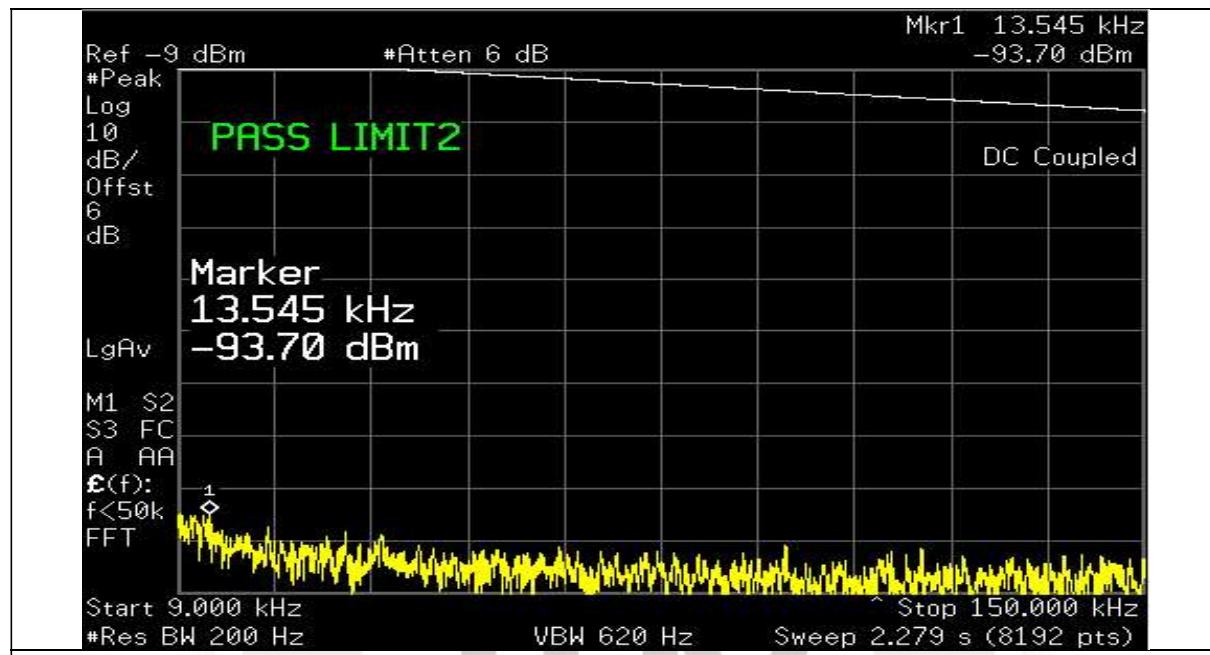
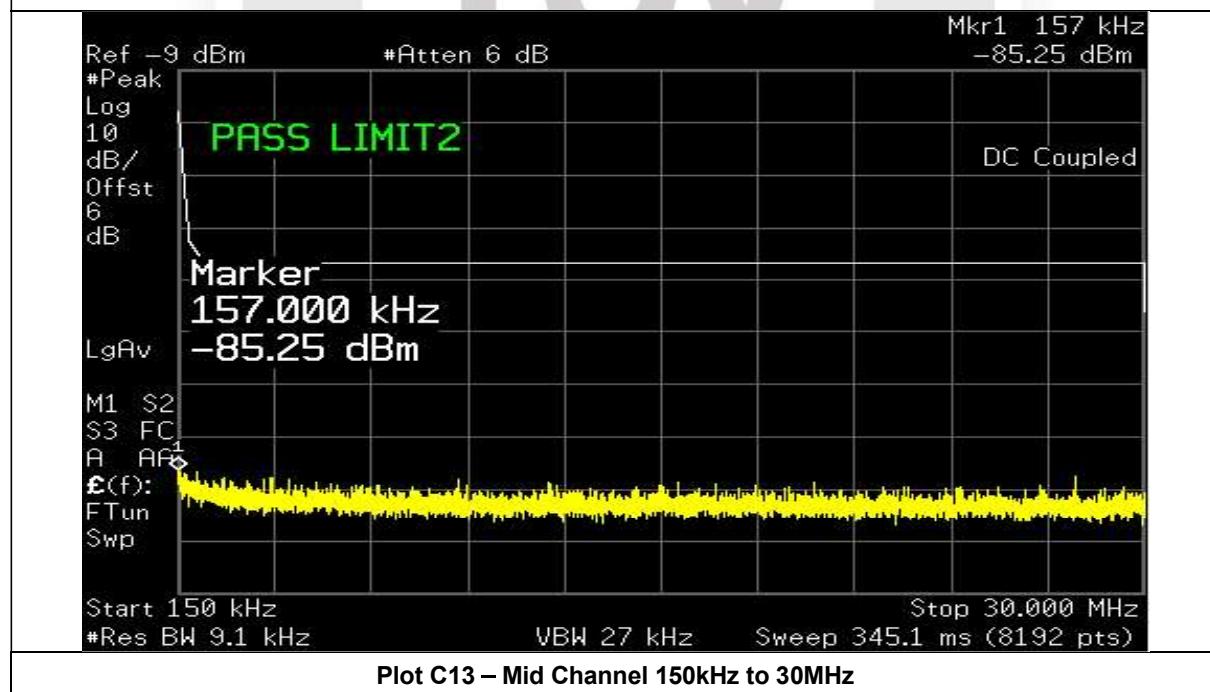




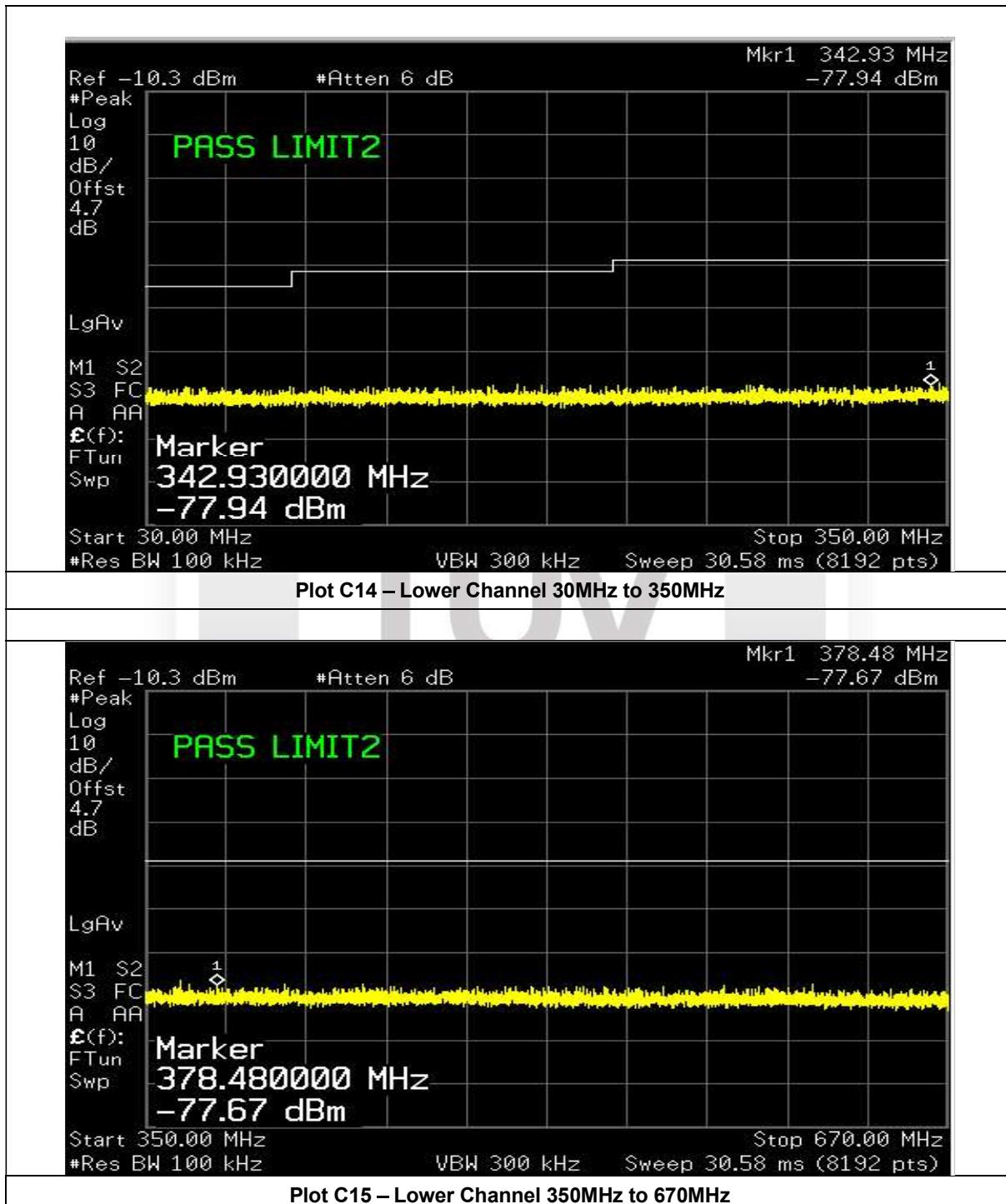
## RF Conducted Spurious Emissions (Restricted Bands) Plots – Peak

