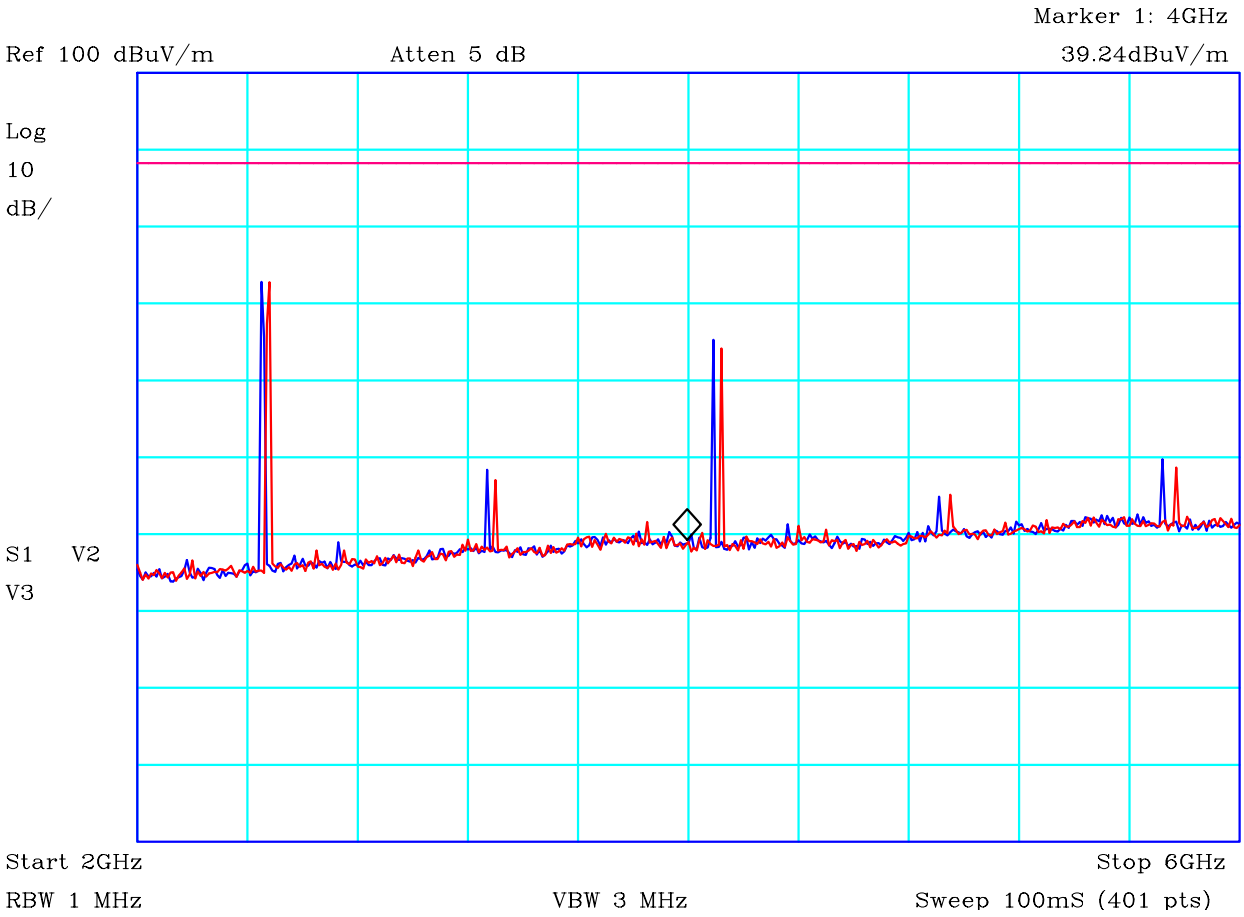
CF1:A23_3m_100806 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:PRE3_110113 CF4:RFF15_110112

PLOT 36 Radiated Emissions - Standalone - 862 - 869 band Tx - 1GHz to 2GHz

Company:	Sepura	Product:	STP8080
Date:	21/05/2012	Test Eng:	Dave Smith
Method:	FCC part 90	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

Standalone
Transmit mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1m	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H24216BE		



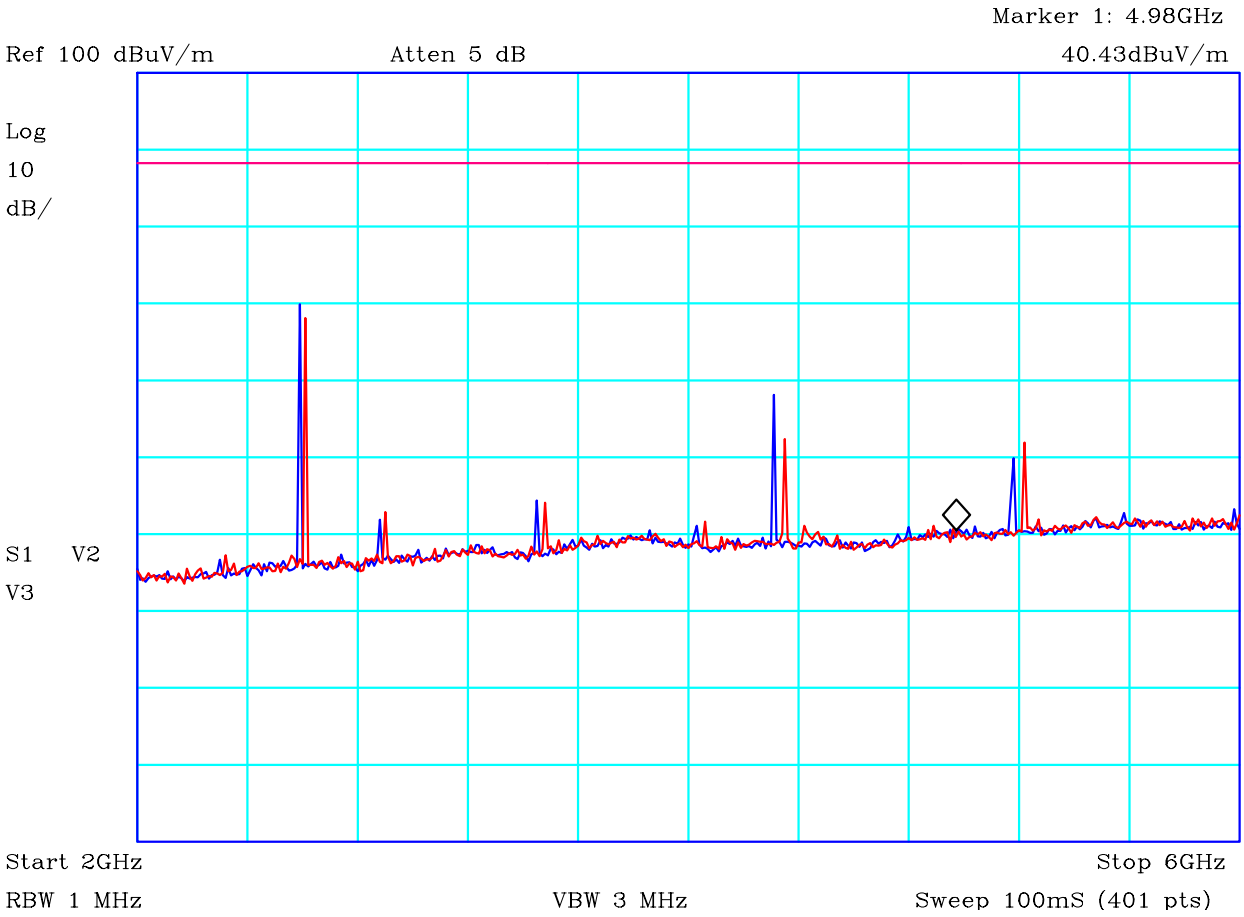
CF1:A23_3m_100806 CF2:CBL049_110107 CF3:PRE3_110113 CF4:RFF22_110221

PLOT 37 Radiated Emissions - Standalone - 817 - 824 band Tx - 2GHz to 6GHz

Company:	Sepura	Product:	STP8080
Date:	29/05/2012	Test Eng:	Dave Smith
Method:	FCC part 90	Method:	
Limit1:(VIO)	43+10 log(P)@1.5m	Limit2:	
Limit3:		Limit4:	

Standalone
Transmit mode. Maximum of both horizontal and vertical.
Blue: 817MHz
Red 824MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1m	Mode:	1
Distance	1.5m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H24306B6		



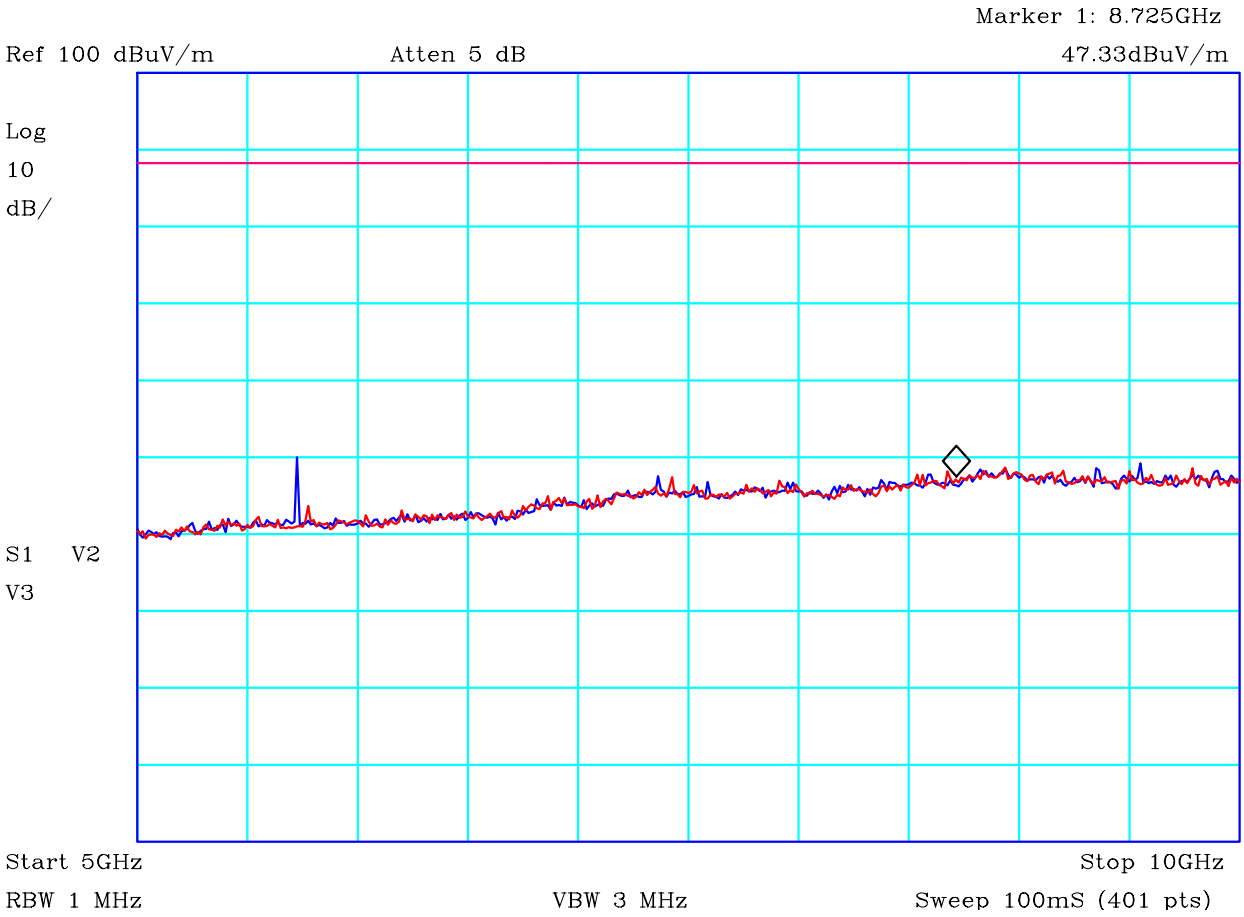
CF1:A23_3m_100806 CF2:CBL049_110107 CF3:PRE3_110113 CF4:RFF22_110221

PLOT 38 Radiated Emissions - Standalone - 862 - 869 band Tx - 2GHz to 6GHz

Company:	Sepura	Product:	STP8080
Date:	30/05/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	43+10 log(P)@1.5m	Limit2:	
Limit3:		Limit4:	

Standalone
Transmit mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1m	Mode:	1
Distance	1.5m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H24306B0		



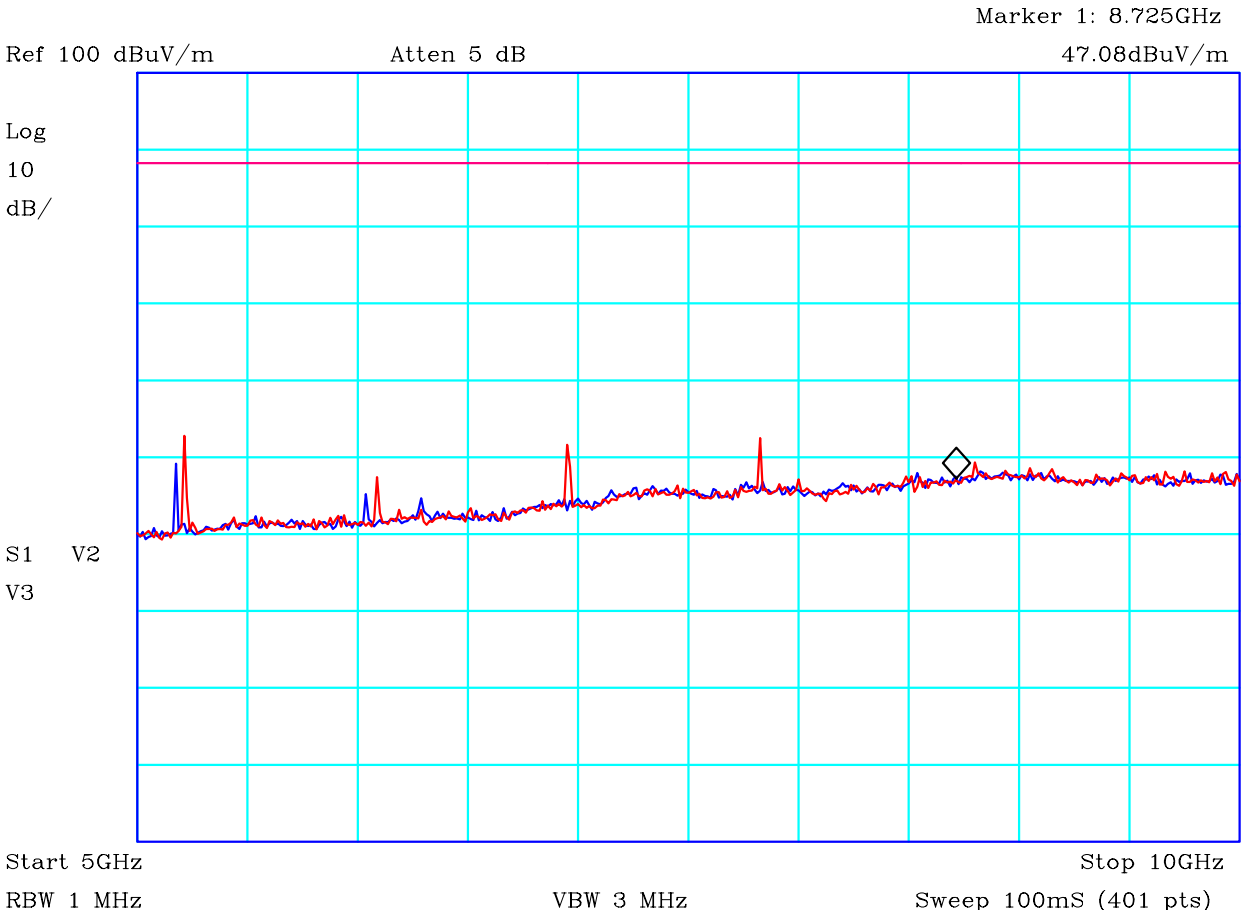
CF1:A23_3m_100806 CF2:CBL049_110107 CF3:PRE3_110113 CF4:RFF22_110221

PLOT 39 Radiated Emissions - Standalone - 817 - 824 band Tx - 5GHz to 10GHz

Company:	Sepura	Product:	STP8080
Date:	30/05/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	43+10 log(P)@1.5m	Limit2:	
Limit3:		Limit4:	

Standalone
Transmit mode. Maximum of both horizontal and vertical.
Blue: 817MHz
Red 824MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1m	Mode:	1
Distance	1.5m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H24306F9		



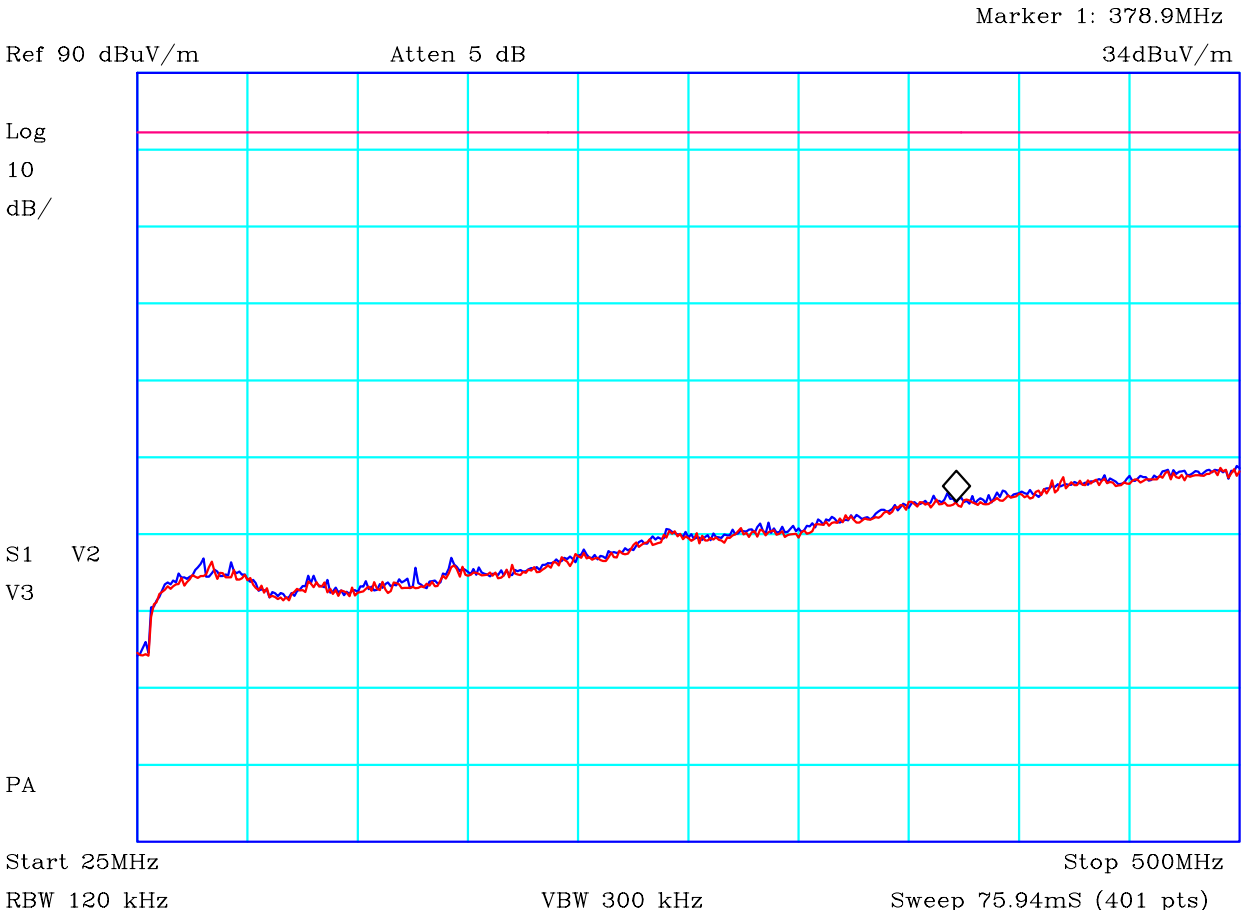
CF1:A23_3m_100806 CF2:CBL049_110107 CF3:PRE3_110113 CF4:RFF22_110221

PLOT 40 Radiated Emissions - Standalone - 862 - 869 band Tx - 5GHz to 10GHz

Company:	Sepura	Product:	STP8080
Date:	30/05/2012	Test Eng:	Dave Smith
Method:	FCC part 90	Method:	
Limit1:(VIO)	43+10 log(P)@1.5m	Limit2:	
Limit3:		Limit4:	

Standalone
Transmit mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1m	Mode:	1
Distance	1.5m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H24306E1		



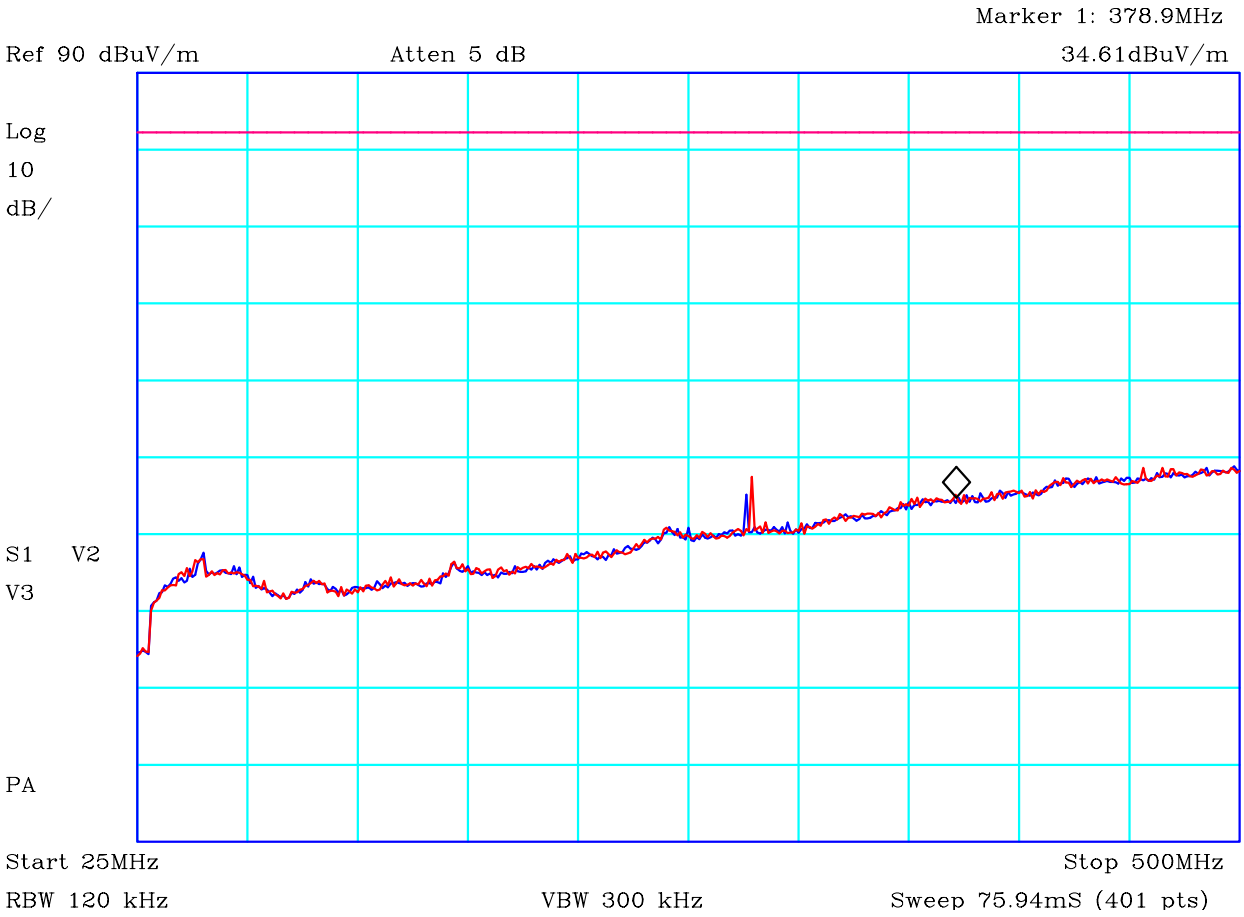
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:RFF17_110221