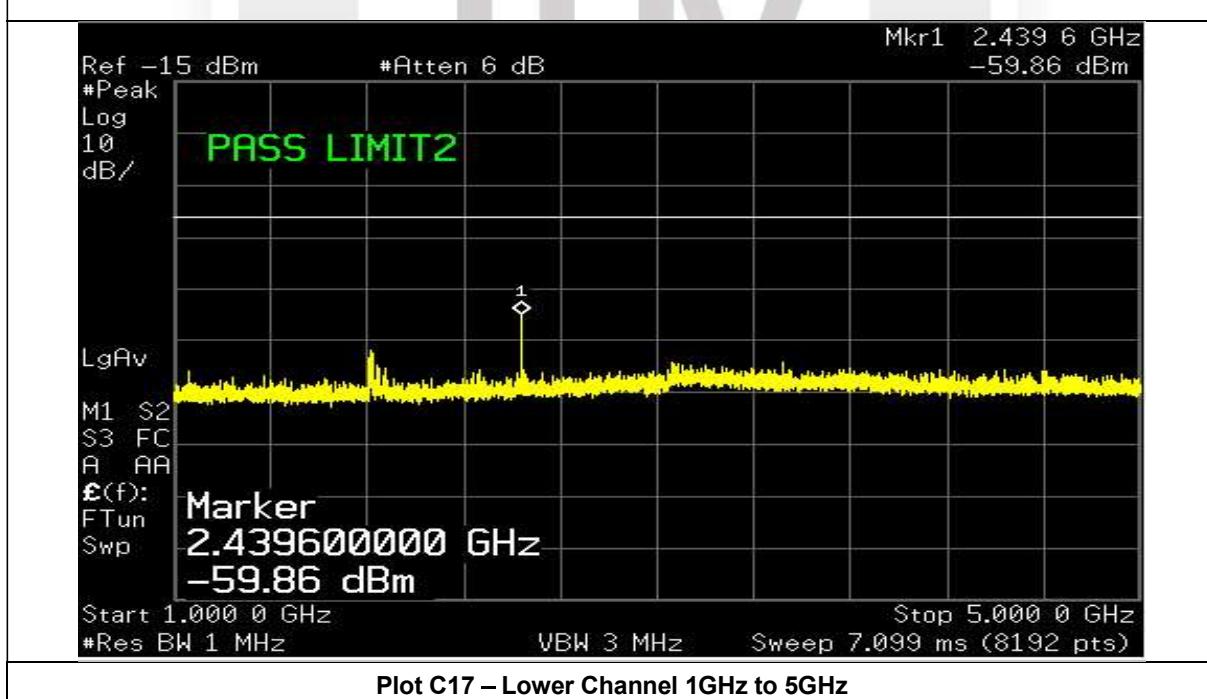


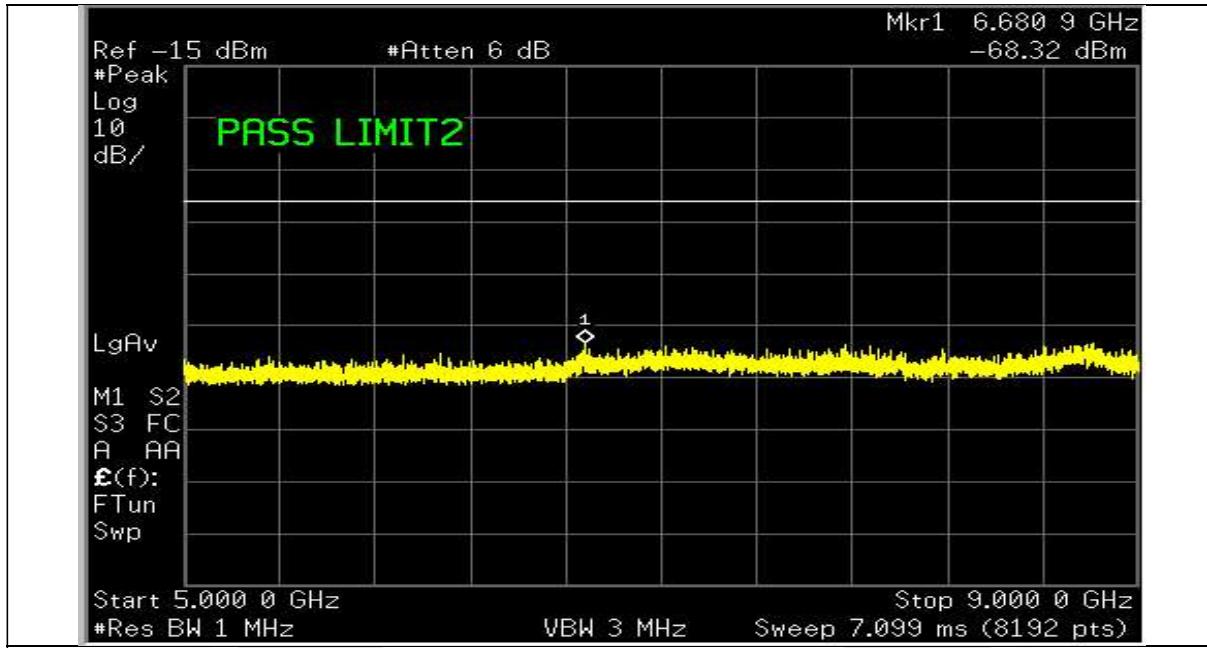
Plot C12 – Mid Channel 9kHz to 150kHz



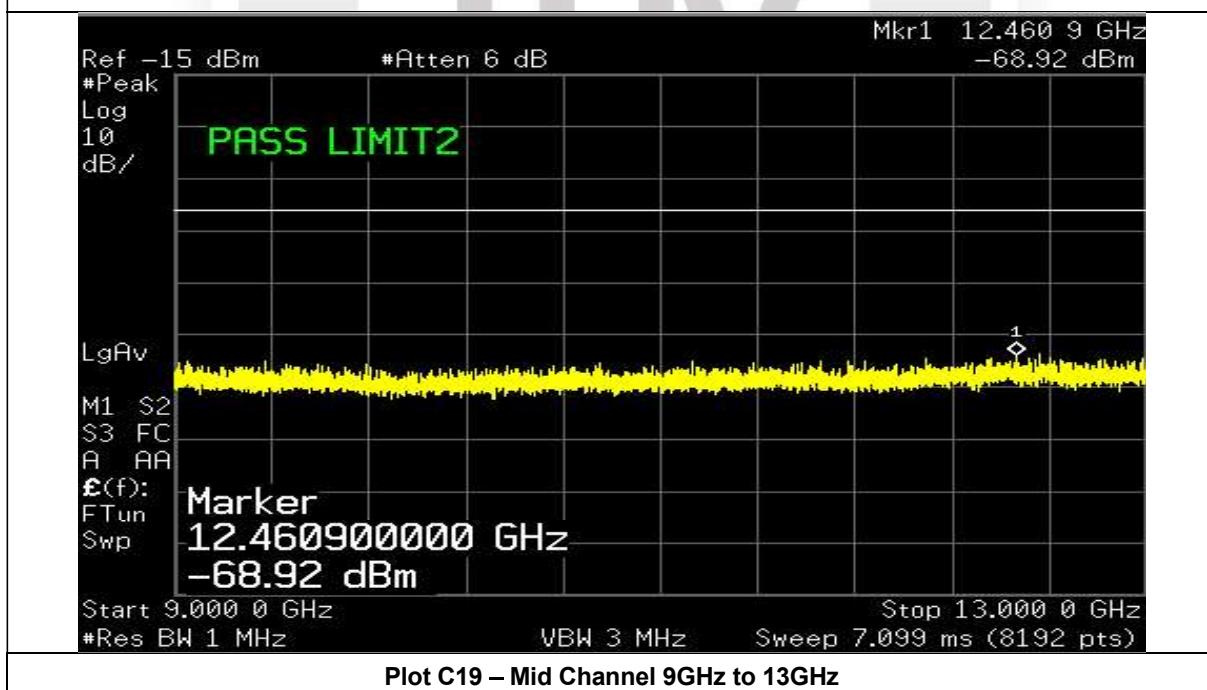
Plot C13 – Mid Channel 150kHz to 30MHz



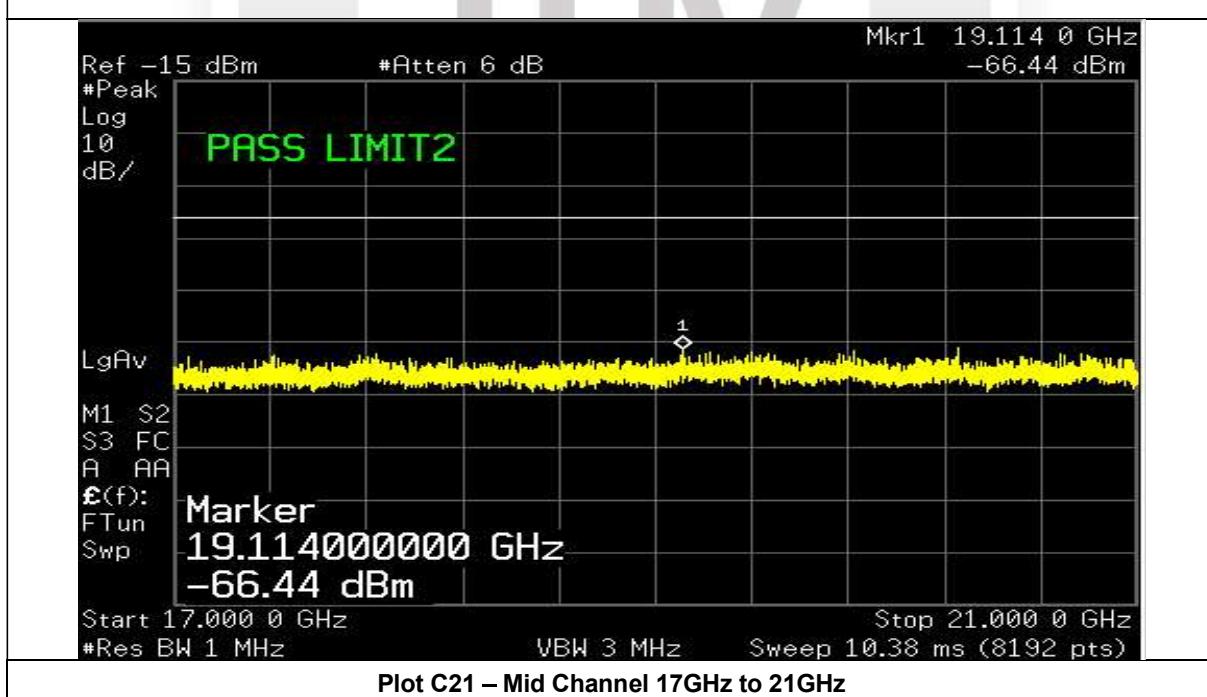


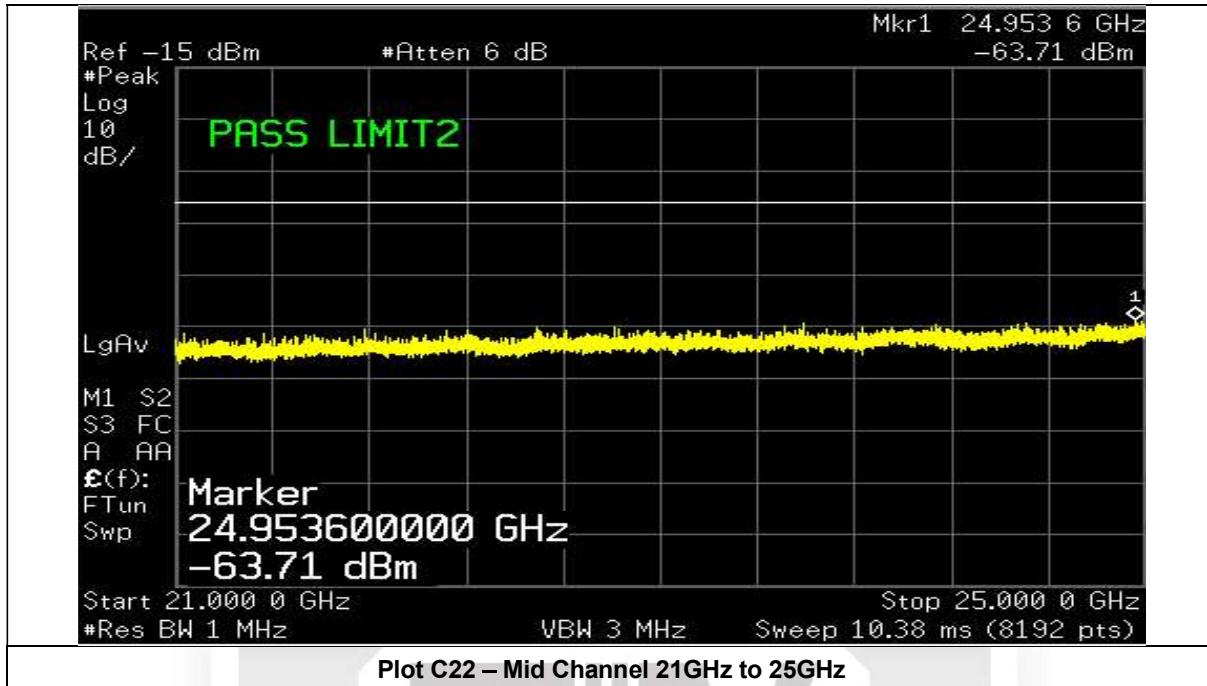


Plot C18 – Mid Channel 5GHz to 9GHz



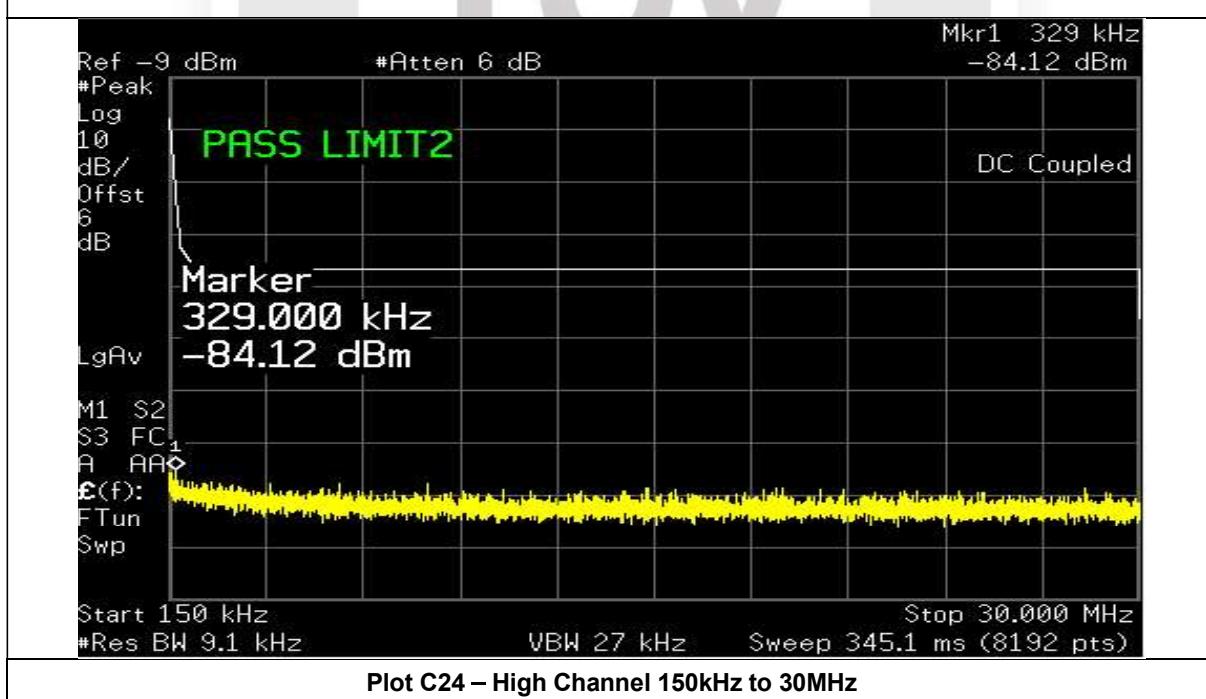
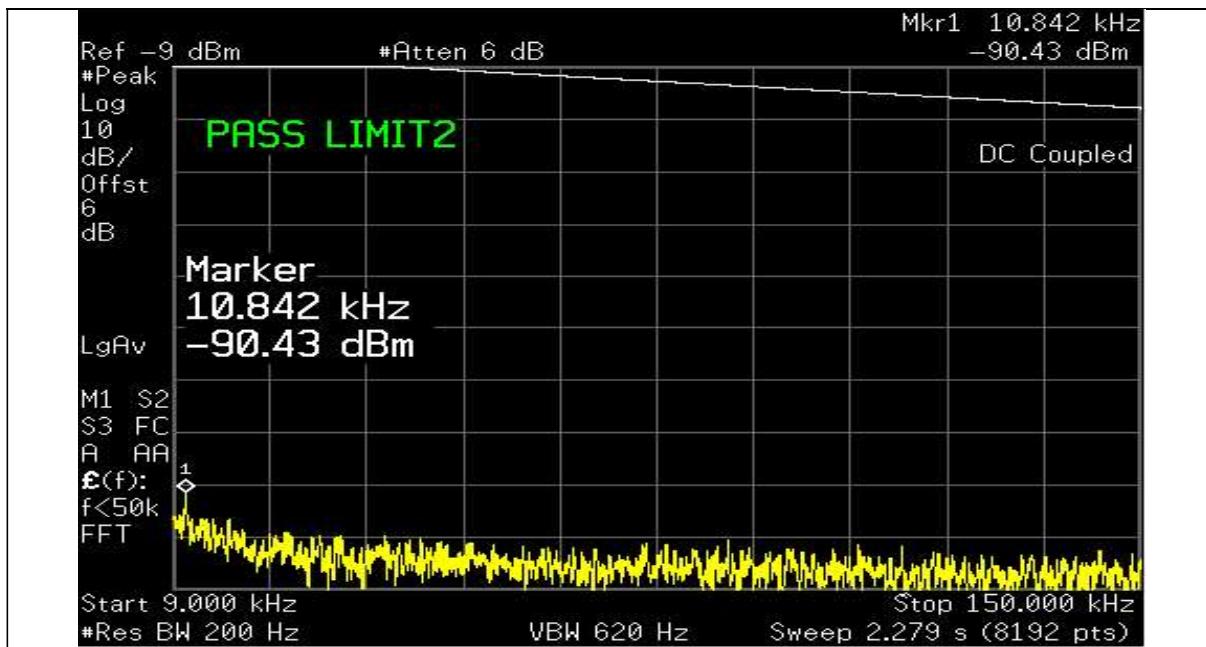
Plot C19 – Mid Channel 9GHz to 13GHz