PLOT 41 Radiated Emissions - RSM - 817 - 824 band Tx - 25MHz to 500MHz

Company:	Sepura	Product:	STP8080
Date:	18/05/2012	Test Eng:	Dave Smith
Method:	FCC Part 15	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

RSM
Transmit mode. Maximum of both horizontal and vertical.
Blue: 817MHz
Red 824MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1.5	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H2418759		



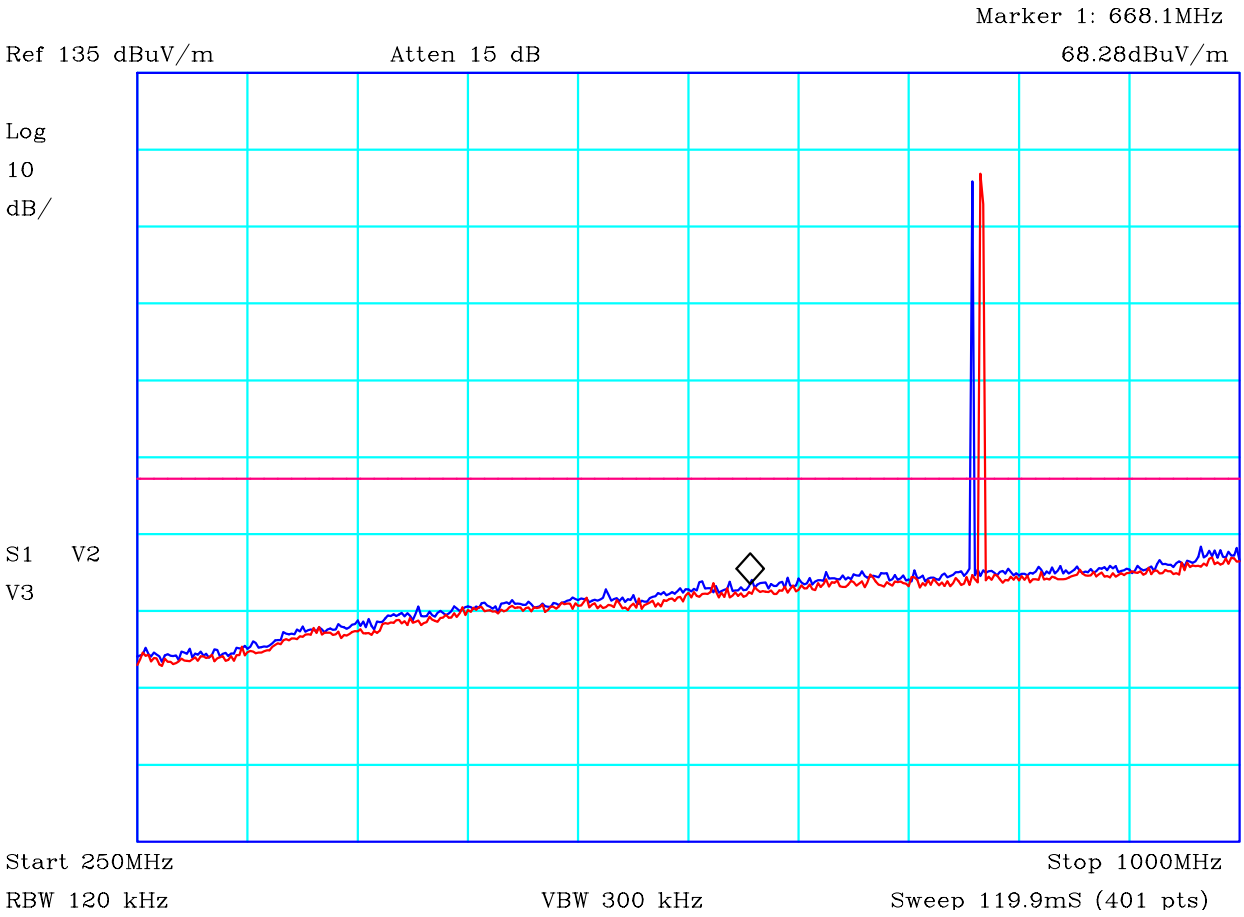
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:RFF17_110221

PLOT 42 Radiated Emissions - RSM - 862 - 869 band Tx - 25MHz to 500MHz

Company:	Sepura	Product:	STP8080
Date:	18/05/2012	Test Eng:	Dave Smith
Method:	Fcc Part 90	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

RSM
Transmit mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1.5	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H241876C		



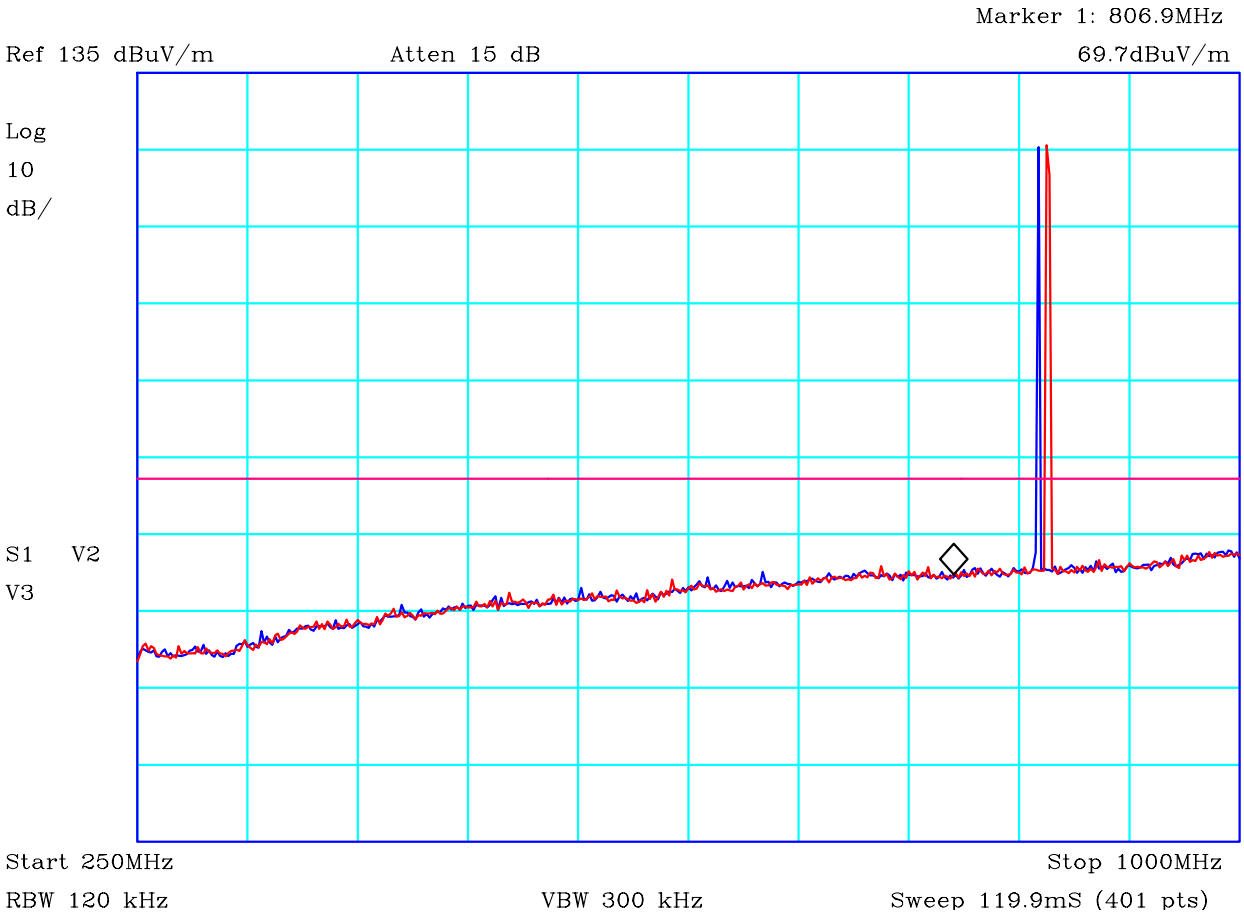
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806

PLOT 43 Radiated Emissions - RSM - 817 - 824 band Tx - 250MHz to 1GHz

Company:	Sepura	Product:	STP8080
Date:	10/05/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

With RSM
Transmit mode. Maximum of both horizontal and vertical.
Blue: 817MHz
Red 824MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1.5	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H24107E4		



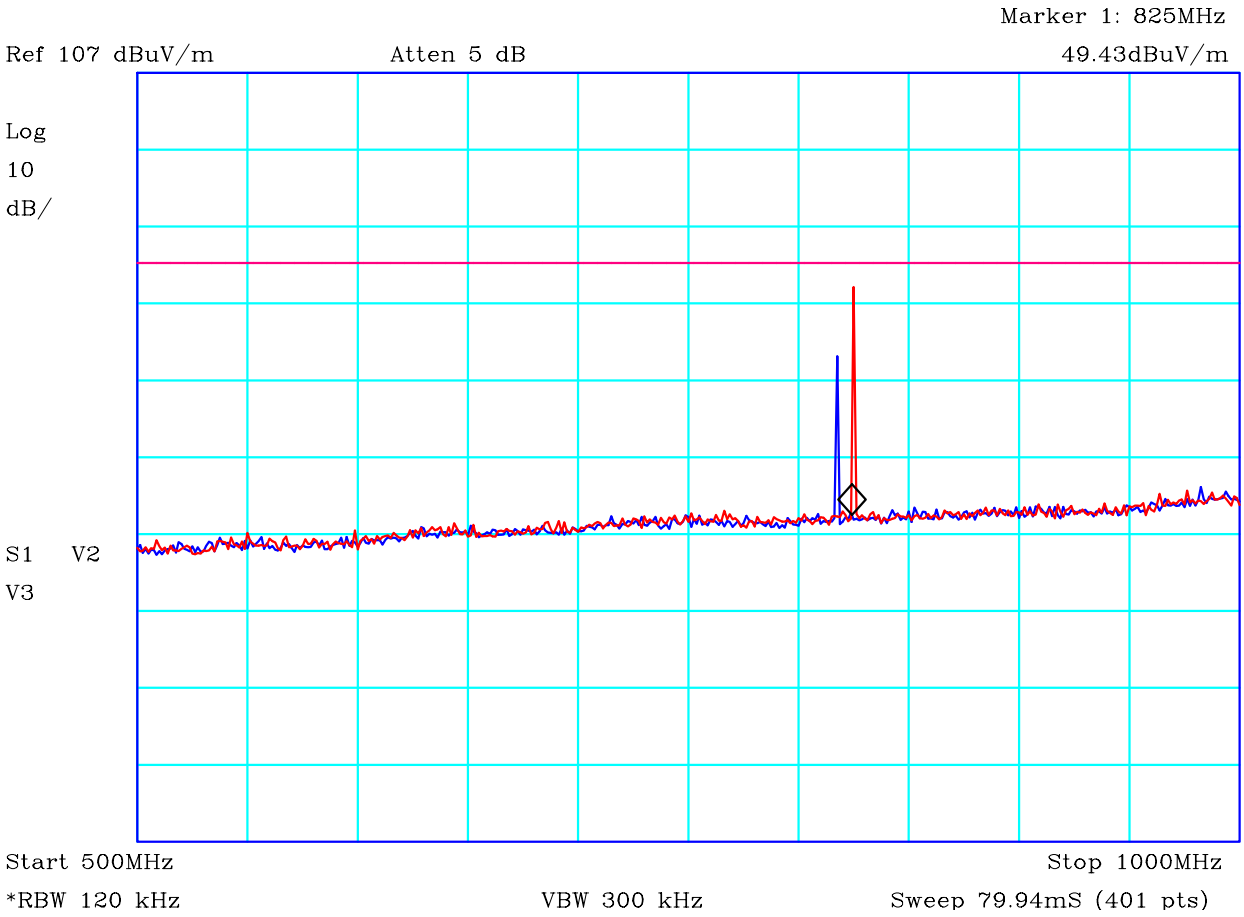
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806

PLOT 44 Radiated Emissions - RSM - 862 - 869 Band Tx - 250MHz to 1GHz

Company:	Sepura	Product:	STP8080
Date:	10/05/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

RSM
Transmit mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1.5	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H24107DF		



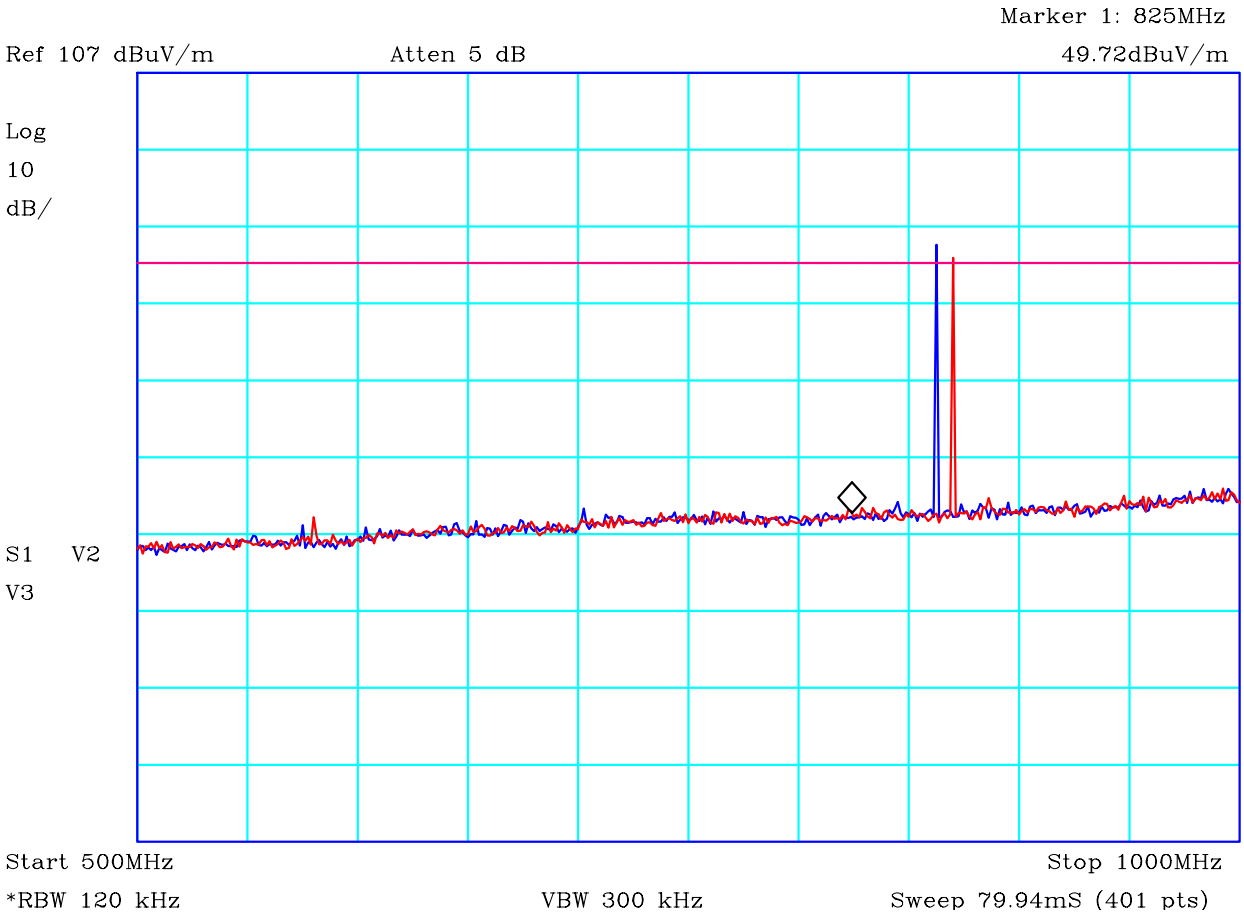
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:RFF16_110112

PLOT 45 Radiated Emissions - RSM - 817 - 824 band Tx - 500MHz to 1GHz - with notch filter

Company:	Sepura	Product:	STP8080
Date:	18/05/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

With RSM. Using notch filter.
Transmit mode. Maximum of both horizontal and vertical.
Blue: 817MHz
Red 824MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1.5	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H24186B7		



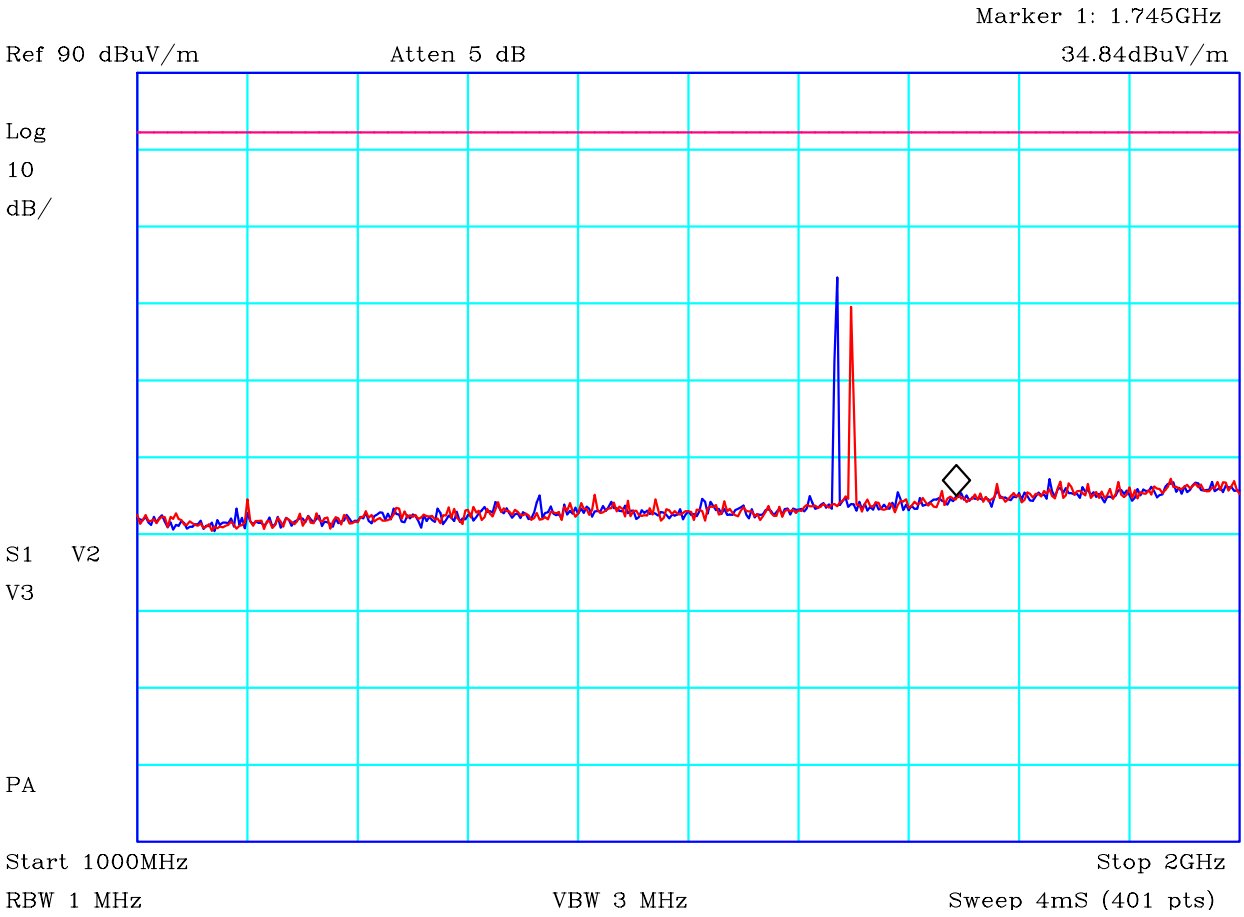
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:RFF16_110112

PLOT 46 Radiated Emissions - RSM - 862 - 869 band Tx - 500MHz to 1GHz - with notch filter

Company:	Sepura	Product:	STP8080
Date:	18/05/2012	Test Eng:	Dave Smith
Method:	FCC part 90	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

RSM. Using notch filter.
Transmit mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1.5	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H24186CB		