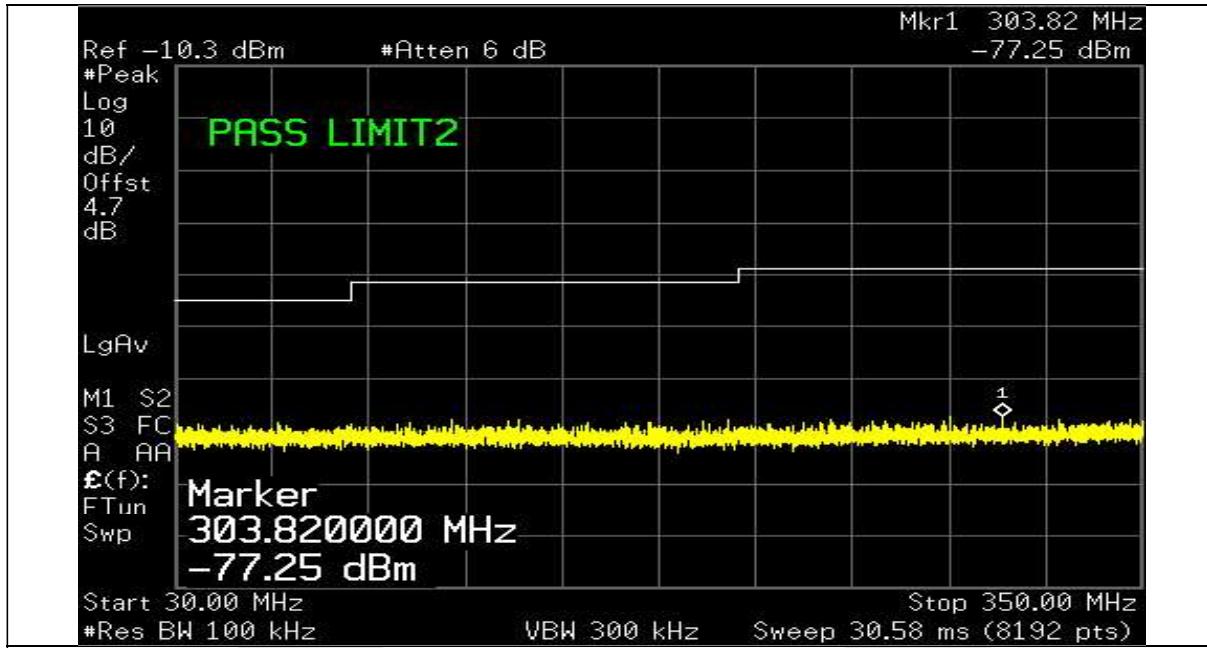






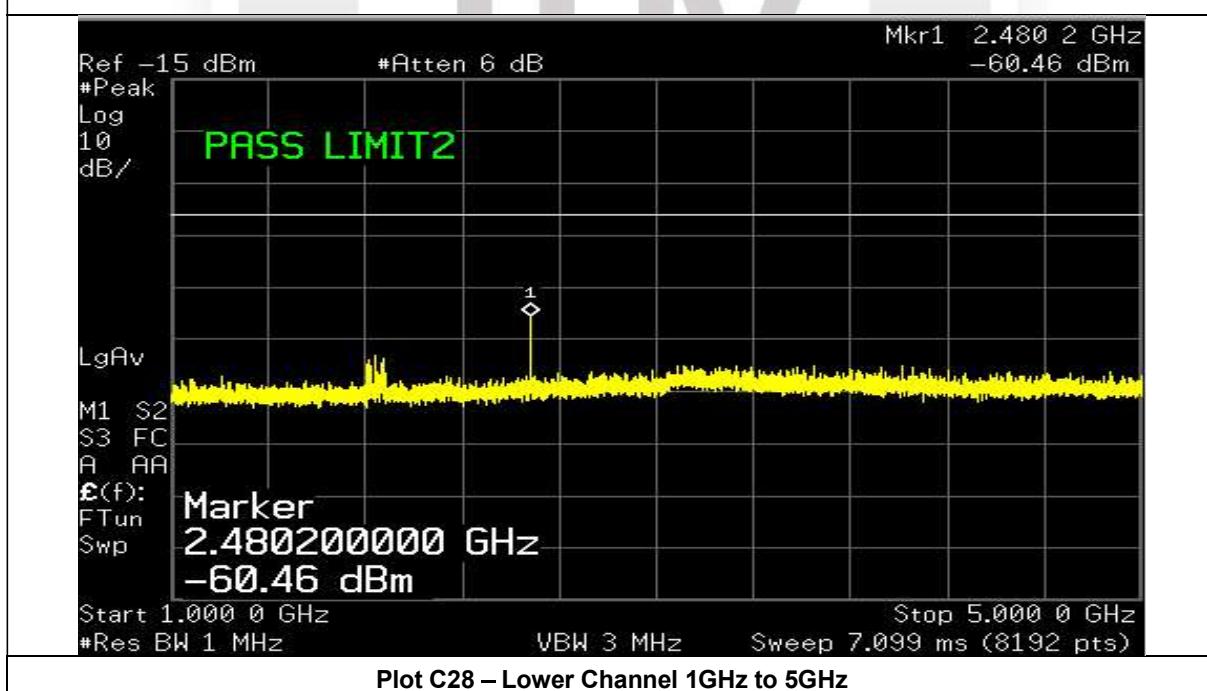
## RF Conducted Spurious Emissions (Restricted Bands) Plots – Peak



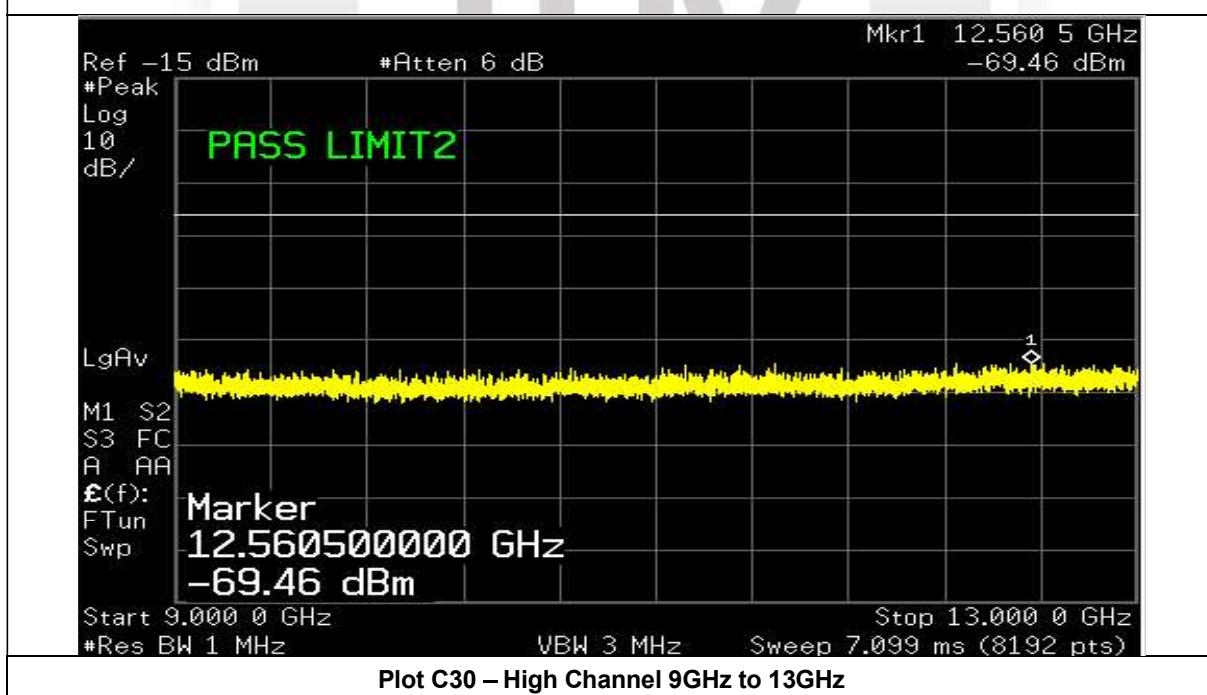
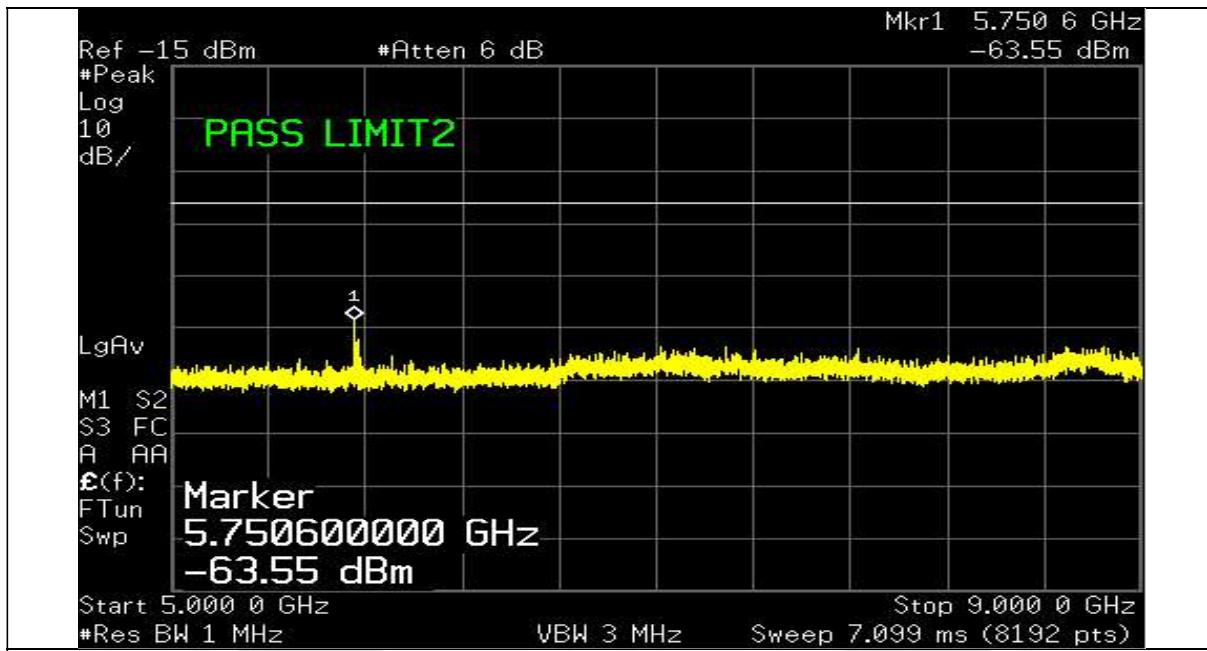


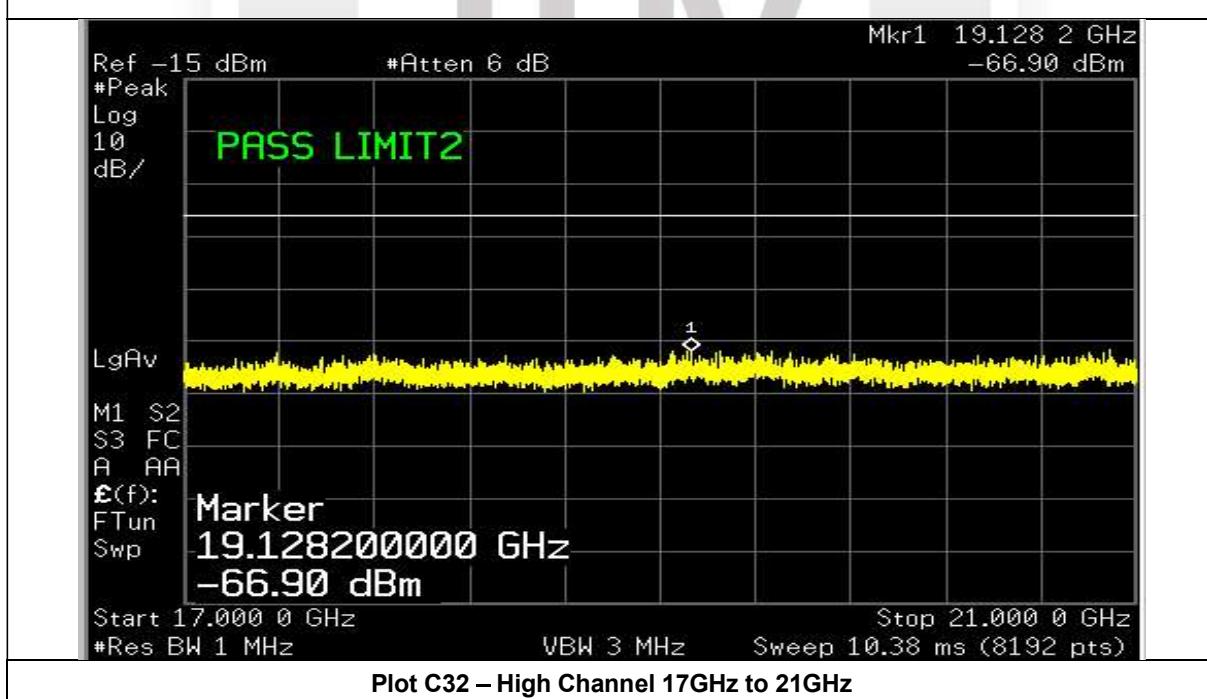
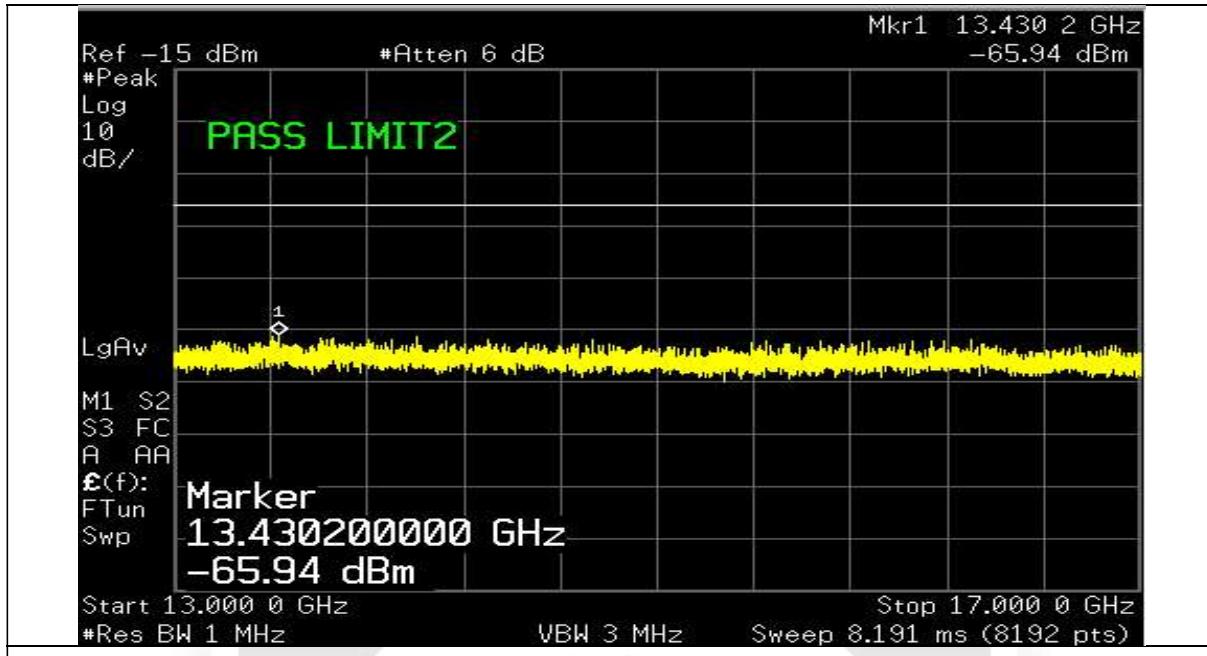


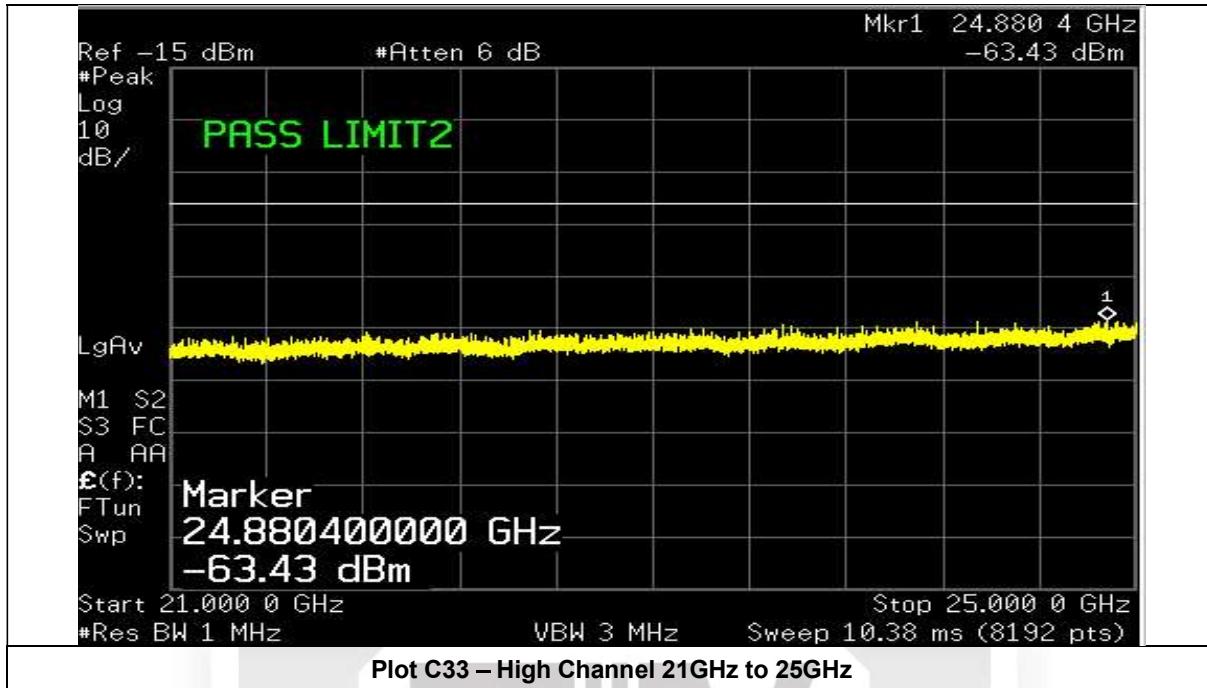
Plot C27 – Lower Channel 670MHz to 1GHz



Plot C28 – Lower Channel 1GHz to 5GHz









## 2.7 Band Edge Compliance (Conducted)

### 2.7.1 Test Limits

The EUT shows compliance to the requirements of this section, which states in any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator (EUT) is operating, the radio frequency power that is produced by the EUT shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of desired power.