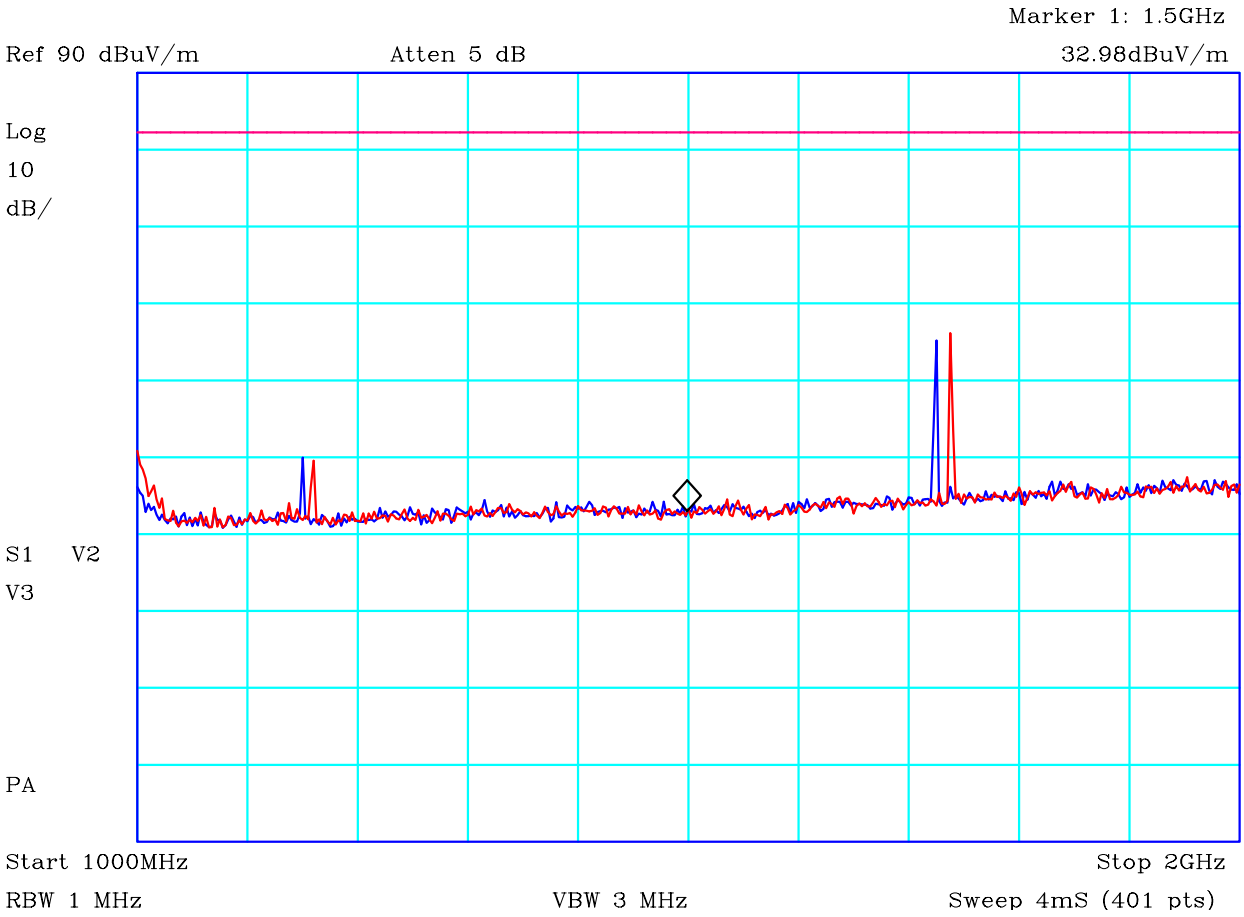
CF1:A23_3m_100806 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:PRE3_110113 CF4:RFF15_110112

PLOT 47 Radiated Emissions - RSM - 806 - 824 band Tx - 1GHz to 2GHz

Company:	Sepura	Product:	STP8080
Date:	22/05/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

RSM
Transmit mode. Maximum of both horizontal and vertical.
Blue: 817MHz
Red 824MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1m	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H24224A5		



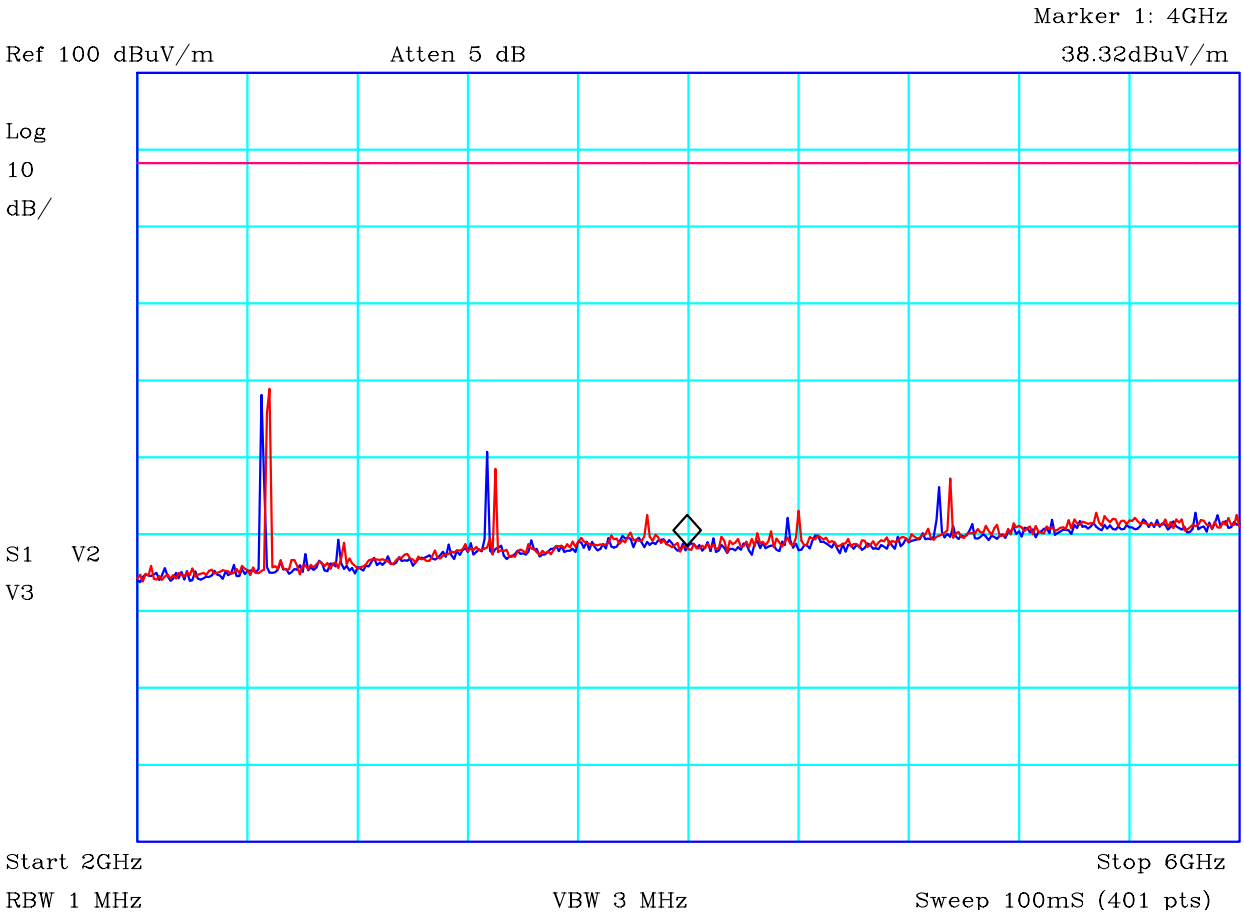
CF1:A23_3m_100806 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:PRE3_110113 CF4:RFF15_110112

PLOT 48 Radiated Emissions - RSM - 862 - 869 band Tx - 1GHz to 2GHz

Company:	Sepura	Product:	STP8080
Date:	22/05/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

RSM
Transmit mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1m	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H24224F0		



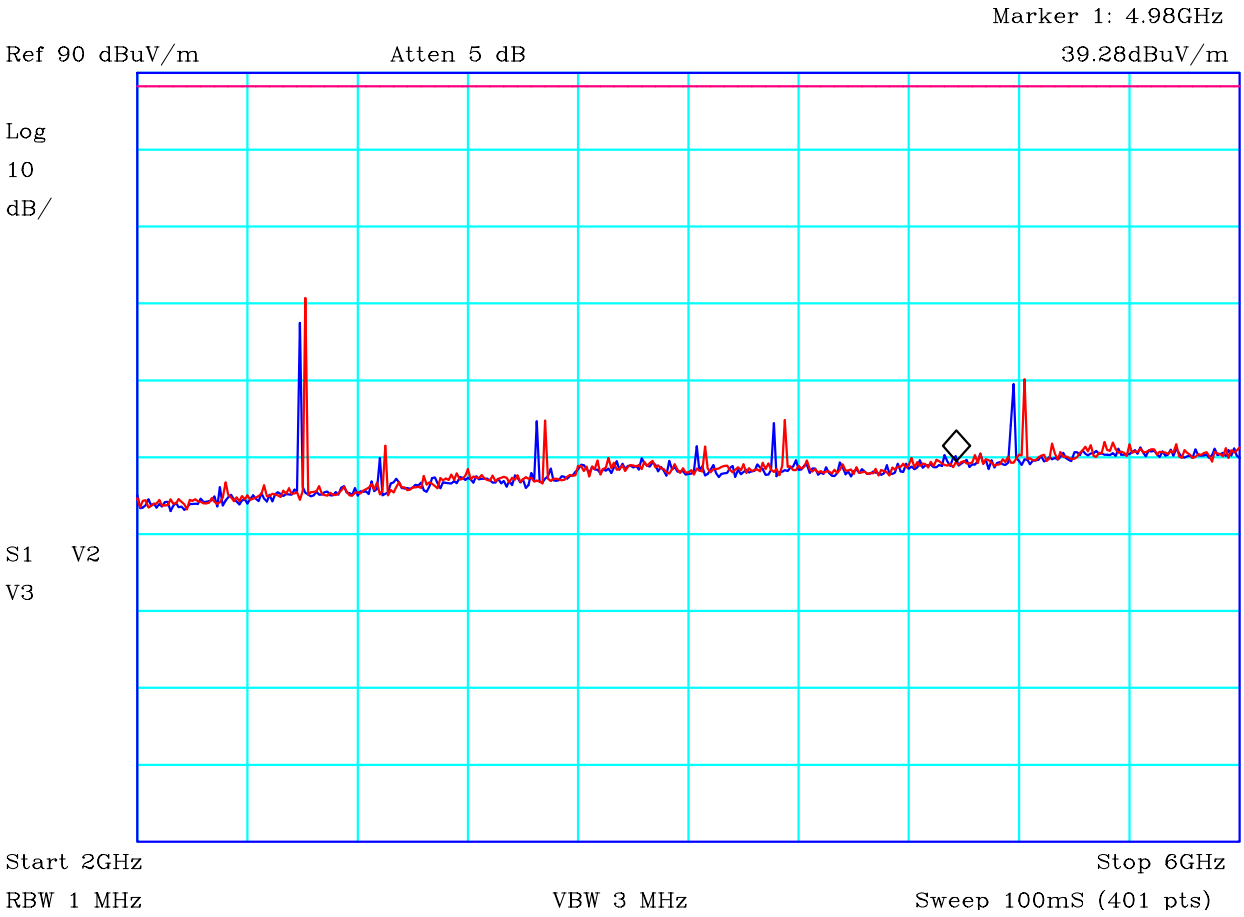
CF1:A23_3m_100806 CF2:CBL049_110107 CF3:PRE3_110113 CF4:RFF22_110221

PLOT 49 Radiated Emissions - RSM - 817 - 824 band Tx - 2GHz to 6GHz

Company:	Sepura	Product:	STP8080
Date:	29/05/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	43+10 log(P)@1.5m	Limit2:	
Limit3:		Limit4:	

Standalone
Transmit mode. Maximum of both horizontal and vertical.
Blue: 817MHz
Red 824MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1m	Mode:	1
Distance	1.5m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H24306C1		



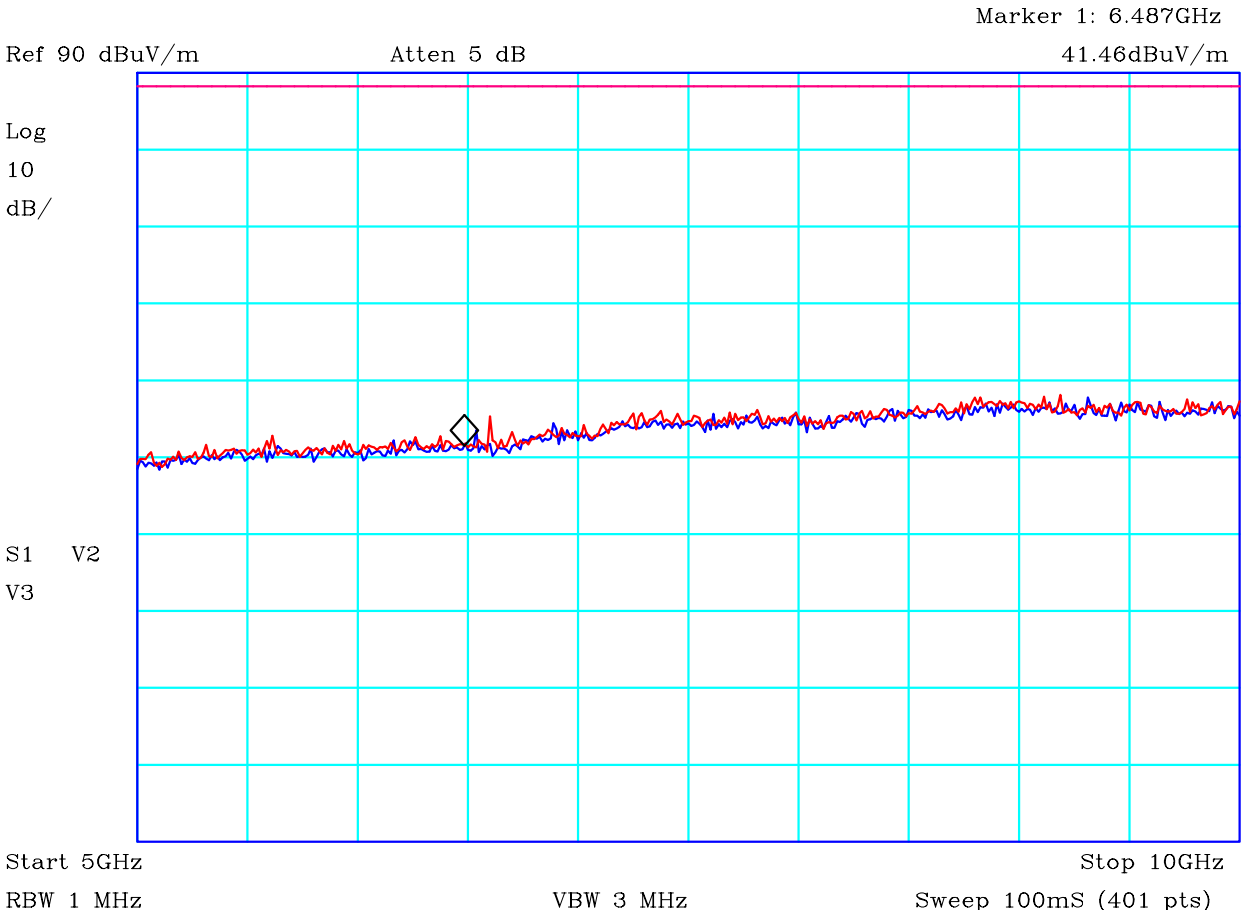
CF1:A23_3m_100806 CF2:CBL049_110107 CF3:PRE3_110113 CF4:RFF22_110221

PLOT 50 Radiated Emissions - RSM - 862 - 869 band Tx - 2GHz to 6GHz

Company:	Sepura	Product:	STP8080
Date:	22/05/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	43+10 log(P)@1.5m	Limit2:	
Limit3:		Limit4:	

RSM
Transmit mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1m	Mode:	1
Distance	1.5m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H24306BE		



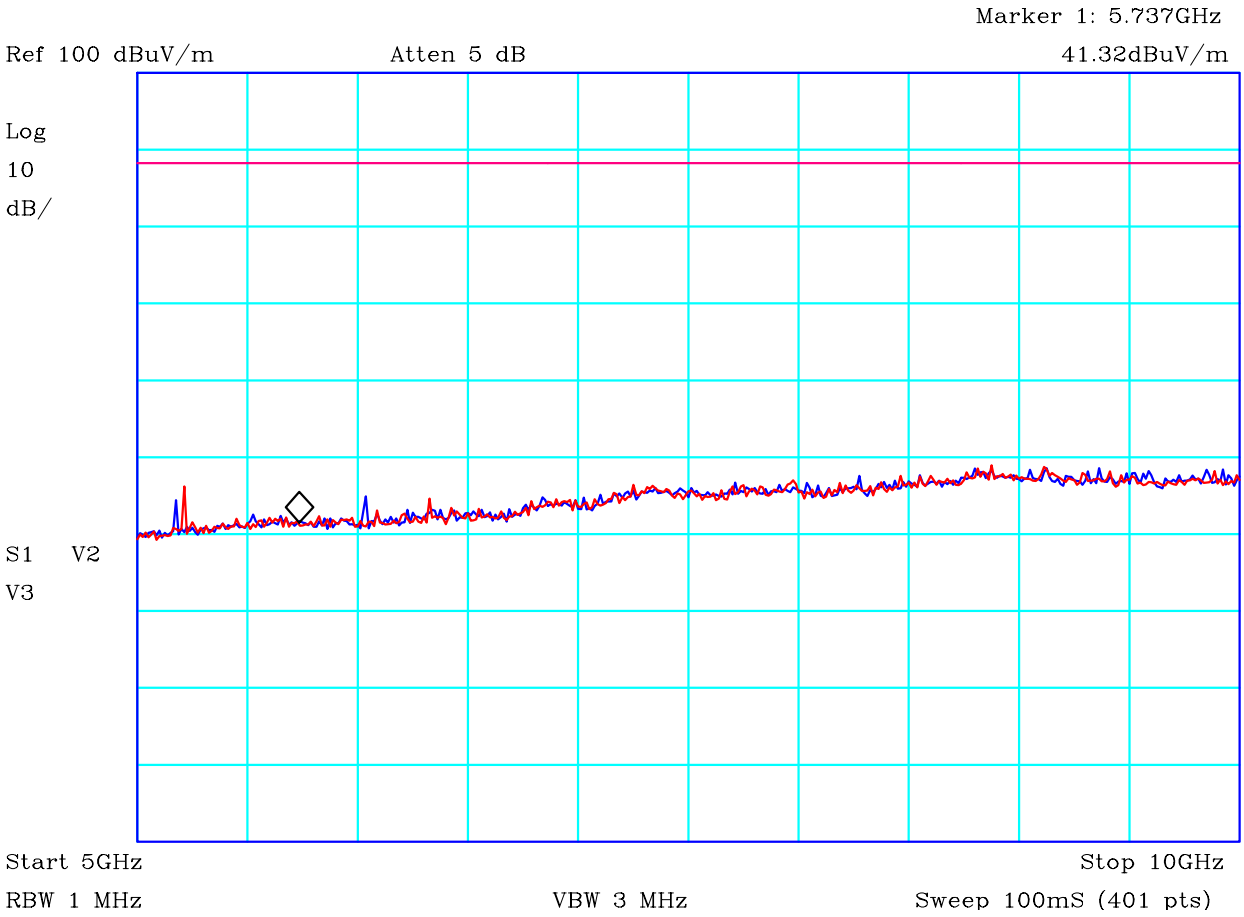
CF1:A23_3m_100806 CF2:CBL049_110107 CF3:PRE3_110113 CF4:RFF22_110221

PLOT 51 Radiated Emissions - RSM - 817 - 824 band Tx - 5GHz to 10GHz

Company:	Sepura	Product:	STP8080
Date:	22/05/2012	Test Eng:	Dave Smith
Method:	FCC part 90	Method:	
Limit1:(VIO)	43+10 log(P)@1.5m	Limit2:	
Limit3:		Limit4:	

RSM
Transmit mode. Maximum of both horizontal and vertical.
Blue: 817MHz
Red 824MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1m	Mode:	1
Distance	1.5m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H24306C5		



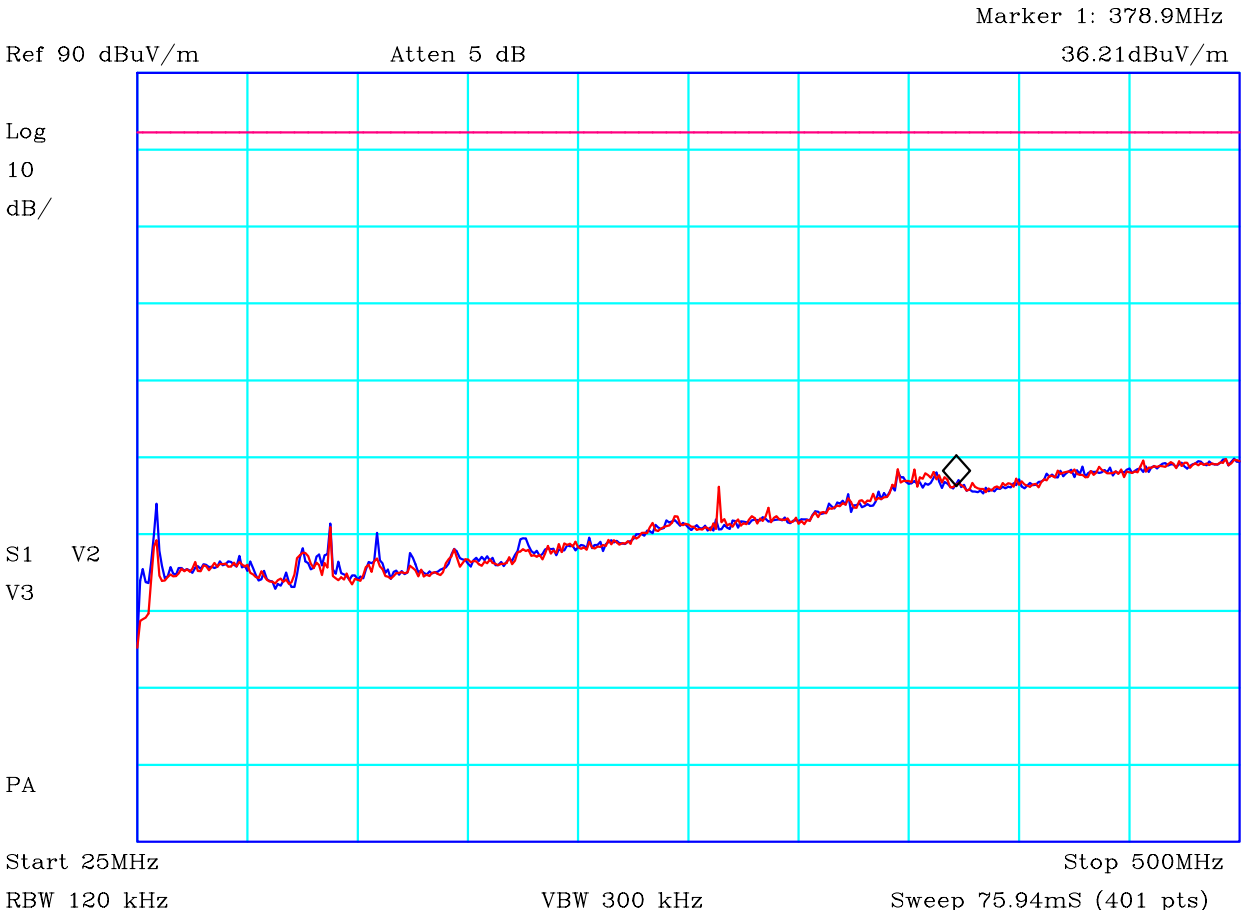
CF1:A23_3m_100806 CF2:CBL049_110107 CF3:PRE3_110113 CF4:RFF22_110221