### 2.7.2 Test Setup

- 2.7.2.1 The EUT and supporting equipment were set up as shown in the setup photo.
- 2.7.2.2 The power supply for the EUT was connected to a filtered mains.
- 2.7.2.3 The RF antenna connector was connected to the spectrum analyser via a low-loss coaxial cable.
- 2.7.2.4 The resolution bandwidth (RBW) and the video bandwidth (VBW) of the spectrum analyser were respectively set to 100kHz and 300kHz.
- 2.7.2.5 All other supporting equipment were powered separately from another filtered mains.

### 2.7.3 Test Method

- 2.7.3.1 The EUT was switched on and allowed to warm up to its normal operating condition. The EUT was then configured to operate in the test mode.
- 2.7.3.2 The frequency span of the spectrum analyser was set to wide enough to capture the lower band edge of the transmission band, 2.400GHz and any spurious emissions at the band edge (within 2MHz of the band edge).
- 2.7.3.3 The spectrum analyser was set to max hold to capture any spurious emissions within the span. The signal capturing was continuous until no further spurious emissions were detected.
- 2.7.3.4 The measurements were repeated if the EUT supports more than one modulation and data rate.
- 2.7.3.5 The measurements were repeated with the frequency span of the spectrum analyser was set to wide enough to capture the upper band edge frequency of the transmission band, 2.4835GHz and the any spurious emissions at the band-edge.



#### 2.7.4 Test Results

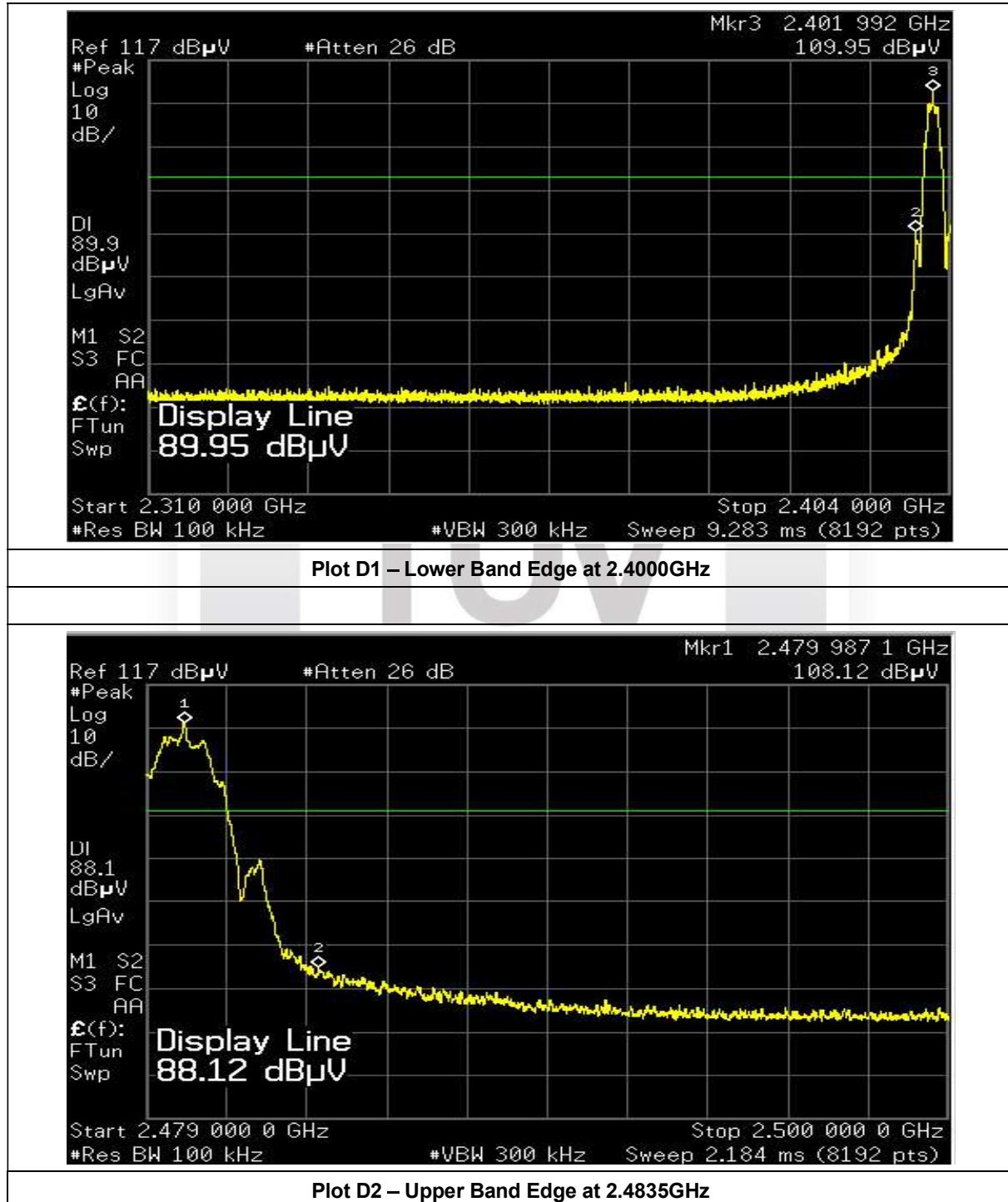
Test Input Power	3.5VDC	Temperature	24°C
Attached Plots	D1 – D2	Relative Humidity	60%
		Atmospheric Pressure	1030mbar
		Tested By	Lim Poh Huat
		Test Date	23 Jan 2025

No significant signal was found and they were below the specified limit.





### Band Edge Compliance (Conducted) Plots





## 2.8 Band Edge Compliance (Radiated)

### 2.8.1 Test Limits

The EUT shows compliance to the requirements of this section, which states in any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator (EUT) is operating, the radio frequency power that is produced by the EUT shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands shall comply to the radiated emission limits specified in 15.209.

### 2.8.2 Test Setup

- 2.8.2.1 The EUT and supporting equipment were set up as shown in the setup photo.
- 2.8.2.2 The power supply for the EUT was connected to a filtered mains.
- 2.8.2.3 The resolution bandwidth (RBW) and the video bandwidth (VBW) of the spectrum analyser were respectively set to 100kHz and 300kHz to show compliance of spurious at band edges are at least 20dB below the carriers. For restricted band spurious at band edges, peak and average measurement plots were taken using the following setting:
  - a. Peak Plot:  
RBW = 1MHz, VBW = 3RBW
  - b. Average Plot  
RBW = 1MHz, VBW = 10Hz
- 2.8.2.4 All other supporting equipment were powered separately from another filtered mains.

### 2.8.3 Test Method

- 2.8.3.1 The EUT was switched on and allowed to warm up to its normal operating condition. The EUT was then configured to operate in the test mode.
- 2.8.3.2 The frequency span of the spectrum analyser was set to wide enough to capture the lower band edge of the transmission band, 2.400GHz and any spurious emissions at the band edge.
- 2.8.3.3 The spectrum analyser was set to max hold to capture any spurious emissions within the span. The signal capturing was continuous until no further spurious emissions were detected.
- 2.8.3.4 The measurements were repeated if the EUT supports more than one modulation and data rate.
- 2.8.3.5 The measurements were repeated with the frequency span of the spectrum analyser was set to wide enough to capture the upper band edge frequency of the transmission band, 2.4835GHz and the any spurious emissions at the band-edge.



#### 2.8.4 Test Results

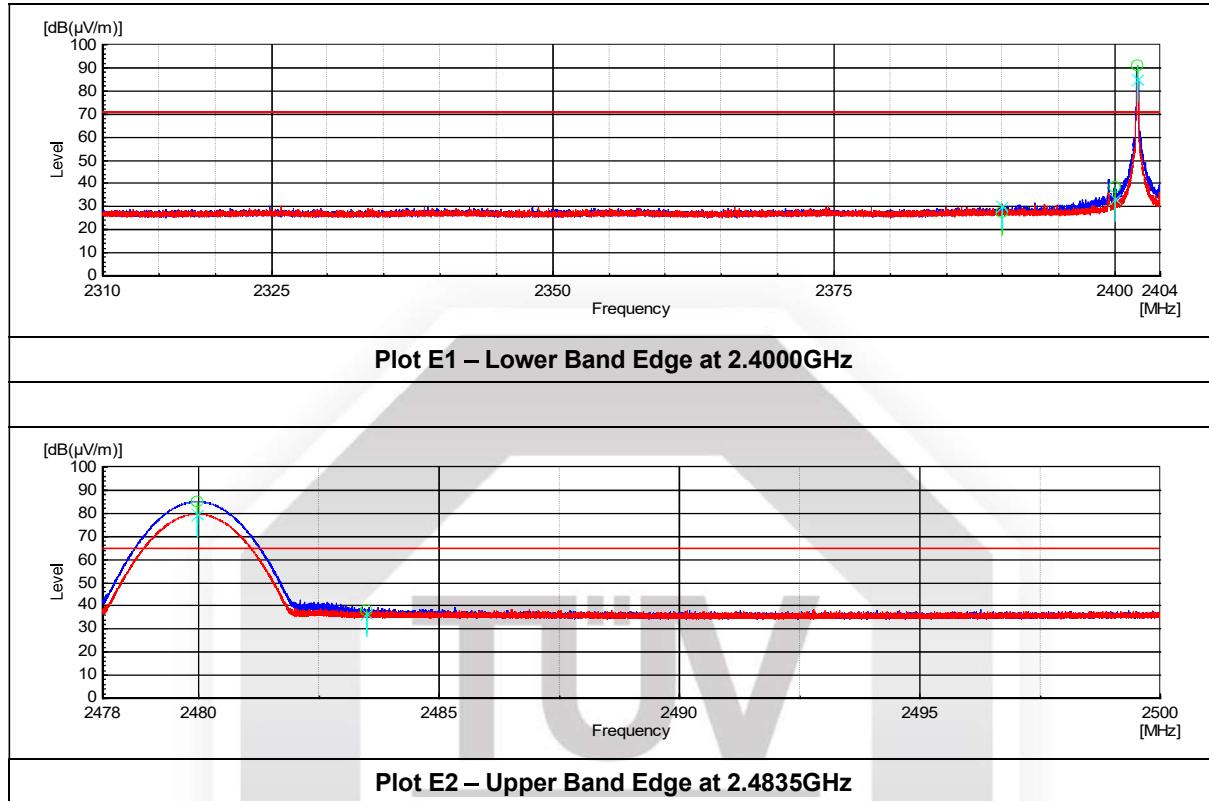
Test Input Power	Battery Operated	Temperature	24°C
Attached Plots	E1 – E6	Relative Humidity	60%
		Atmospheric Pressure	1030mbar
		Tested By	Dylan Lin
		Test Date	03 Oct 2024