PLOT 52 Radiated Emissions - RSM - 862 - 869 band Tx - 5GHz to 10GHz

Company:	Sepura	Product:	STP8080
Date:	30/05/2012	Test Eng:	Dave Smith
Method:	FCC part 90	Method:	
Limit1:(VIO)	43+10 log(P)@1.5m	Limit2:	
Limit3:		Limit4:	

RSM
Transmit mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1m	Mode:	1
Distance	1.5m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H2430780		



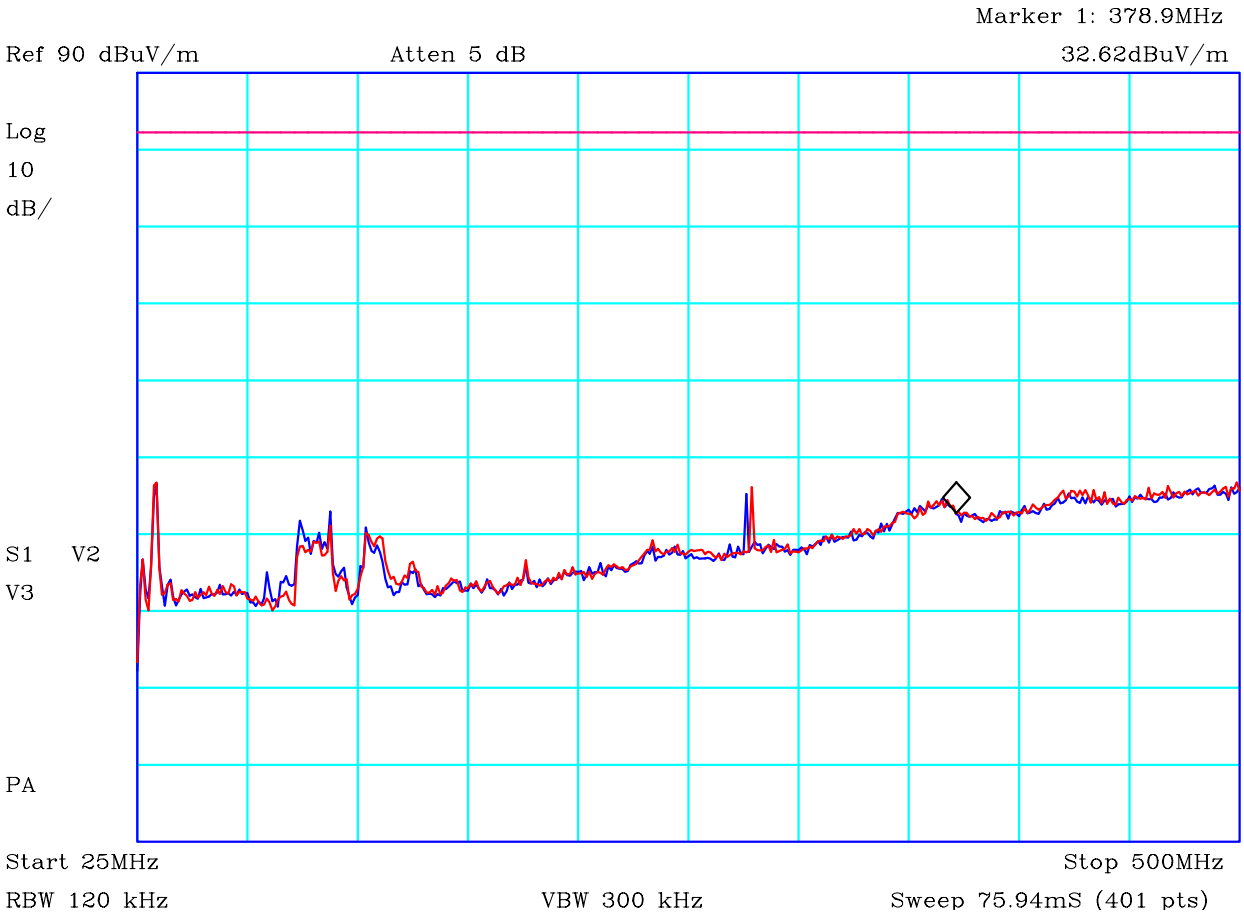
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:RFF17_110221

PLOT 53 Radiated Emissions - Car Kit - 817 - 824 band Tx - 25MHz to 500MHz

Company:	Sepura	Product:	STP8080
Date:	11/05/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

Car Kit
Transmit mode. Maximum of both horizontal and vertical.
Blue: 817MHz
Red 824MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1.5	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H2411516		



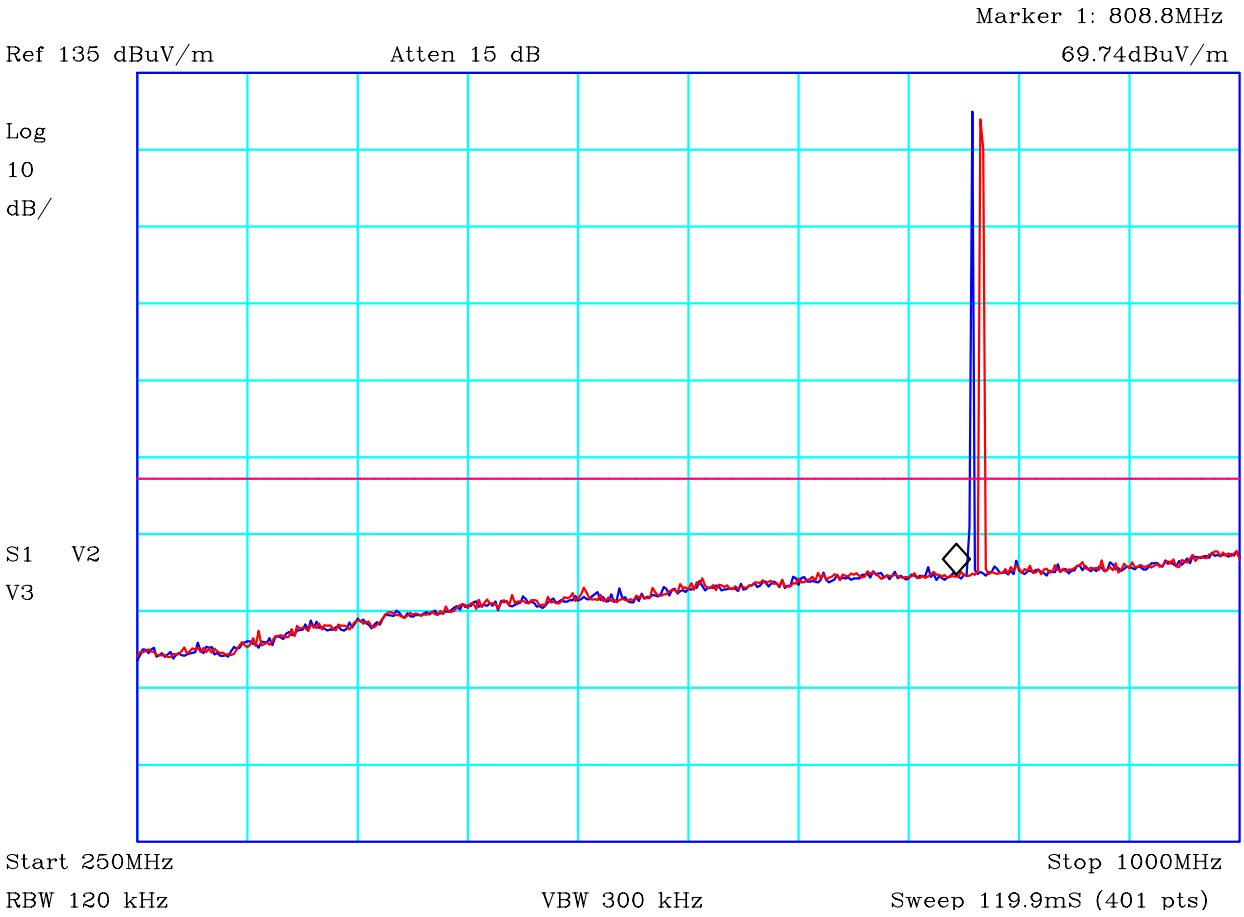
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:RFF17_110221

PLOT 54 Radiated Emissions - Car Kit - 862 - 869 band Tx - 25MHz to 500MHz

Company:	Sepura	Product:	STP8080
Date:	11/05/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

Car Kit
Transmit mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHzz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1.5	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H25214C1		



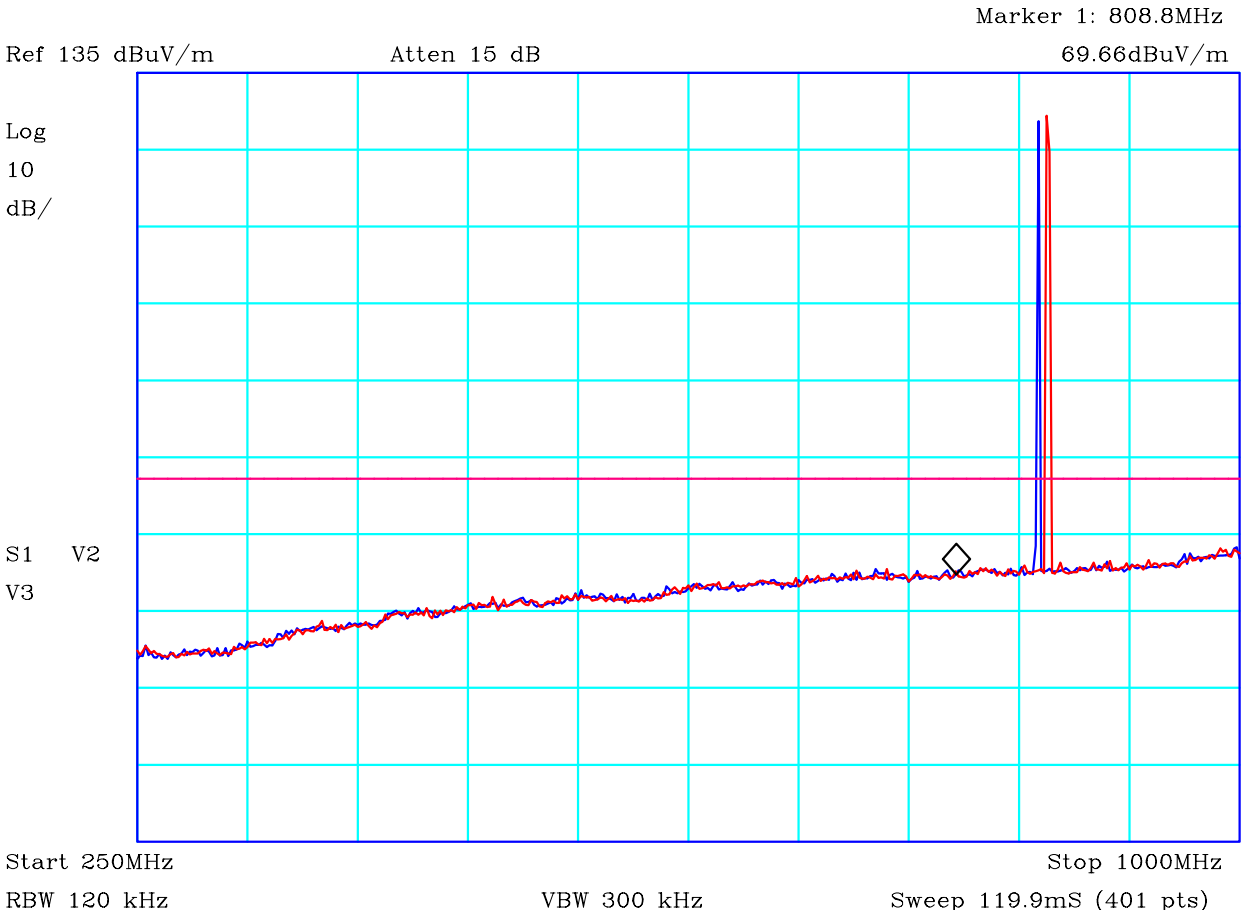
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806

PLOT 55 Radiated Emissions - Car Kit - 817 - 824 band Tx - 250MHz to 1GHz

Company:	Sepura	Product:	STP8080
Date:	11/05/2012	Test Eng:	Dave Smith
Method:	FCC_part 90	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

Car Kit
Transmit mode. Maximum of both horizontal and vertical.
Blue: 817MHz
Red 824MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1.5	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H24114C6		



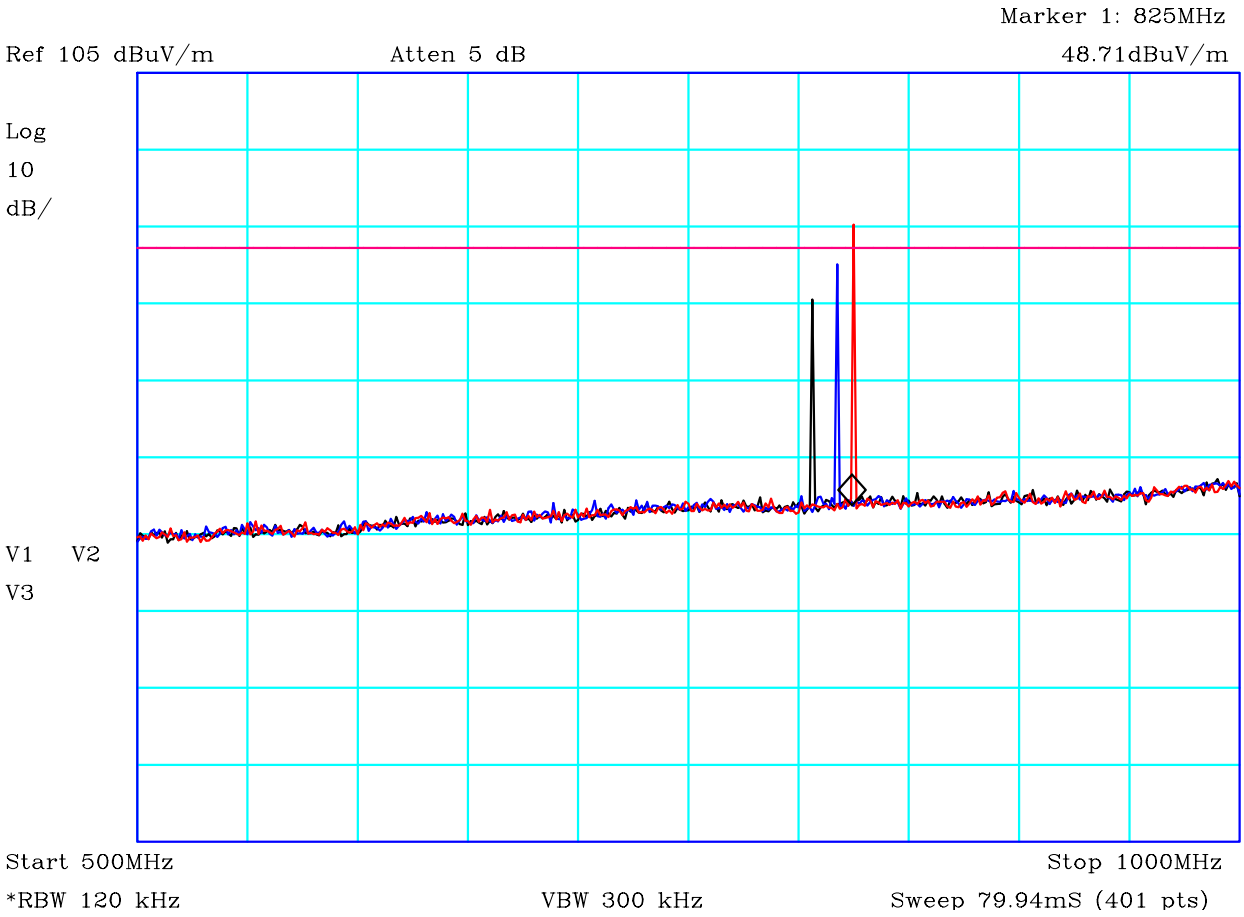
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806

PLOT 56 Radiated Emissions - Car Kit - 862 - 869 band Tx - 250MHz to 1GHz

Company:	Sepura	Product:	STP8080
Date:	11/05/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

Car Kit
Transmit mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1.5	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H24114EA		



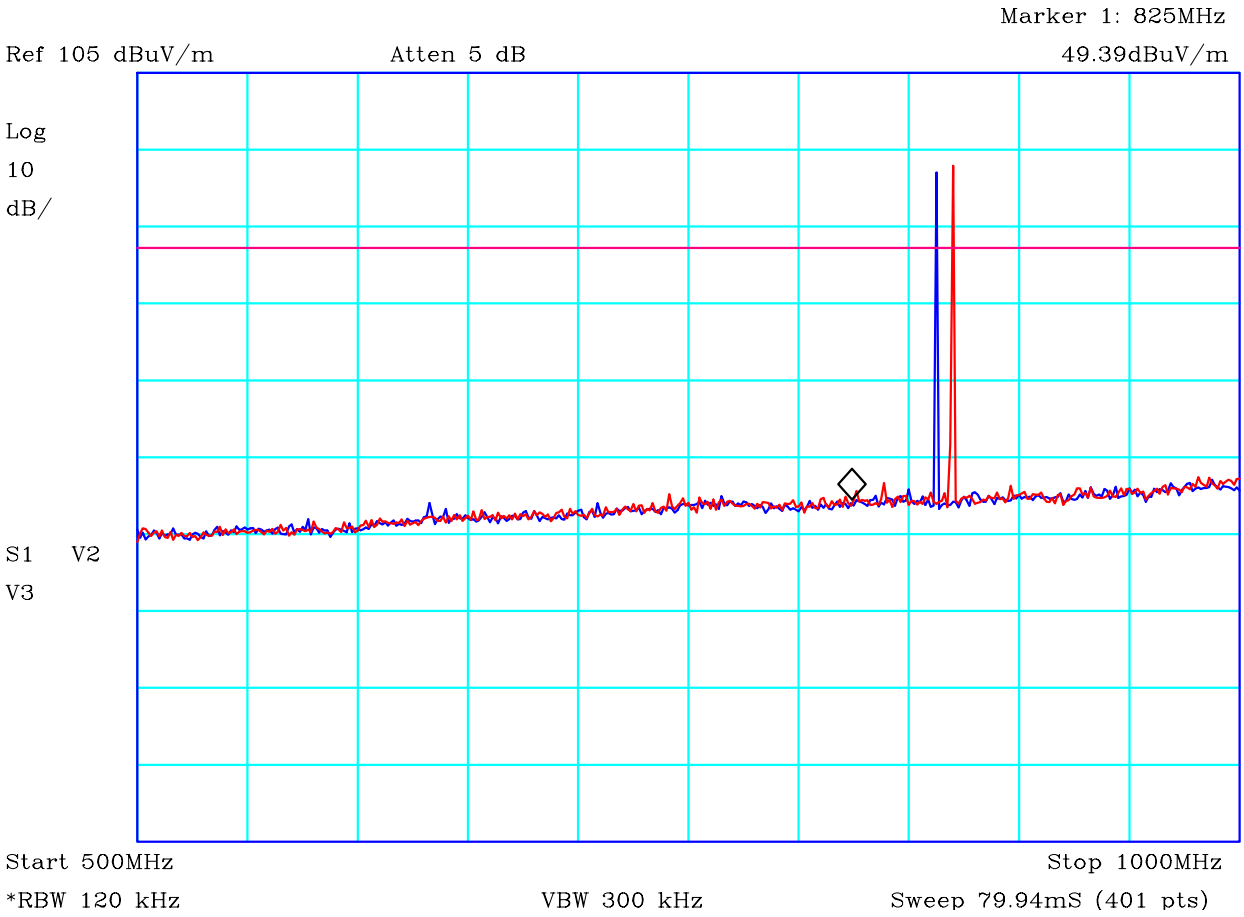
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:RFF16_110112

PLOT 57 Radiated Emissions - Car Kit - 817 - 824 band Tx - 500MHz to 1GHz - with notch filter

Company:	Sepura	Product:	STP8080
Date:	11/05/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

With car kit. Using notch filter.
Transmit mode. Maximum of both horizontal and vertical.
Blue: 817MHz
Red 824MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1.5	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H241148A		



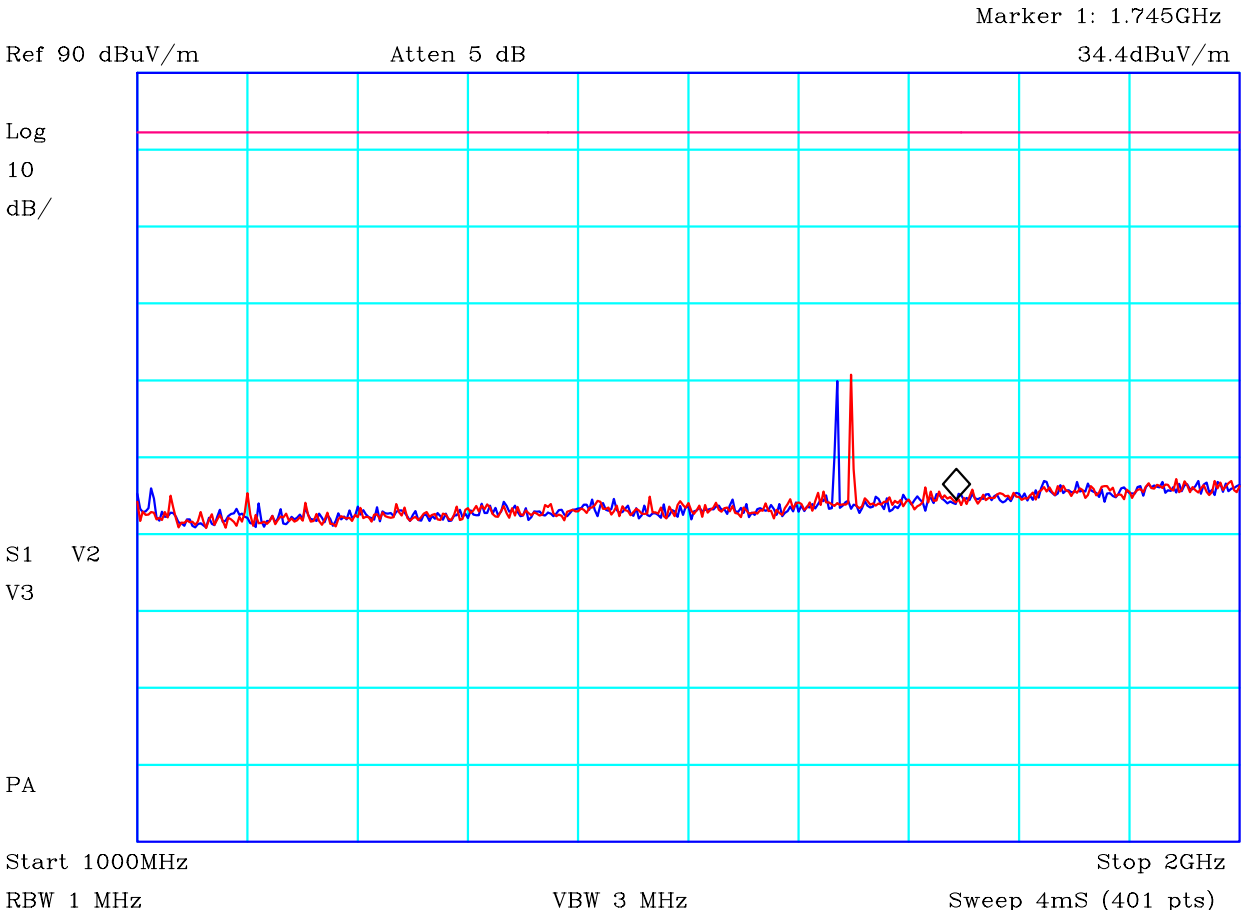
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:RFF16_110112

PLOT 58 Radiated Emissions - Car Kit - 862 - 869 band Tx - 500MHz to 1GHz - with notch filter

Company:	Sepura	Product:	STP8080
Date:	11/05/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

With car kit. Using notch filter.
Transmit mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1.5	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H2411486		



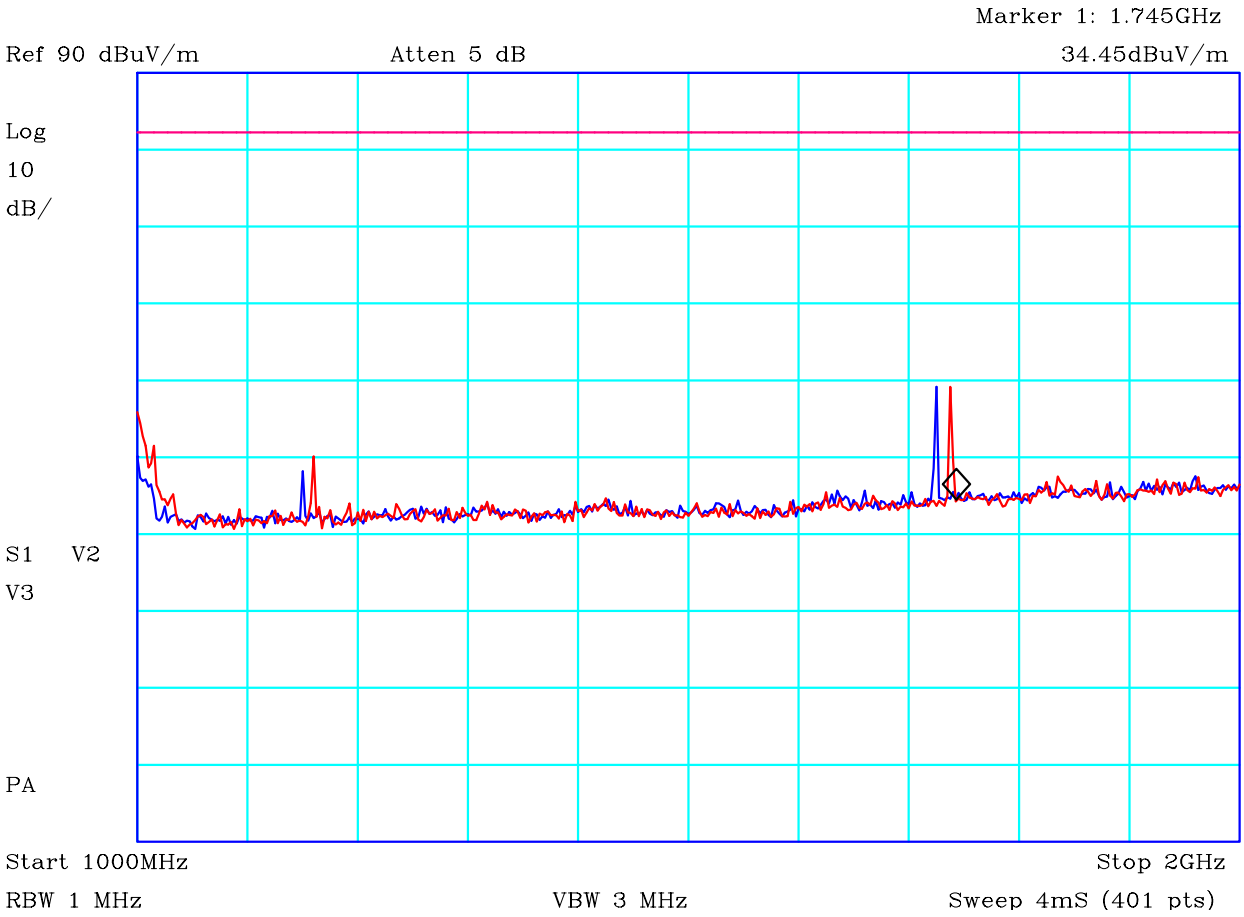
CF1:A23_3m_100806 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:PRE3_110113 CF4:RFF15_110112

PLOT 59 Radiated Emissions - Car Kit - 817 - 824 band Tx - 1GHz to 2GHz

Company:	Sepura	Product:	STP8080
Date:	21/05/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

Carkit
Transmit mode. Maximum of both horizontal and vertical.
Blue: 817MHz
Red 824MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1m	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H242171B		



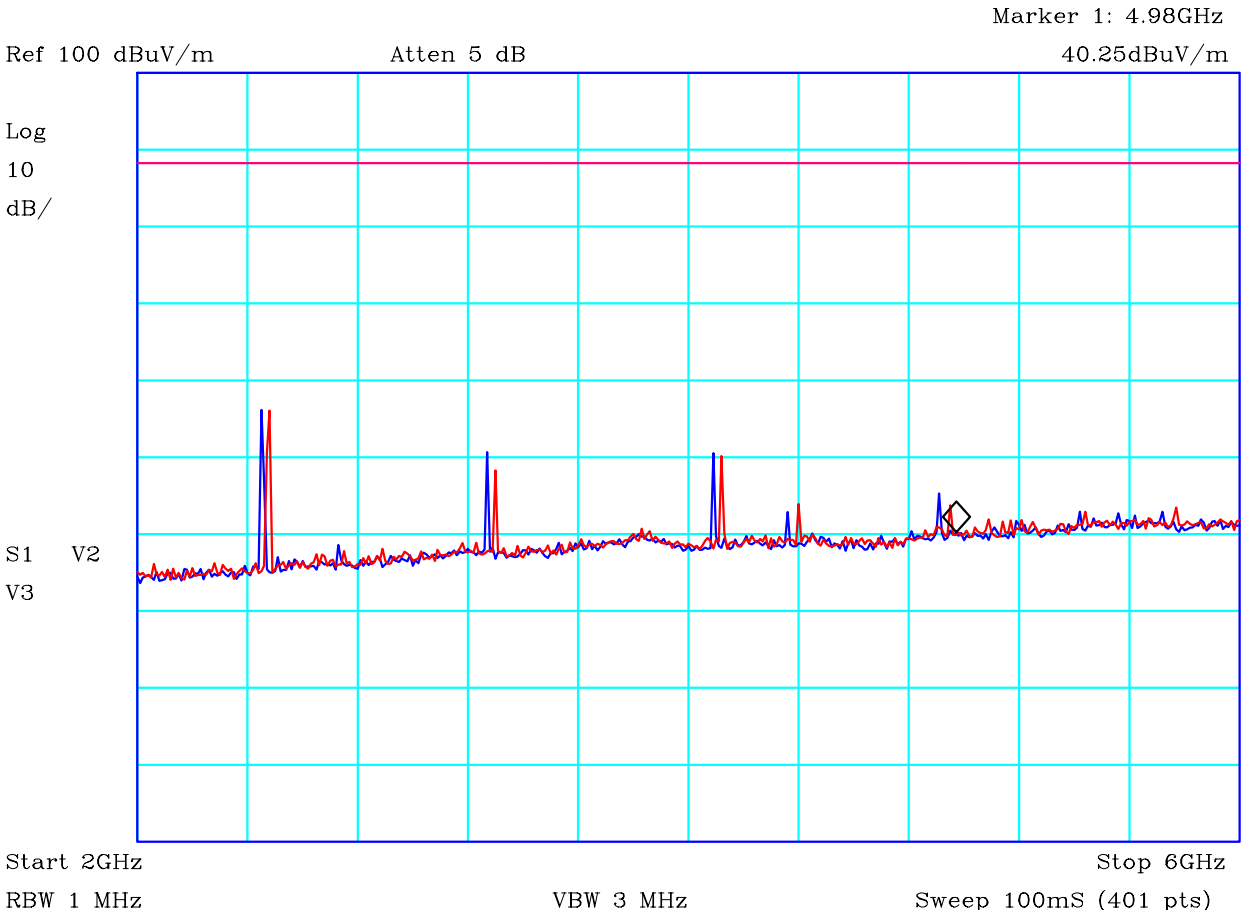
CF1:A23_3m_100806 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:PRE3_110113 CF4:RFF15_110112

PLOT 60 Radiated Emissions - Car Kit - 862 - 869 band Tx - 1GHz to 2GHz

Company:	Sepura	Product:	STP8080
Date:	21/05/2012	Test Eng:	Dave Smith
Method:	FCC part 90	Method:	
Limit1:(VIO)	43+10 log(P)@3m	Limit2:	
Limit3:		Limit4:	

Carkit
Transmit mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1m	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H242173C		



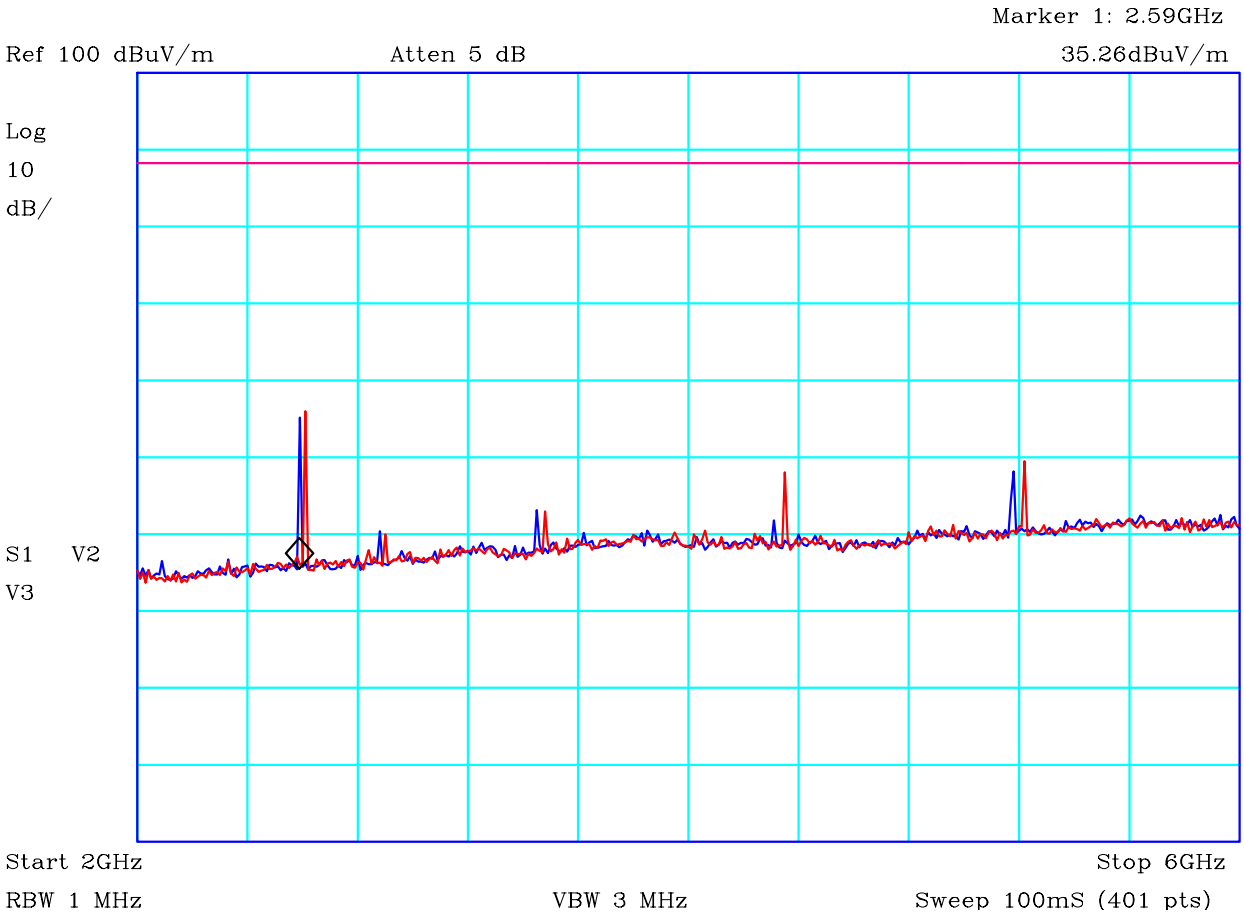
CF1:A23_3m_100806 CF2:CBL049_110107 CF3:PRE3_110113 CF4:RFF22_110221

PLOT 61 Radiated Emissions - Car Kit - 817 - 824 band Tx - 2GHz to 6GHz

Company:	Sepura	Product:	STP8080
Date:	30/05/2012	Test Eng:	Dave Smith
Method:	FCC part 90	Method:	
Limit1:(VIO)	43+10 log(P)@1.5m	Limit2:	
Limit3:		Limit4:	

Car Kit
Transmit mode. Maximum of both horizontal and vertical.
Blue: 817MHz
Red 824MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1m	Mode:	1
Distance	1.5m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H24307C4		



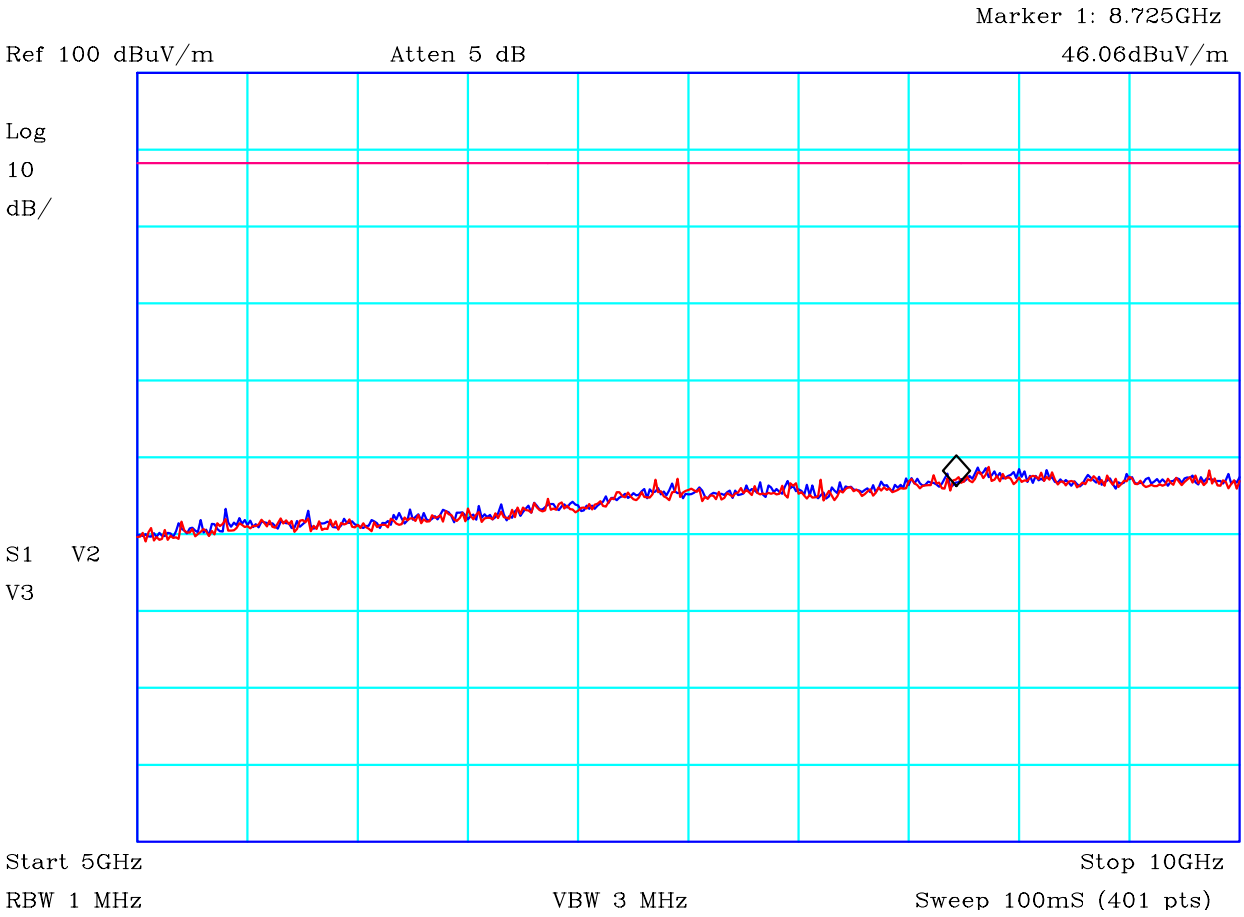
CF1:A23_3m_100806 CF2:CBL049_110107 CF3:PRE3_110113 CF4:RFF22_110221

PLOT 62 Radiated Emissions - Car Kit - 862 - 869 band Tx - 2GHz to 6GHz

Company:	Sepura	Product:	STP8080
Date:	30/05/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	43+10 log(P)@1.5m	Limit2:	
Limit3:		Limit4:	

Car Kit
Transmit mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1m	Mode:	1
Distance	1.5m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H2430815		



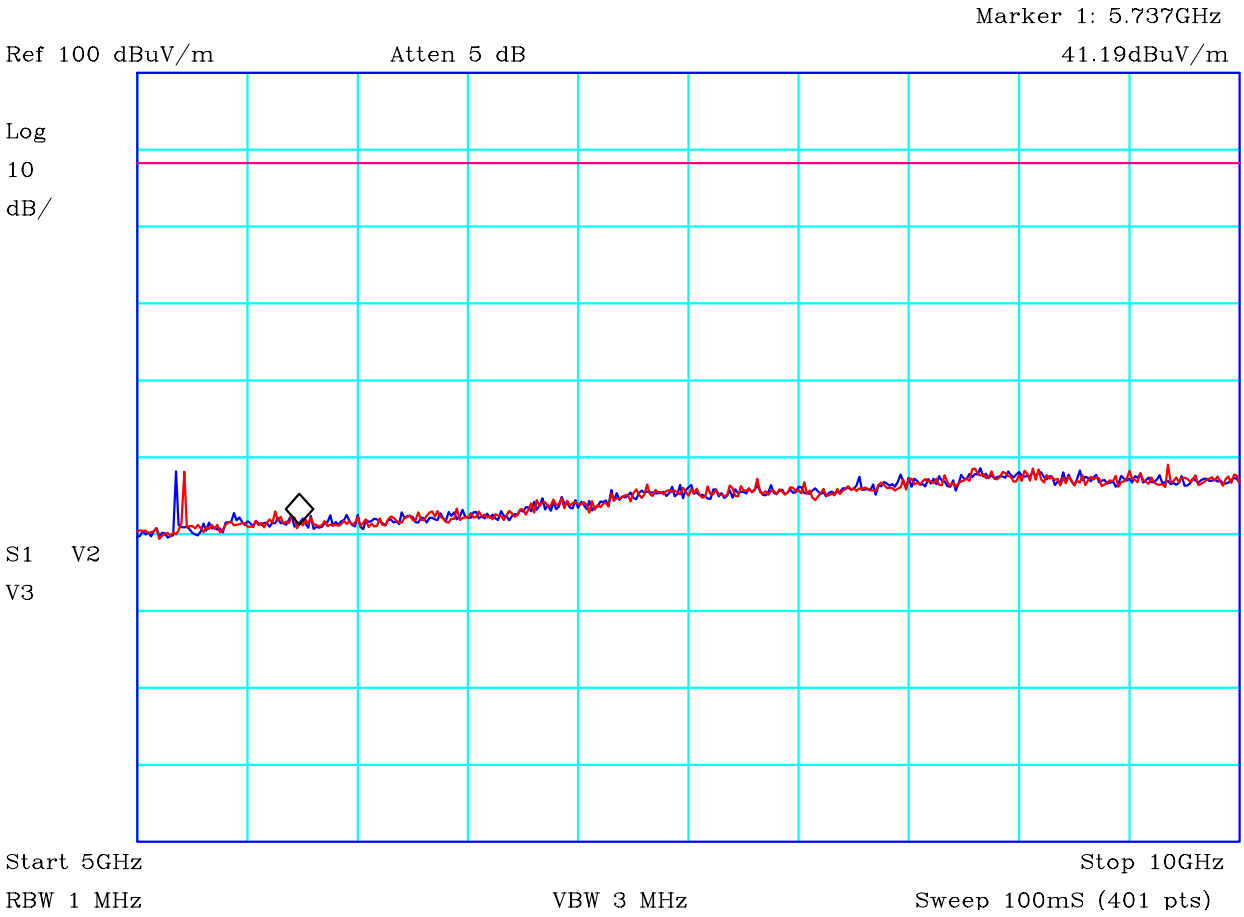
CF1:A23_3m_100806 CF2:CBL049_110107 CF3:PRE3_110113 CF4:RFF22_110221