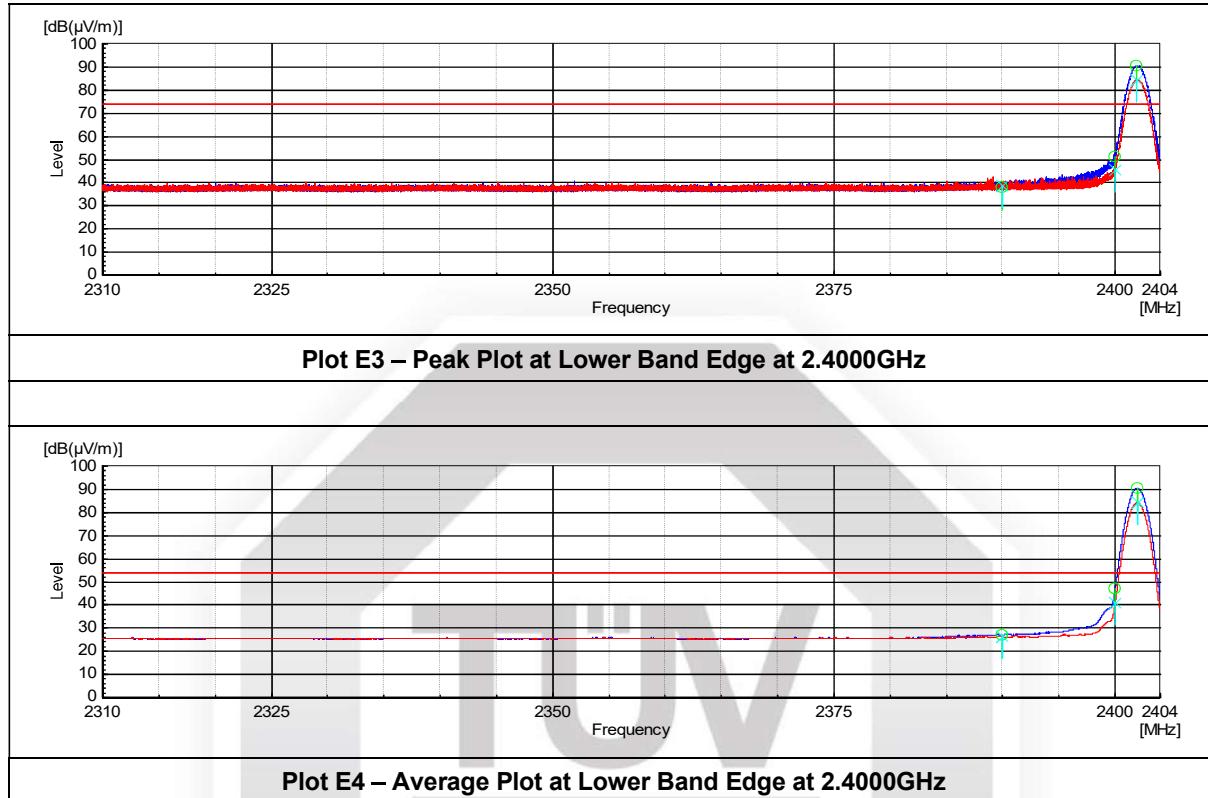
No significant signal was found and they were below the specified limit.

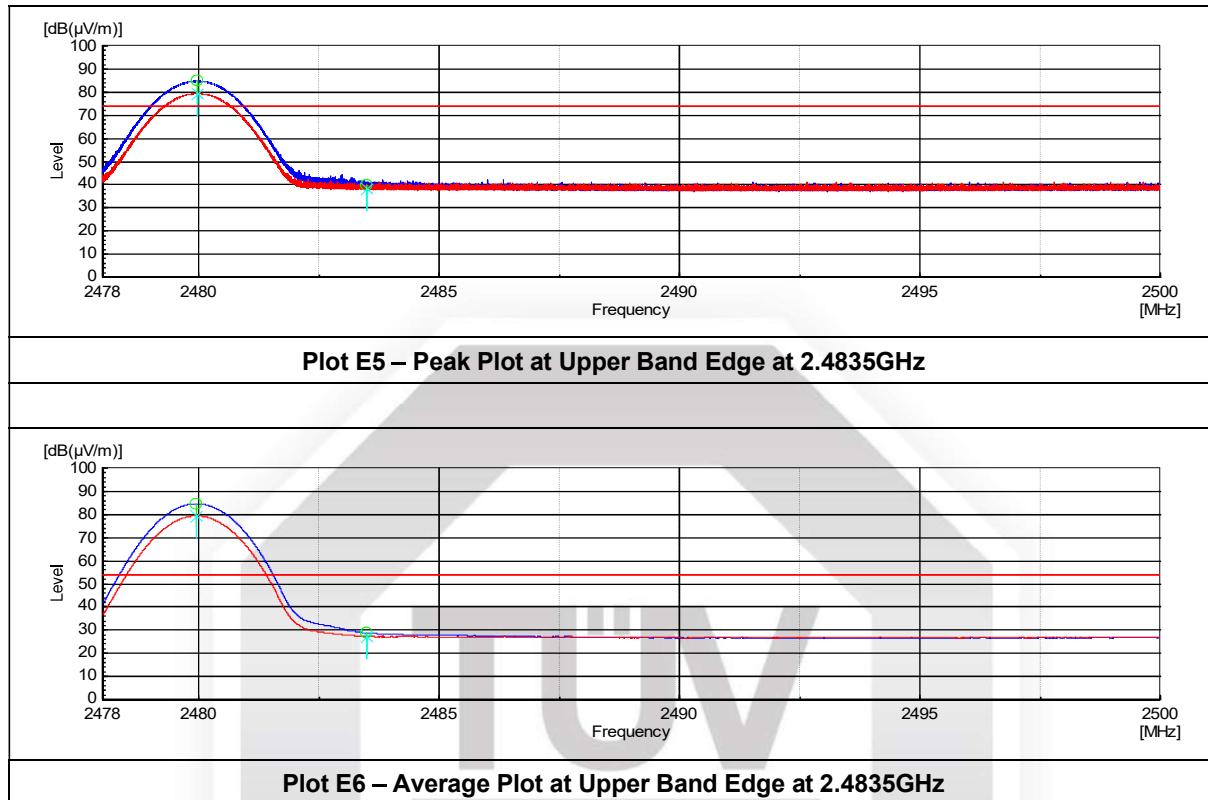




**Band Edge Compliance (Radiated) Plots (20dB Delta from Carrier at Band Edge)**



**Band Edge Compliance (Radiated) Plots (Restricted Band)**

**Band Edge Compliance (Radiated) Plots (Restricted Band)**



## 2.9 Peak Power Spectral Density

### 2.9.1 Test Limits

The EUT shows compliance to the requirements of this section, which states the peak power spectral density conducted from the intentional radiator (EUT) to the antenna shall not be greater than 8dBm (6.3mW) in any 3kHz band during any time interval of continuous transmission.

### 2.9.2 Test Setup

- 2.9.2.1 The EUT and supporting equipment were set up as shown in the setup photo.
- 2.9.2.2 The power supply for the EUT was connected to a filtered mains.
- 2.9.2.3 The RF antenna connector was connected to the spectrum via a low-loss coaxial cable.
- 2.9.2.4 The resolution bandwidth (RBW) and the video bandwidth (VBW) of the spectrum analyser were set to the following:
  - RBW = 3kHz
  - VBW = 3RBW
  - Span = 1.5 times the channel bandwidth (6dB Bandwidth)
  - Sweep time = auto couple
- 2.9.2.5 All other supporting equipment were powered separately from another filtered mains.

### 2.9.3 Test Method

- 2.9.3.1 The EUT was switched on and allowed to warm up to its normal operating condition. The EUT was then configured to operate in the test mode at lower channel.
- 2.9.3.2 The peak of the transmitting frequency was detected with the marker peak function of the spectrum analyser.
- 2.9.3.3 The peak power density of the transmitting frequency was plotted and recorded.
- 2.9.3.4 The measurements were repeated if the EUT supports more than one modulation and data rate.
- 2.9.3.5 The measurement was repeated with the transmitting frequency was set to middle channel and upper channels respectively.