PLOT 63 Radiated Emissions - Car Kit - 817 - 824 band Tx - 5GHz to 10GHz

Company:	Sepura	Product:	STP8080
Date:	30/05/2012	Test Eng:	Dave Smith
Method:	FCC Part 90	Method:	
Limit1:(VIO)	43+10 log(P)@1.5m	Limit2:	
Limit3:		Limit4:	

Car Kit
Transmit mode. Maximum of both horizontal and vertical.
Blue: 817MHz
Red 824MHz
Limit is approximate field strength correlation to -13dBm

Facility:	Anech_2	Height	1m	Mode:	1
Distance	1.5m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H24307C2		



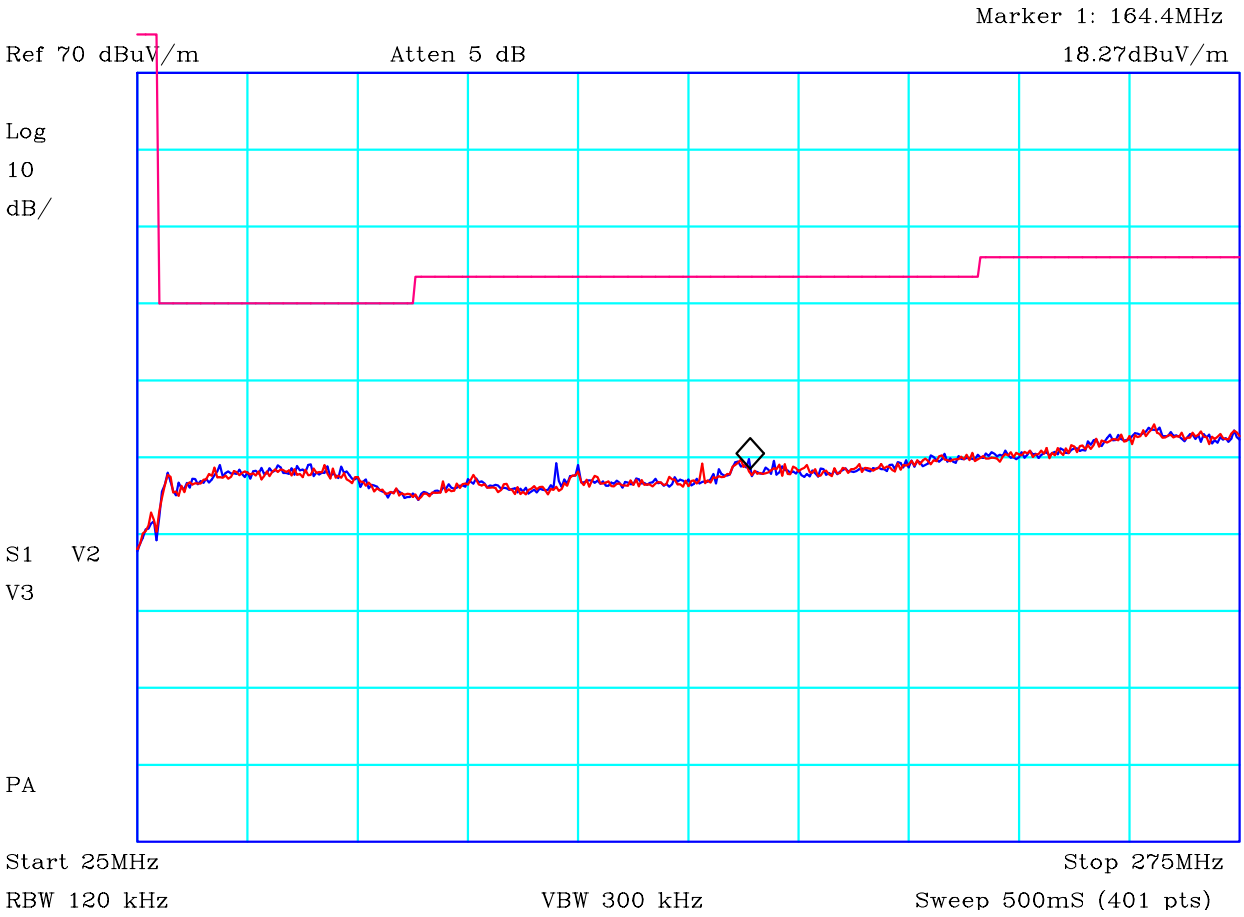
CF1:A23_3m_100806 CF2:CBL049_110107 CF3:PRE3_110113 CF4:RFF22_110221

PLOT 64 Radiated Emissions - Car Kit - 862 - 869 band Tx - 5GHz to 10GHz

Company:	Sepura	Product:	STP8080
Date:	30/05/2012	Test Eng:	Dave Smith
Method:	FCC part 90	Method:	
Limit1:(VIO)	43+10 log(P)@1.5m	Limit2:	
Limit3:		Limit4:	

Car Kit
Transmit mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz
Limit is approximate field strength correlation to --13dBm

Facility:	Anech_2	Height	1m	Mode:	1
Distance	1.5m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H2430819		



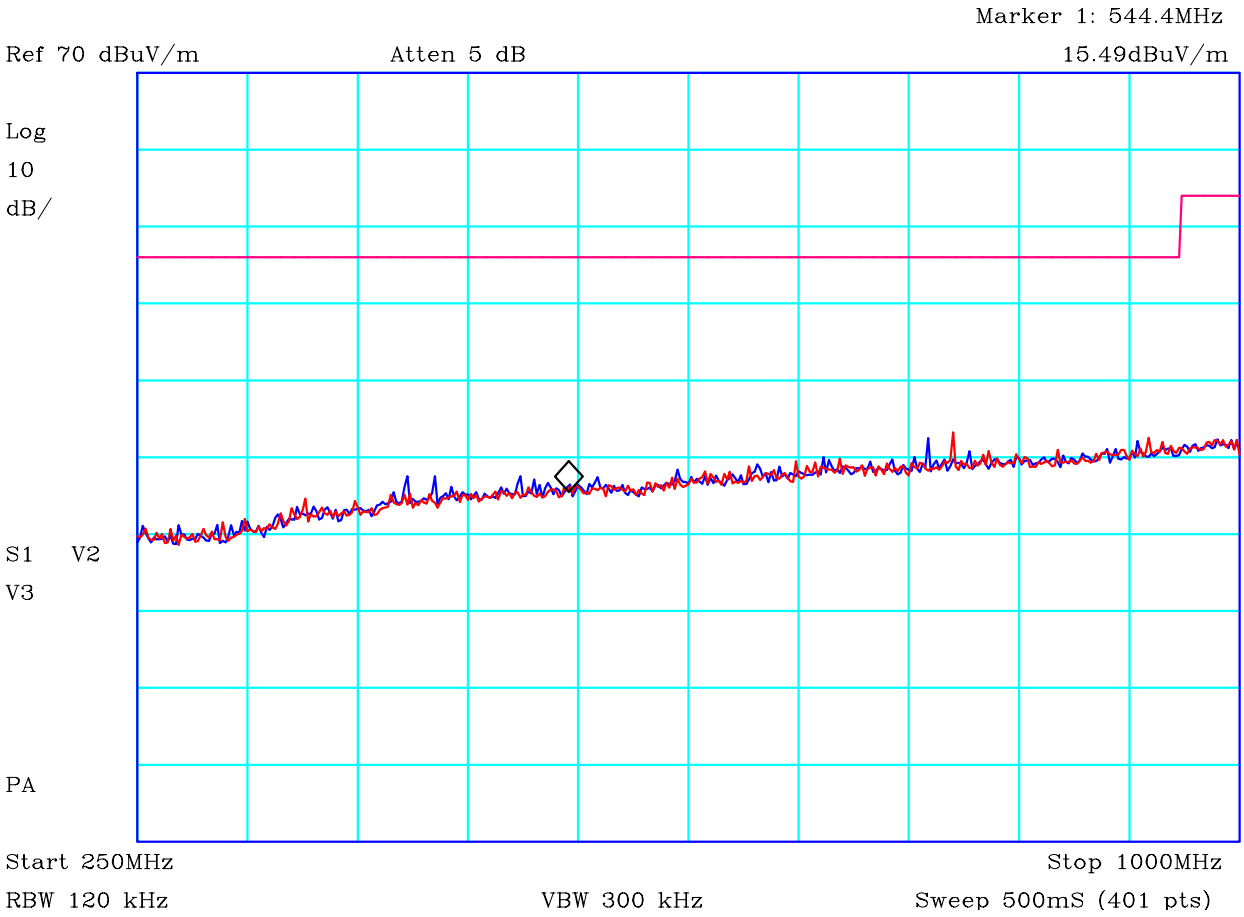
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806

PLOT 65 Radiated Emissions - Standalone - Rx - 25MHz to 275MHz

Company:	Sepura	Product:	STP8080
Date:	06/06/2012	Test Eng:	Dave Smith
Method:	ANSI C63.4	Method:	
Limit1:(VIO)	FCC_B@3m	Limit2:	
Limit3:		Limit4:	

Standalone
Receive mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz

Facility:	Anech_2	Height	1.5	Mode:	2
Distance	3m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H25214C6		



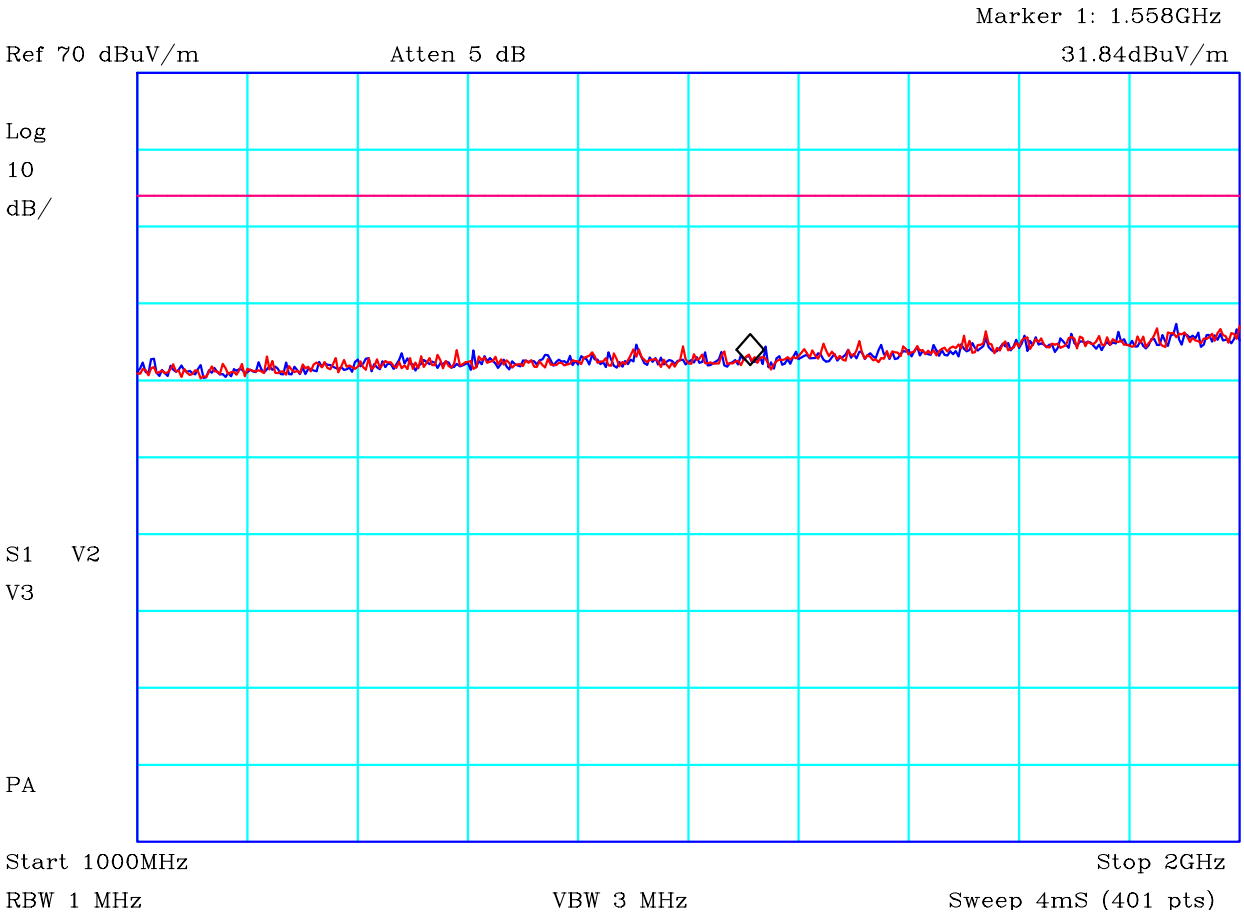
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:PRE3_110113

PLOT 66 Radiated Emissions - Standalone - Rx - 250MHz to 1GHz

Company:	Sepura	Product:	STP8080
Date:	06/06/2012	Test Eng:	Dave Smith
Method:	ANSI C63.4	Method:	
Limit1:(VIO)	FCC_B@3m	Limit2:	
Limit3:		Limit4:	

Standalone
Receive mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz

Facility:	Anech_2	Height	1.5	Mode:	2
Distance	3m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H25214C8		



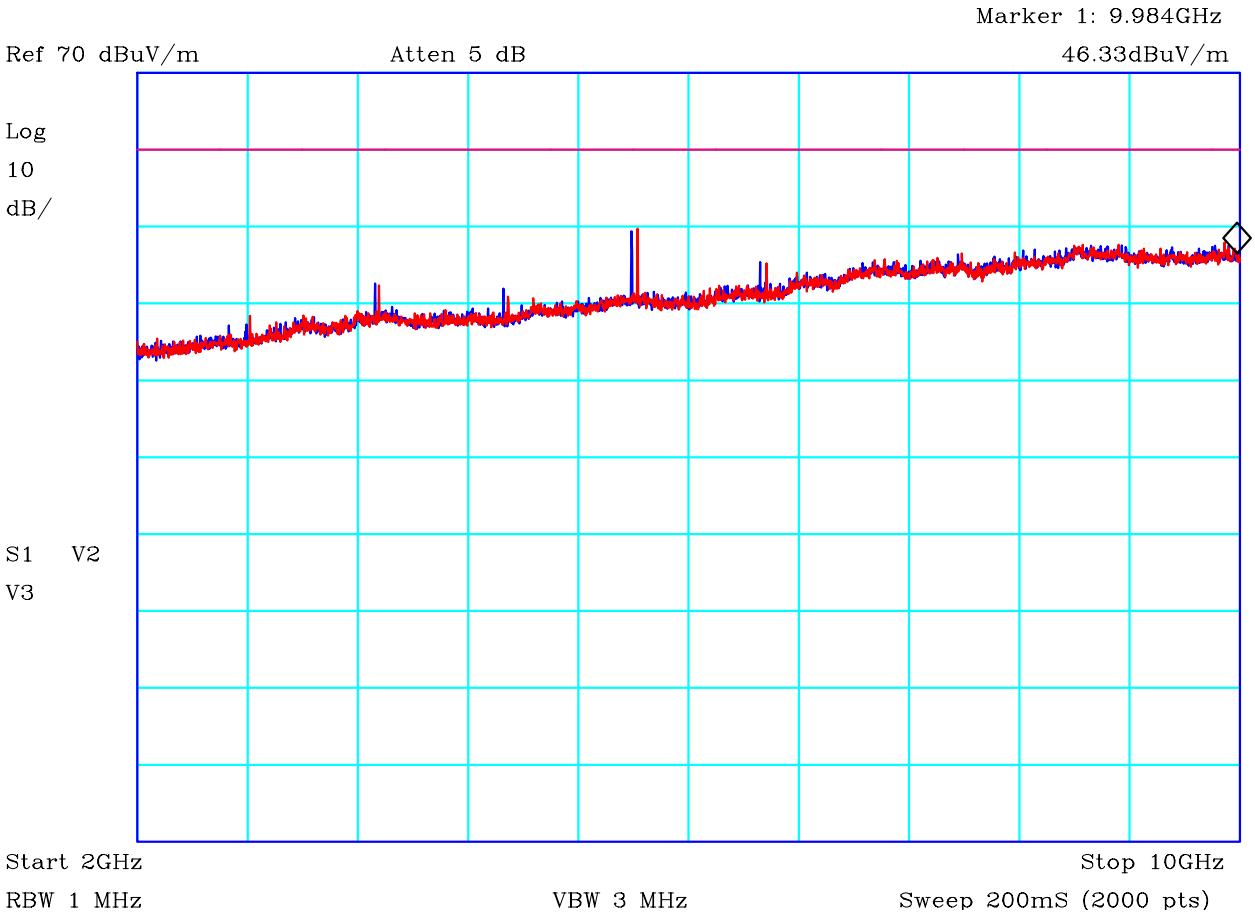
CF1:A23_3m_100806 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:PRE3_110113 CF4:RFF15_110112

PLOT 67 Radiated Emissions - Standalone - Rx - 1GHz to 2GHz

Company:	Sepura	Product:	STP8080
Date:	01/06/2012	Test Eng:	Dave Smith
Method:	ANSI C63.4	Method:	
Limit1:(VIO)	FCC_Bx@3m	Limit2:	
Limit3:		Limit4:	

Standalone
Receive mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz

Facility:	Anech_2	Height	1m	Mode:	2
Distance	3m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H250168D		



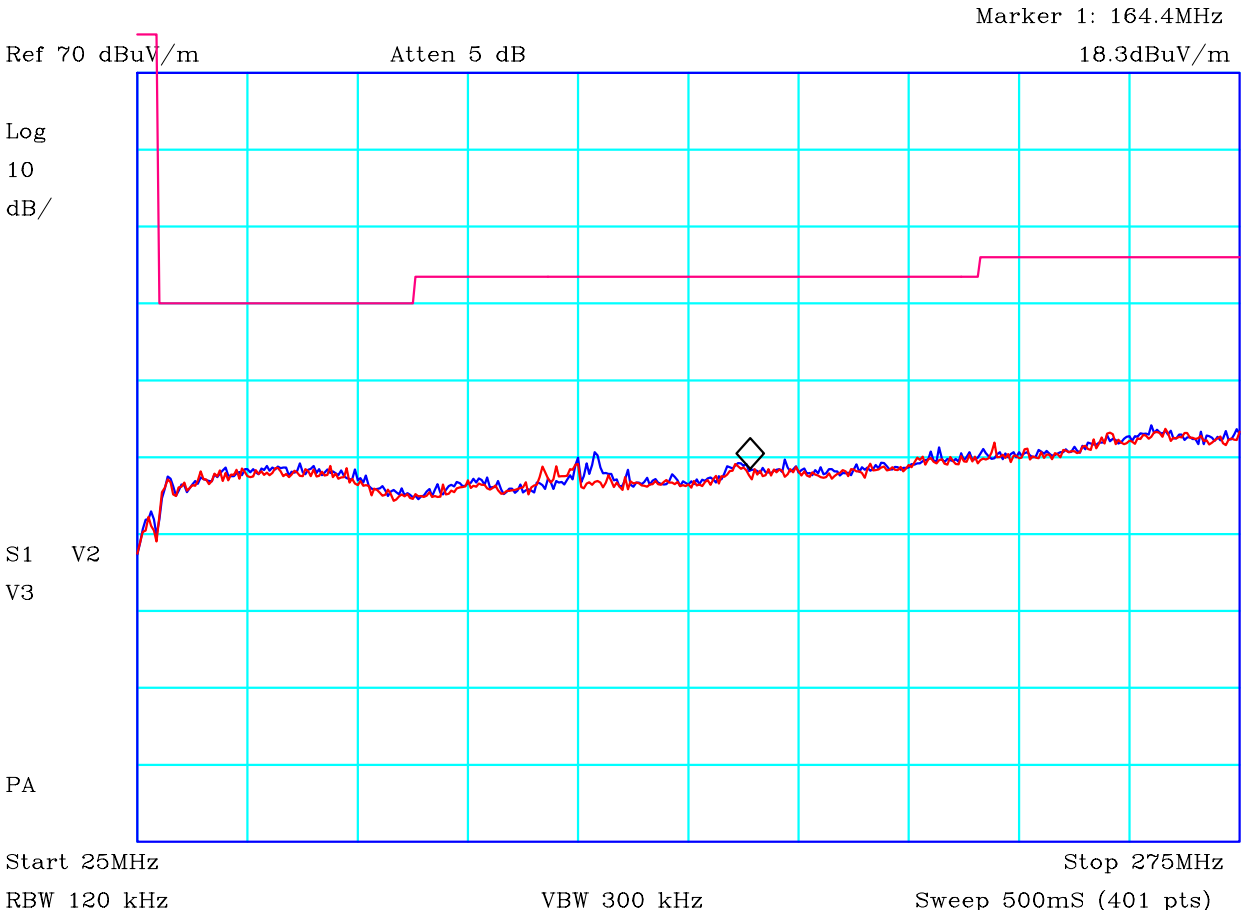
CF1:A23_3m_100806 CF2:PRE3_110113 CF3:CBL049_110107 CF4:RFF22_110221

PLOT 68 Radiated Emissions - Standalone - Rx - 2GHz to 10GHz

Company:	Sepura	Product:	STP8080
Date:	29/05/2012	Test Eng:	Dave Smith
Method:	ANSI C63.4	Method:	
Limit1:(VIO)	FCC_B@1.5m	Limit2:	
Limit3:		Limit4:	

Standalone
Receive mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz

Facility:	Anech_2	Height	1m	Mode:	2
Distance	1.5m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H24296B2		



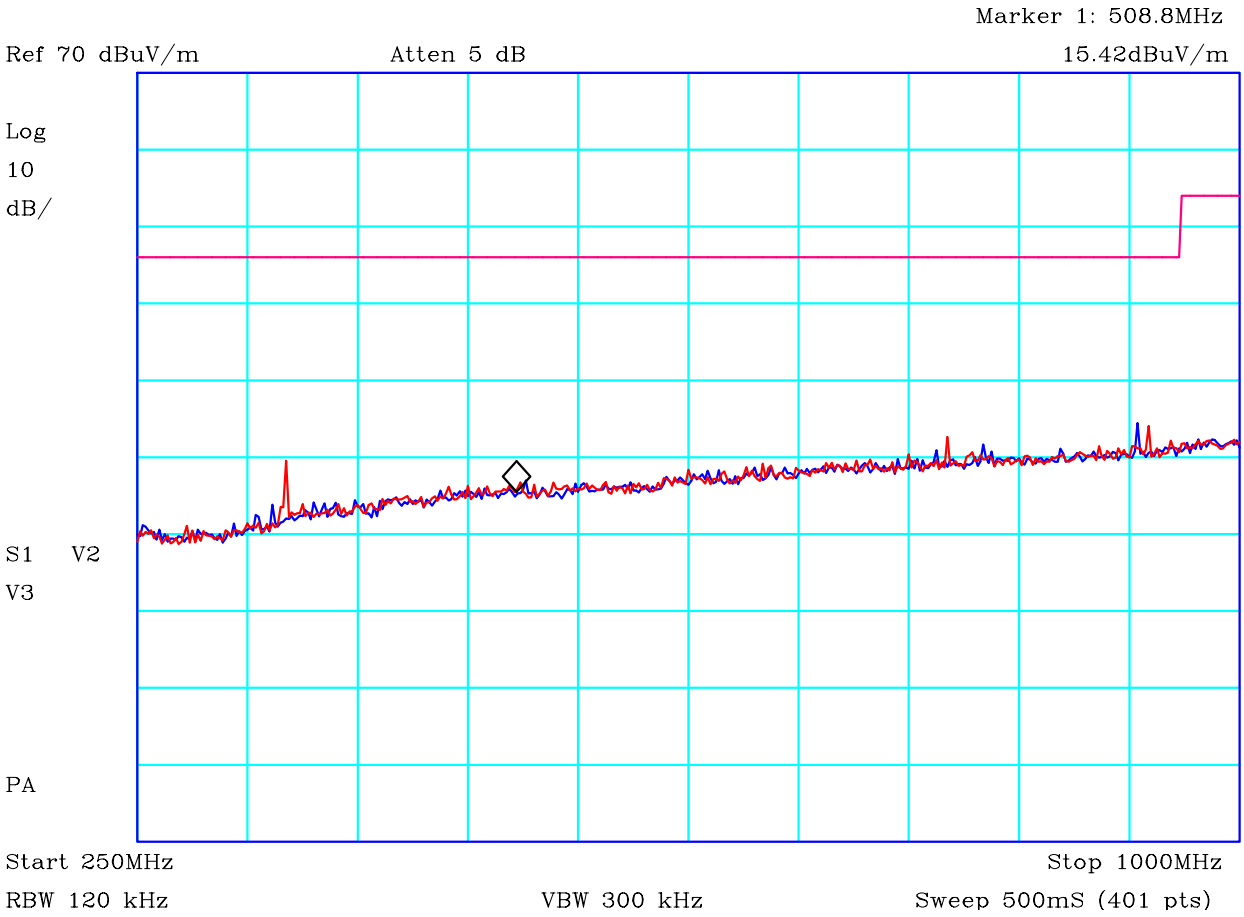
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806

PLOT 69 Radiated Emissions - RSM - Rx - 25MHz to 275MHz

Company:	Sepura	Product:	STP8080
Date:	06/06/2012	Test Eng:	Dave Smith
Method:	ANSI C63.4	Method:	
Limit1:(VIO)	FCC_B@3m	Limit2:	
Limit3:		Limit4:	

RSM
Receive mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz

Facility:	Anech_2	Height	1.5	Mode:	2
Distance	3m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H25214CA		



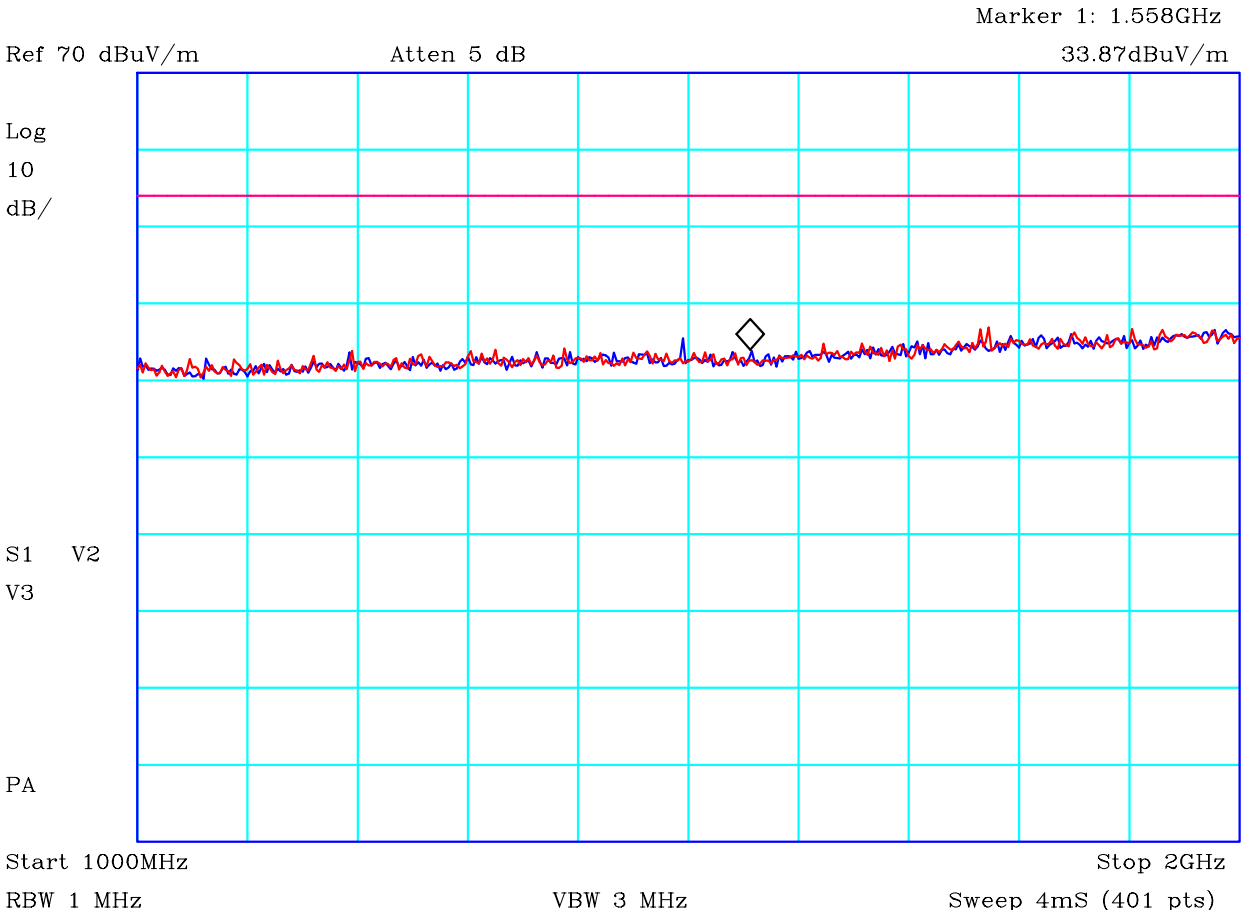
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:PRE3_110113

PLOT 70 Radiated Emissions - RSM - Rx - 250MHz to 1GHz

Company:	Sepura	Product:	STP8080
Date:	06/06/2012	Test Eng:	Dave Smith
Method:	ANSI C63.4	Method:	
Limit1:(VIO)	FGCC_B@3m	Limit2:	
Limit3:		Limit4:	

RSM
Receive mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz

Facility:	Anech_2	Height	1.5	Mode:	2
Distance	3m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H25214CC		



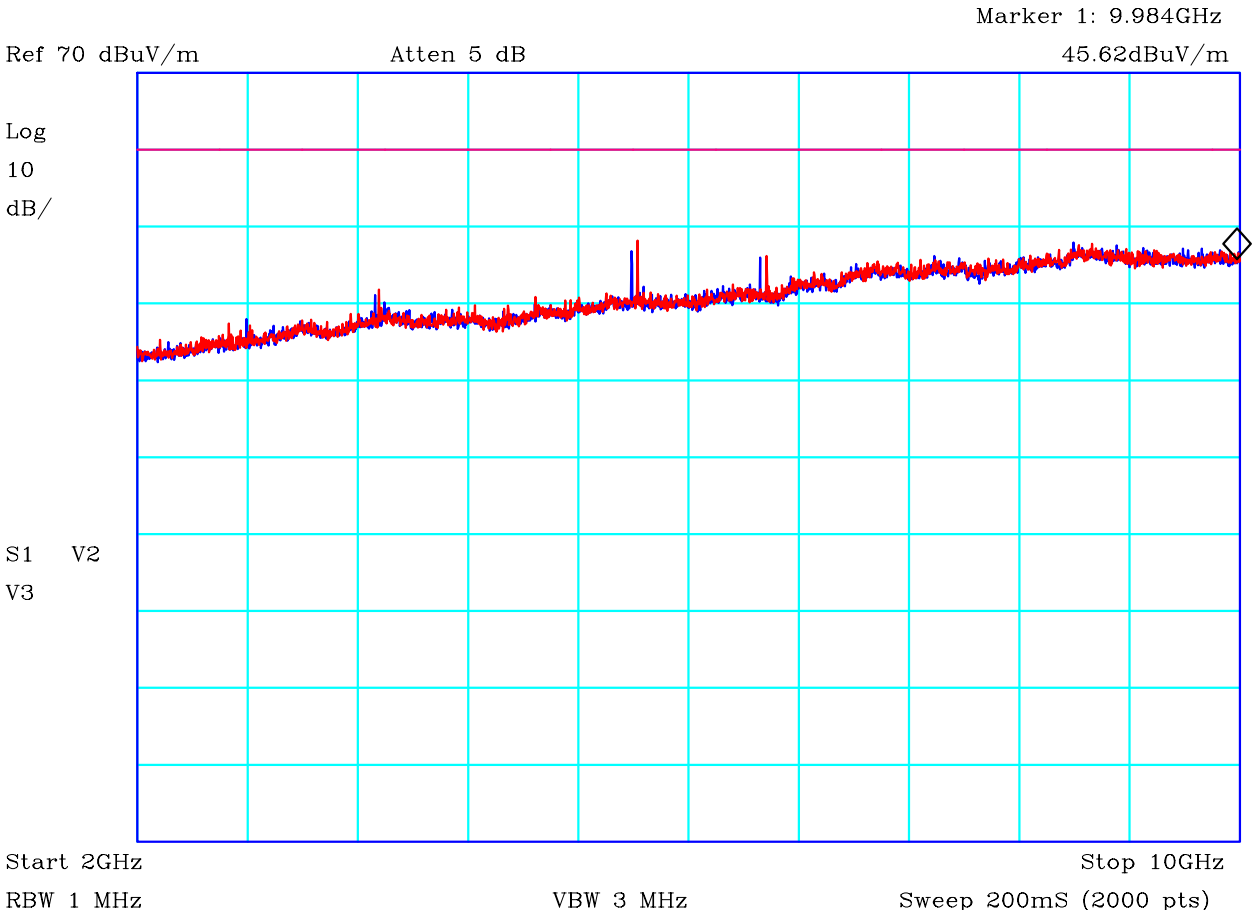
CF1:A23_3m_100806 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:PRE3_110113 CF4:RFF15_110112

PLOT 71 Radiated Emissions - RSM - Rx - 1GHz to 2GHz

Company:	Sepura	Product:	STP8080
Date:	01/06/2012	Test Eng:	Dave Smith
Method:	ANSI C63.4	Method:	
Limit1:(VIO)	FCC_B@3m	Limit2:	
Limit3:		Limit4:	

RSM
Receive mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz

Facility:	Anech_2	Height	1m	Mode:	2
Distance	3m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H25016A9		



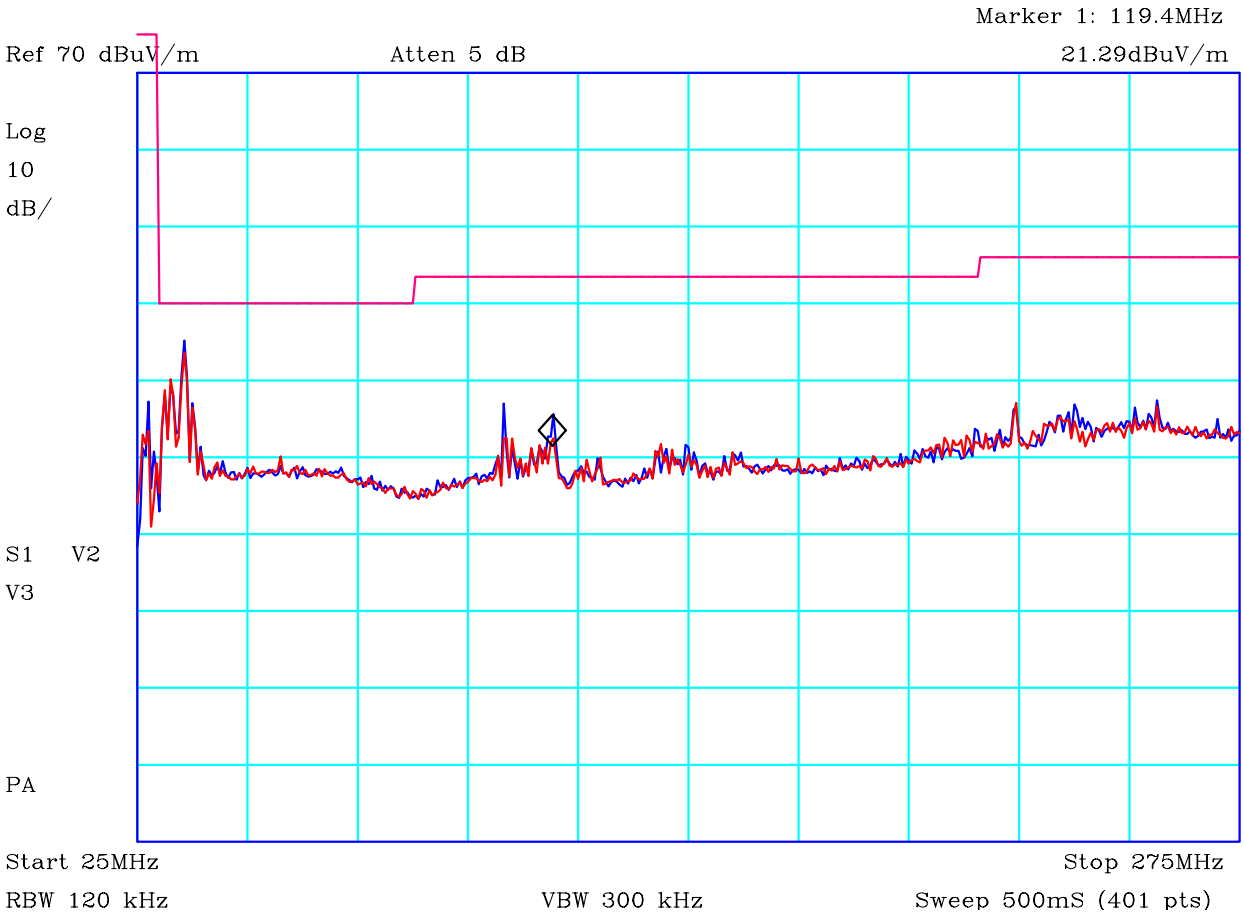
CF1:A23_3m_100806 CF2:PRE3_110113 CF3:CBL049_110107 CF4:RFF22_110221

PLOT 72 Radiated Emissions - RSM - Rx - 2GHz to 10GHz

Company:	Sepura	Product:	STP8080
Date:	30/05/2012	Test Eng:	Dave Smith
Method:	ANSI C63.4	Method:	
Limit1:(VIO)	FCC_B@1.5m	Limit2:	
Limit3:		Limit4:	

RSM
Receive mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz

Facility:	Anech_2	Height	1m	Mode:	2
Distance	1.5m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H243072B		



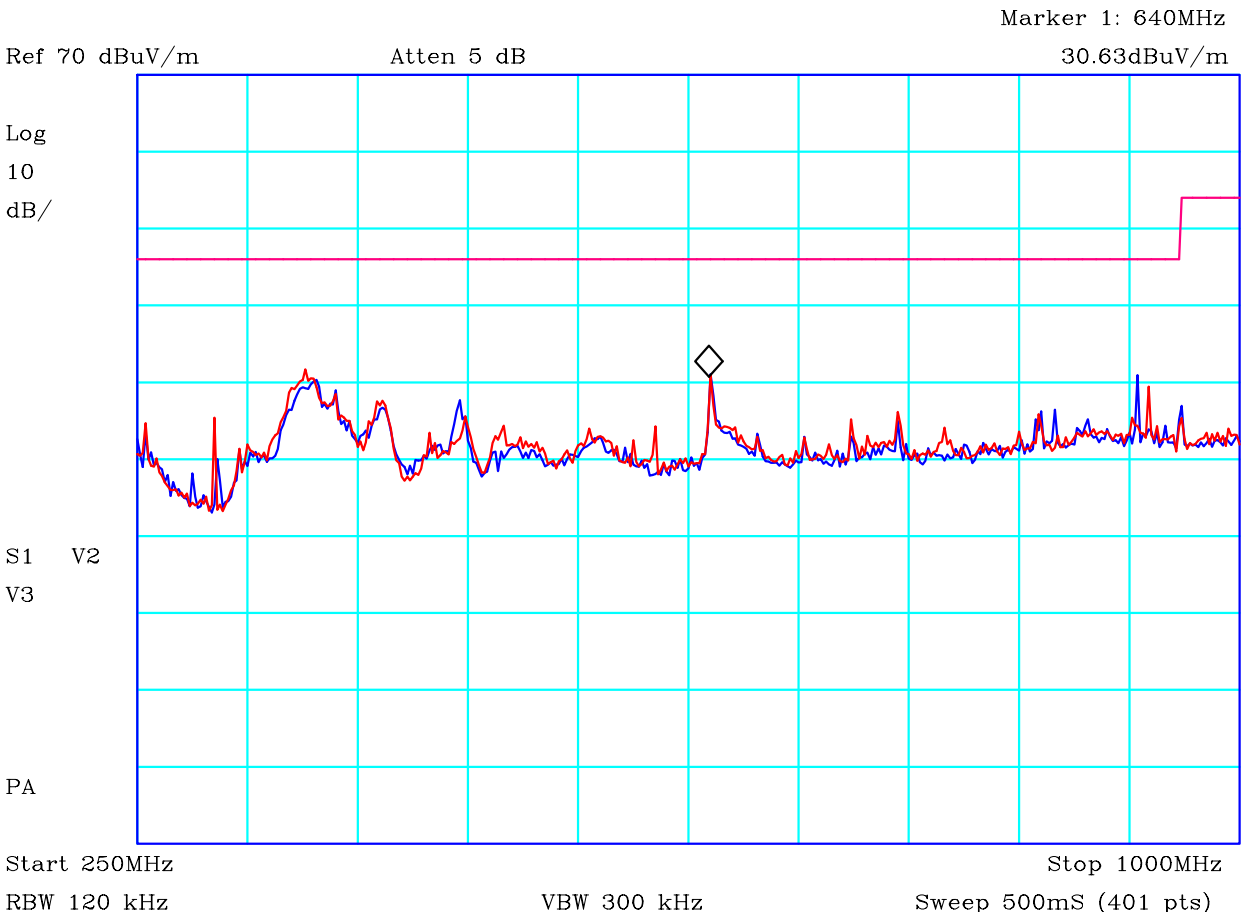
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806

PLOT 73 Radiated Emissions - Car Kit - Rx - 25MHz to 275MHz

Company:	Sepura	Product:	STP8080
Date:	06/06/2012	Test Eng:	Dave Smith
Method:	ANSI C63.4	Method:	
Limit1:(VIO)	FCC_B@3m	Limit2:	
Limit3:		Limit4:	

Car Kit
Receive mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz

Facility:	Anech_2	Height	1.5	Mode:	2
Distance	3m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H25214D1		



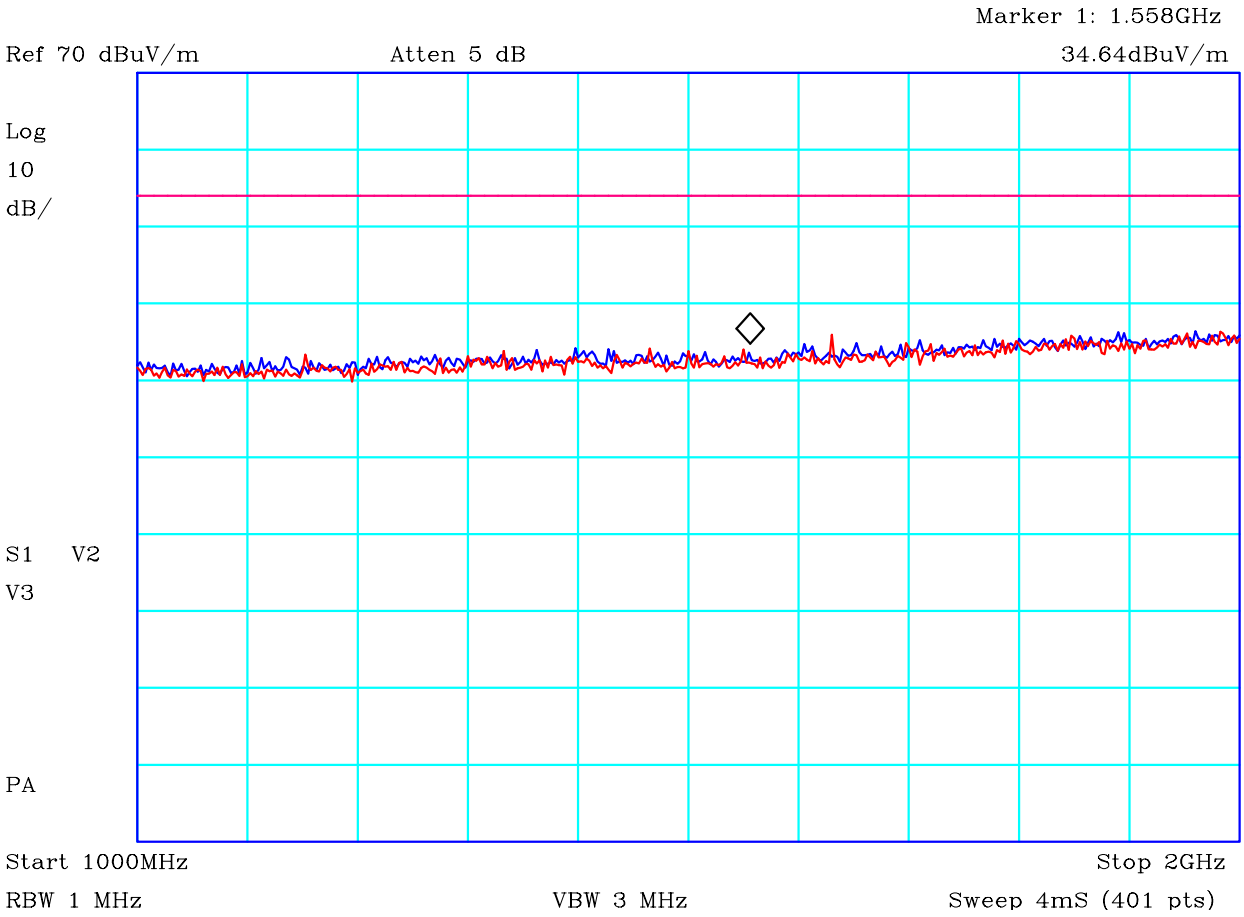
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:PRE3_110113

PLOT 74 Radiated Emissions - Car Kit - Rx - 250MHz to 1GHz

Company:	Sepura	Product:	STP8080
Date:	06/06/2012	Test Eng:	Dave Smith
Method:	ANSI C63.4	Method:	
Limit1:(VIO)	FCC_B@3m	Limit2:	
Limit3:		Limit4:	

Car Kit
Receive mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz

Facility:	Anech_2	Height	1.5	Mode:	2
Distance	3m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H25214D3		



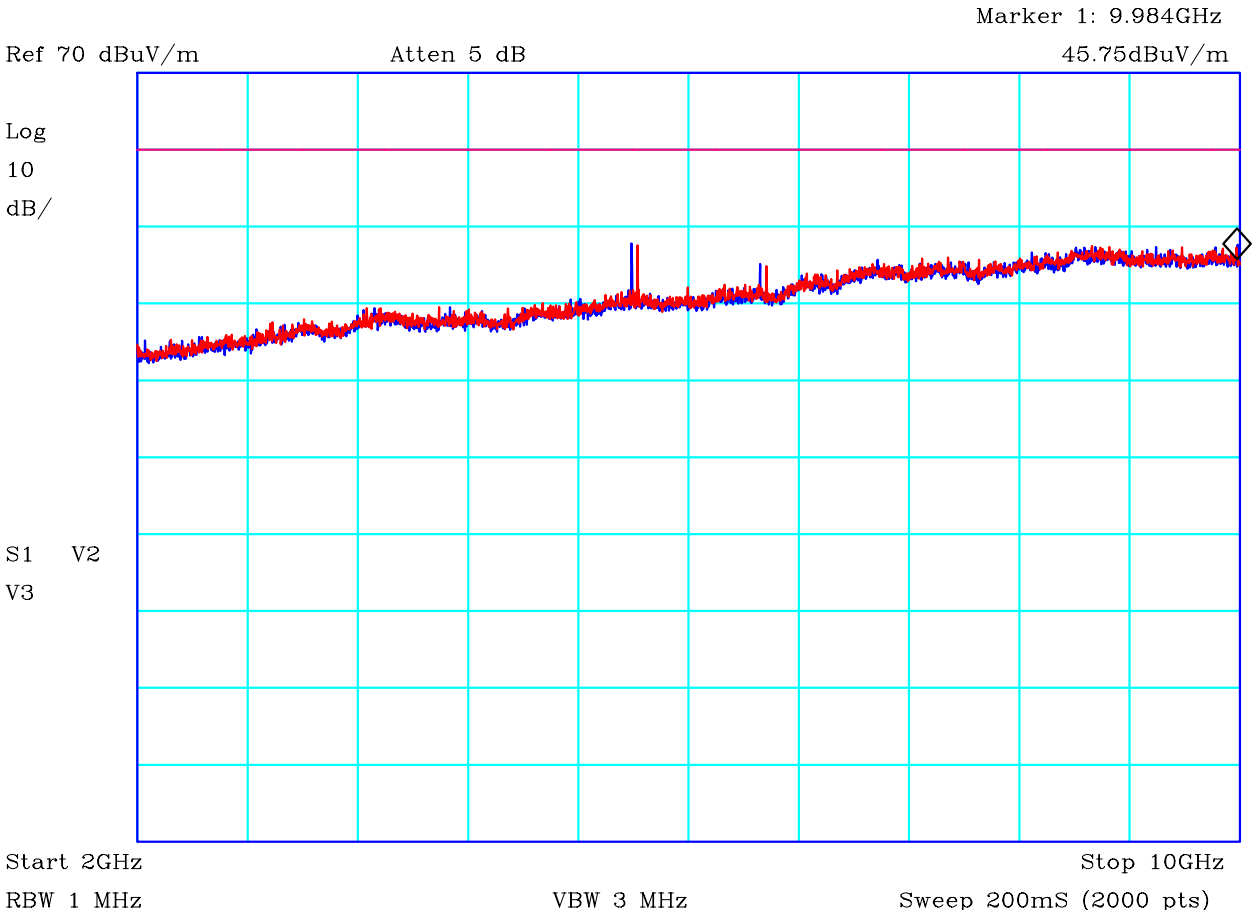
CF1:A23_3m_100806 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:PRE3_110113 CF4:RFF15_110112

PLOT 75 Radiated Emissions - Car Kit - Rx - 1GHz to 2GHz

Company:	Sepura	Product:	STP8080
Date:	01/06/2012	Test Eng:	Dave Smith
Method:	ANSI C63.4	Method:	
Limit1:(VIO)	FCC_B@3m	Limit2:	
Limit3:		Limit4:	

Car Kit
Receive mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz

Facility:	Anech_2	Height	1m	Mode:	2
Distance	3m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H25016F3		



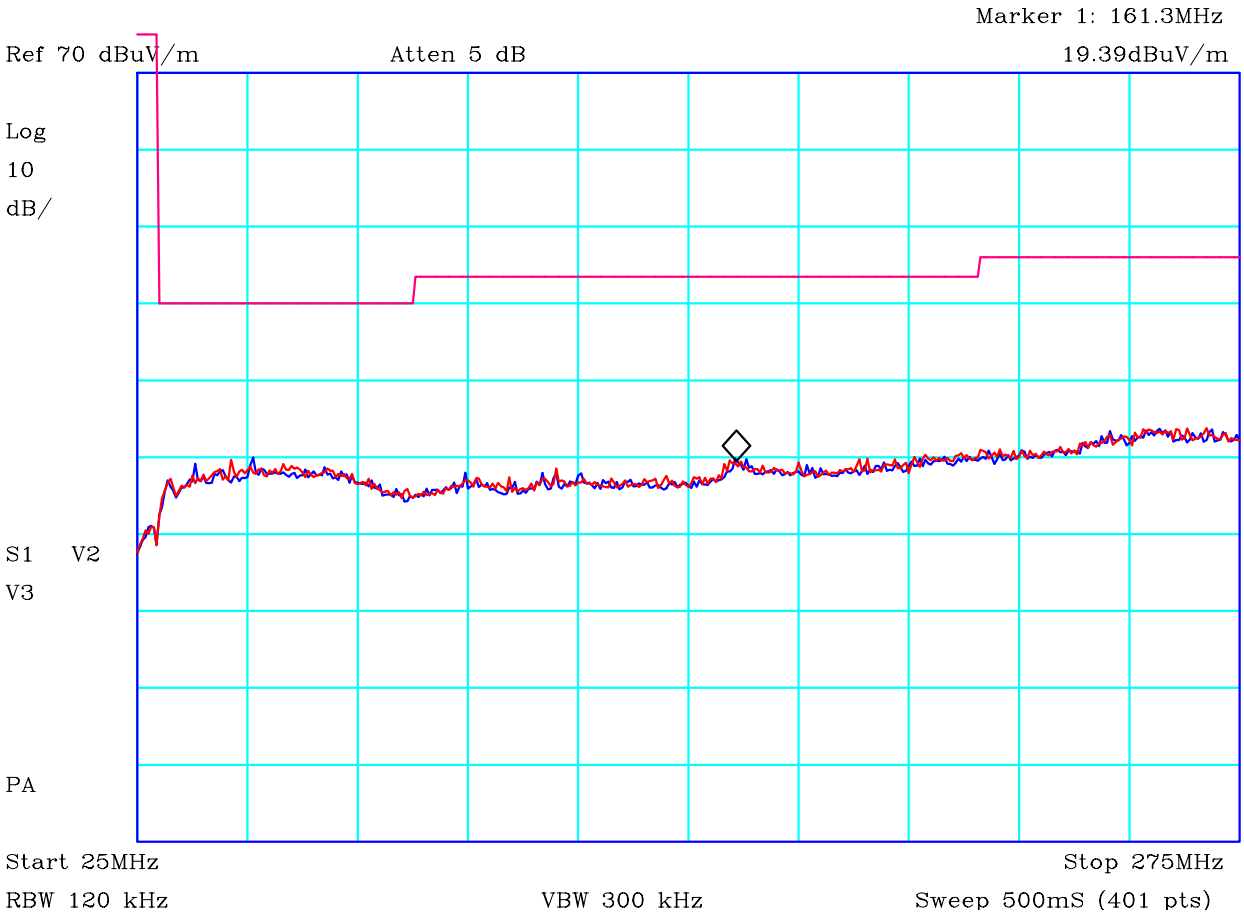
CF1:A23_3m_100806 CF2:PRE3_110113 CF3:CBL049_110107 CF4:RFF22_110221

PLOT 76 Radiated Emissions - Car Kit - Rx - 2GHz to 10GHz

Company:	Sepura	Product:	STP8080
Date:	30/05/2012	Test Eng:	Dave Smith
Method:	ANSI C63.4	Method:	
Limit1:(VIO)	FCC_B@1.5m	Limit2:	
Limit3:		Limit4:	

Car Kit
Receive mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz

Facility:	Anech_2	Height	1m	Mode:	2
Distance	1.5m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H24307E8		



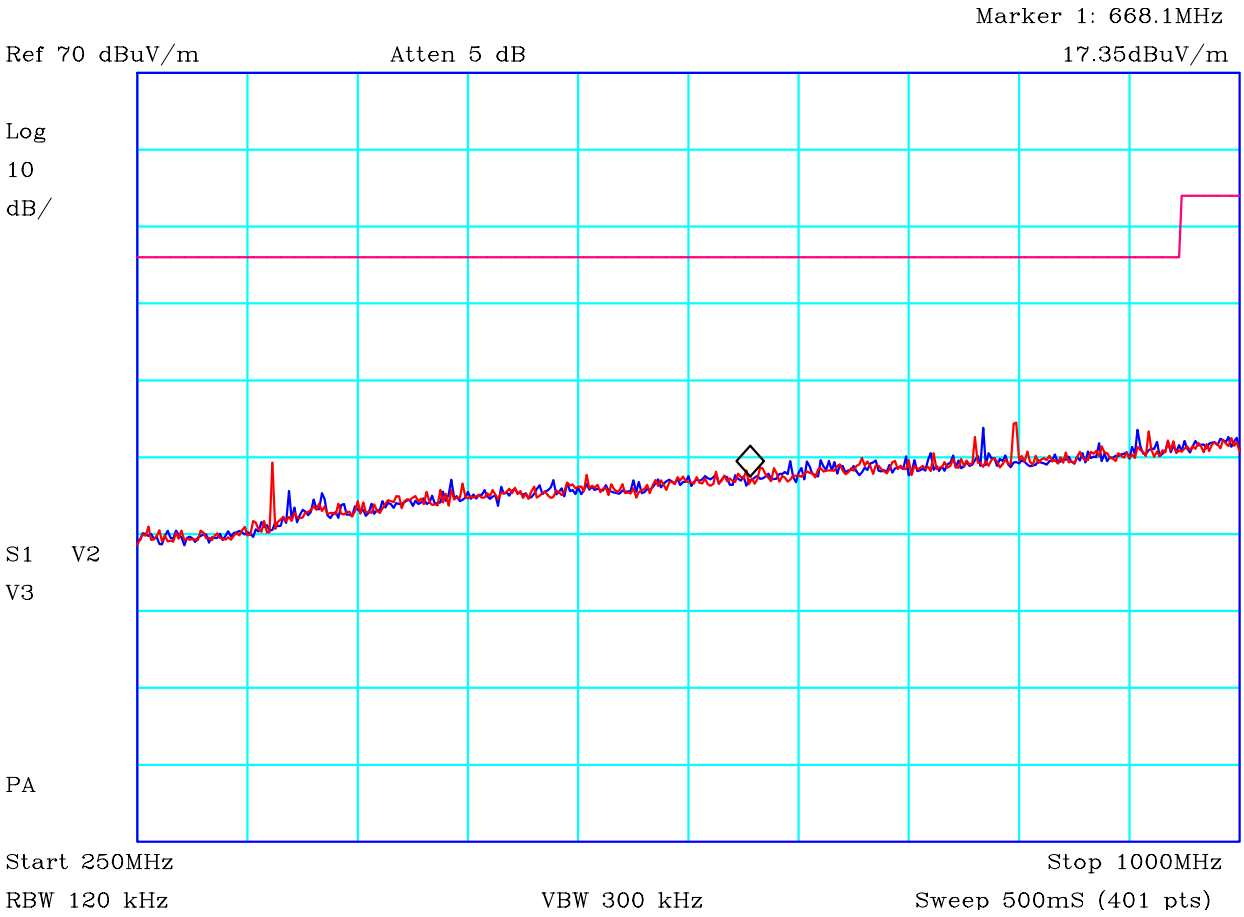
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806

PLOT 77 Radiated Emissions - STP8280 - Rx - 25MHz to 275MHz

Company:	Sepura	Product:	STP8280
Date:	06/06/2012	Test Eng:	Dave Smith
Method:	ANSI C63.4	Method:	
Limit1:(VIO)	FCC_B@3m	Limit2:	
Limit3:		Limit4:	

STP8280
Receive mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz

Facility:	Anech_2	Height	1.5	Mode:	2
Distance	3m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H25214D5		



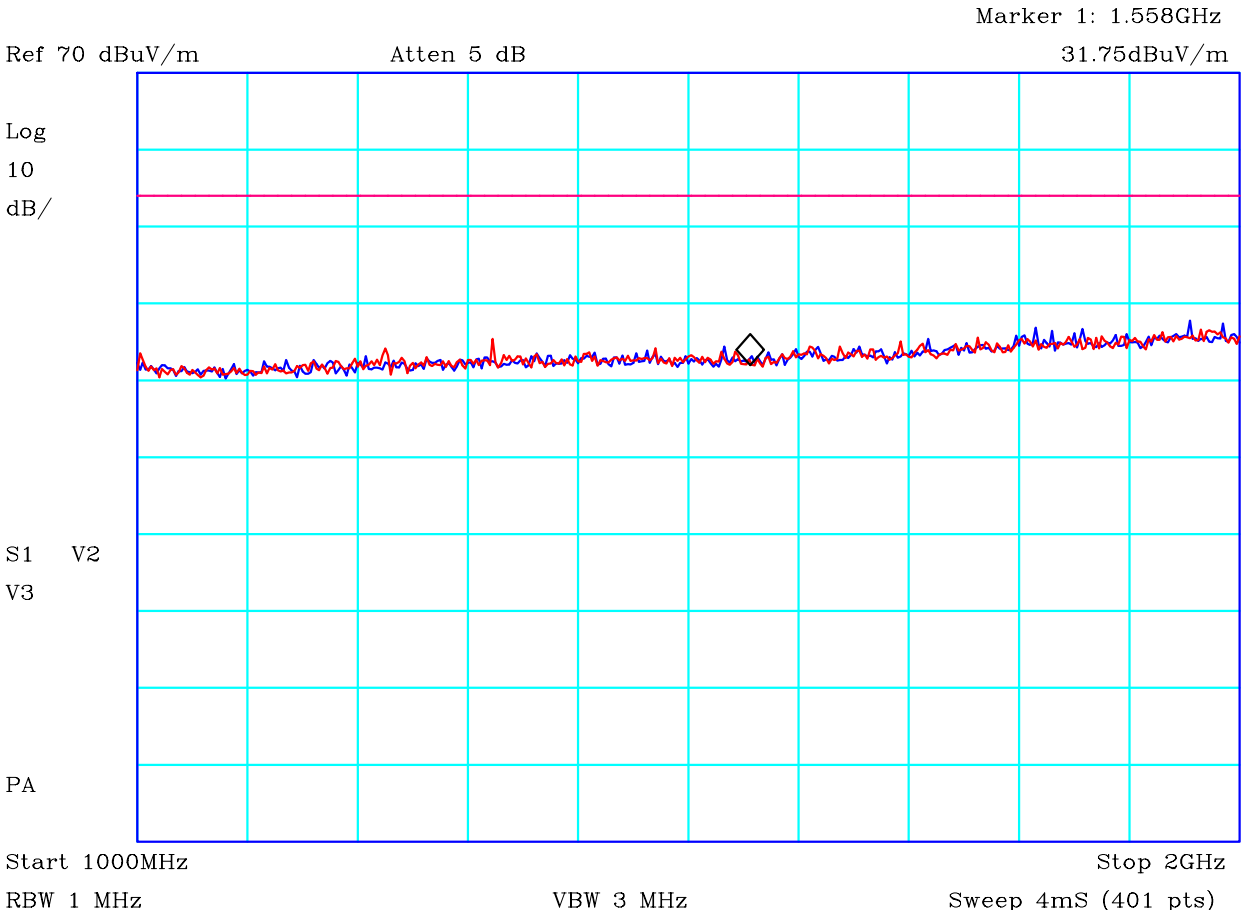
CF1:A24_3m_101116 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:PRE3_110113

PLOT 78 Radiated Emissions - STP8280 - Rx - 250MHz to 1GHz

Company:	Sepura	Product:	STP8280
Date:	06/06/2012	Test Eng:	Dave Smith
Method:	ANSI C63.4	Method:	
Limit1:(VIO)	FCC_B@3m	Limit2:	
Limit3:		Limit4:	

STP8280
Receive mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz

Facility:	Anech_2	Height	1.5	Mode:	2
Distance	3m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H25214D7		



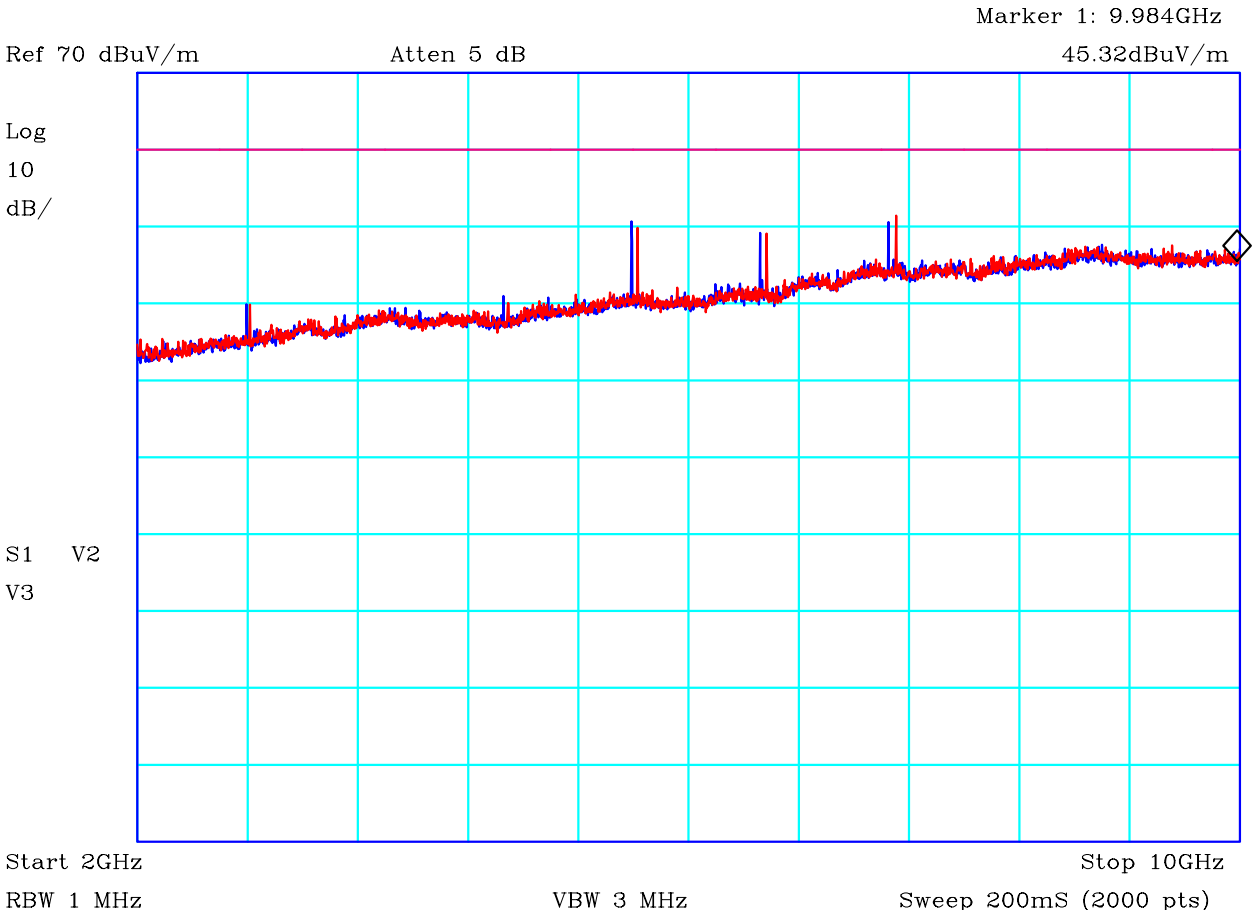
CF1:A23_3m_100806 CF2:CBL059_CBL018_CBL065_CBL060_100806 CF3:PRE3_110113 CF4:RFF15_110112

PLOT 79 Radiated Emissions - STP8280 - Rx - 1GHz to 2GHz

Company:	Sepura	Product:	STP8280
Date:	01/06/2012	Test Eng:	Dave Smith
Method:	ANSI C63.4	Method:	
Limit1:(VIO)	FCC_B@3m	Limit2:	
Limit3:		Limit4:	

STP8280
Receive mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz

Facility:	Anech_2	Height	1m	Mode:	2
Distance	3m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H25016CC		



CF1:A23_3m_100806 CF2:PRE3_110113 CF3:CBL049_110107 CF4:RFF22_110221

PLOT 80 Radiated Emissions - STP8280 - Rx - 2GHz to 10GHz

Company:	Sepura	Product:	STP8280
Date:	30/05/2012	Test Eng:	Dave Smith
Method:	ANSI C63.4	Method:	
Limit1:(VIO)	FCC_B@1.5m	Limit2:	
Limit3:		Limit4:	

STP8280
Receive mode. Maximum of both horizontal and vertical.
Blue: 862MHz
Red 869MHz

Facility:	Anech_2	Height	1m	Mode:	2
Distance	1.5m	Polarisation	V+H	Modification State:	1
Angle	0-360	File:	H2430764		