### 2.9.5 Test Results

Test Input Power	3.5VDC	Temperature	24°C
Attached Plots	F1 – F3	Relative Humidity	60%
		Atmospheric Pressure	1030mbar
		Tested By	Lim Poh Huat
		Test Date	23 Jan 2025

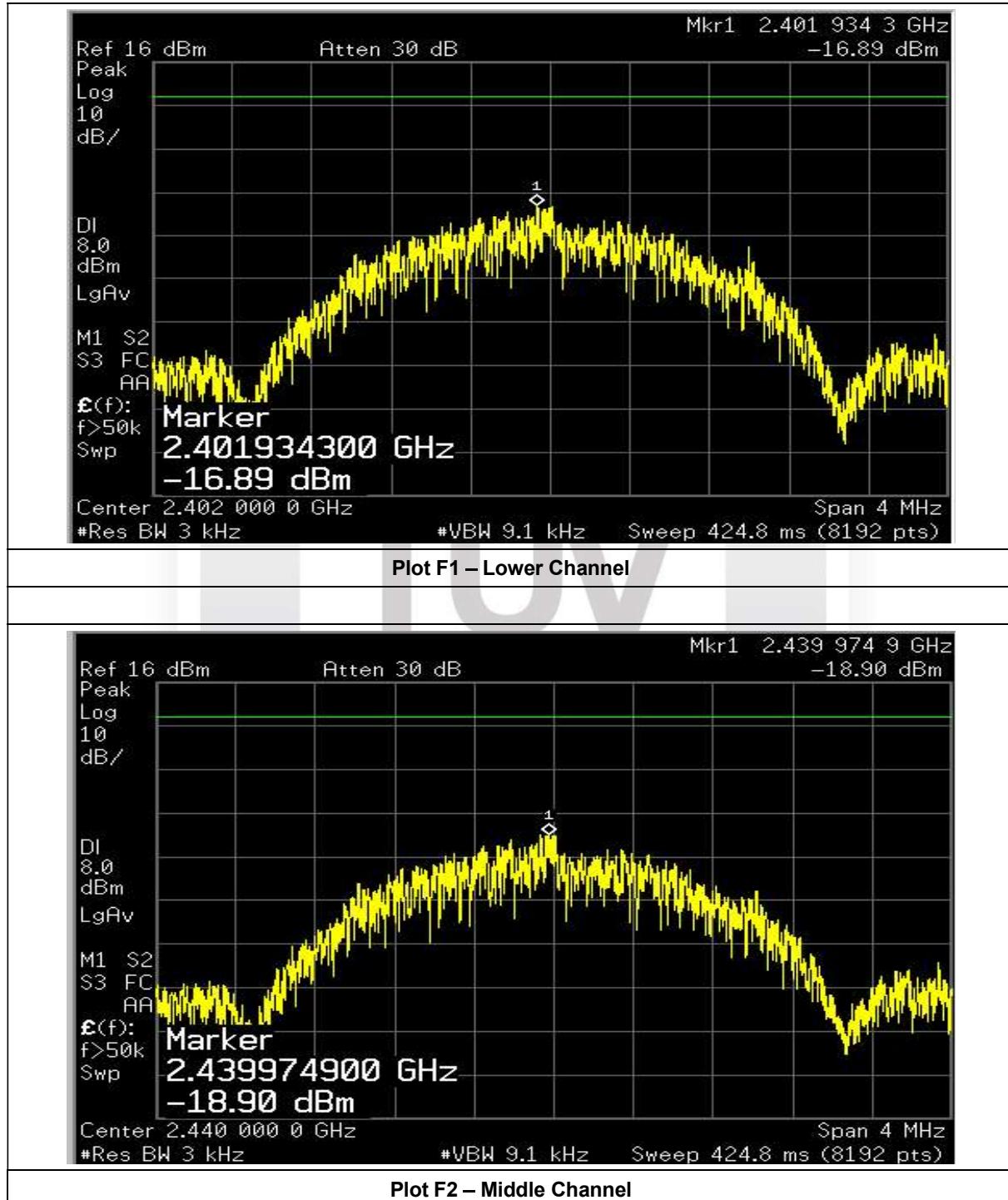
Channel	Channel Frequency (GHz)	Peak Power Spectral Density (mW) <small>*See Note 1</small>	Limit (mW)
Lower	2.402	0.0205	6.3
Middle	2.440	0.0129	6.3
Upper	2.480	0.0063	6.3

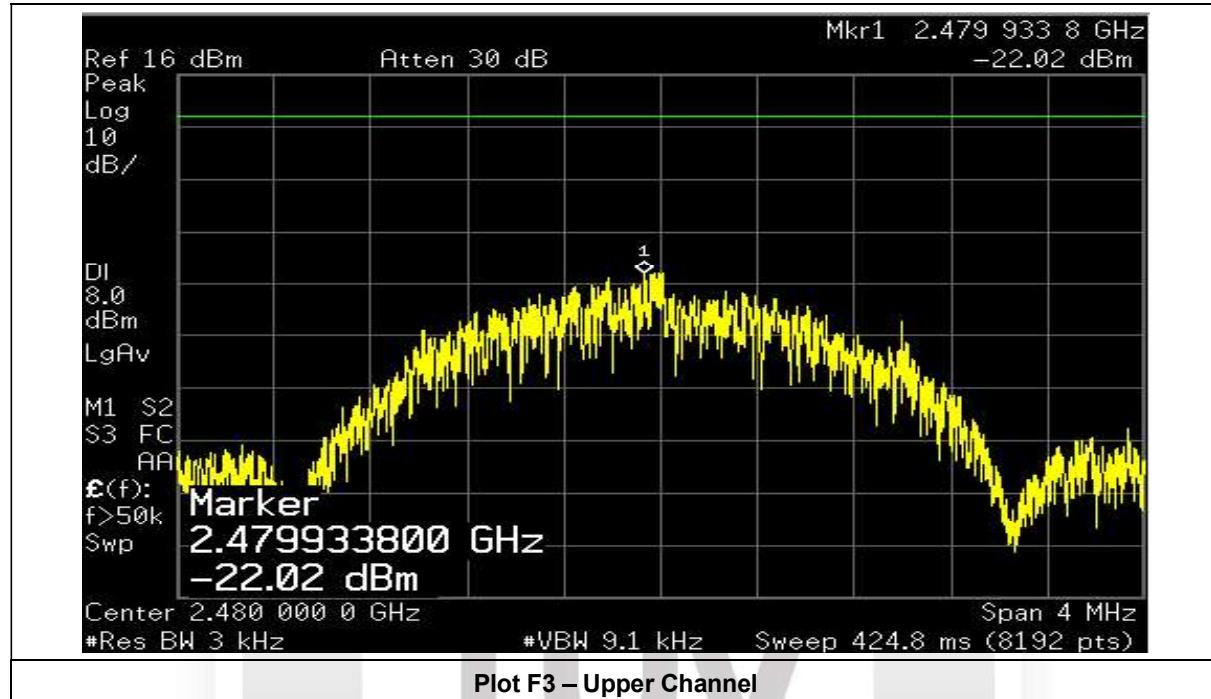
#### Notes

1.	Only the highest measured peak power spectral density was reported. Refer to plots for all measured peak power spectral density.
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### Peak Power Spectral Density Plots



**Peak Power Spectral Density Plots**



## 4 Test Equipment

Instrument	Model	S/No	Cal Due Date
Conducted Emissions			
R&S EMI Test Receiver (9kHz - 3GHz)	ESCI3	100477	22 Oct 2025
AFJ LISN	AFJ LT32C/10	32031929295	09 May 2025
Toyo EP5/CE Measurement Software	Ver 5.6.30	Not Applicable	Not Applicable
Radiated Emissions (Spurious Emissions Inclusive Restricted Bands Requirement)			
R&S EMI Test Receiver (1Hz - 44GHz)	ESW44	101661	26 Oct 2024
Com-Power Preamplifier (1MHz - 1GHz)	PAM-103	441096	04 Oct 2024
Schaffner Bilog Antenna (30MHz - 2GHz)	CBL6112B	2593	09 Nov 2024
Com-Power Preamplifier (1GHz - 18GHz)	PAM-118A	551039	31 May 2025
Electro-Metrics Horn Antenna (1GHz - 18GHz)	EM-6961	6553	11 Jun 2025
ETS Horn Antenna (18GHz – 40GHz)	3116	0004-2474	24 Oct 2024
HP Preamplifier (1GHz - 26.5GHz)	8449B	3008A02305	11 Sep 2025
Micro-tronics Bandstop Filter (2.4GHz)	BRM50701-02	007	13 Mar 2025
Toyo EP5/RE Measurement Software	Ver 6.0.112	Not Applicable	Not Applicable
Spectrum Bandwidth (6dB Bandwidth Measurement)			
Agilent Spectrum Analyzer	E4440A	MY45304764	08 Nov 2025
Maximum Peak Power			
Keysight EPM Series Power Meter	N1913A	MY57390057	14 Aug 2025
Agilent E-Series Avg Power Sensor	E9304A	MY41496818	19 Aug 2025
RF Conducted Spurious Emissions (Non-Restricted Bands)			
Agilent Spectrum Analyzer	E4440A	MY45304764	08 Nov 2025
Micro-tronics Bandstop Filter (2.4GHz)	BRM50701-02	007	13 Mar 2025
RF Conducted Spurious Emissions (Restricted Bands)			
Agilent Spectrum Analyzer	E4440A	MY45304764	08 Nov 2025



Instrument	Model	S/No	Cal Due Date
Band Edge Compliance (Conducted)			
Agilent Spectrum Analyzer	E4440A	MY45304764	08 Nov 2025
Band Edge Compliance (Radiated)			
R&S EMI Test Receiver (1Hz - 44GHz)	ESW44	101661	26 Oct 2024
Com-Power Preamplifier (1GHz - 18GHz)	PAM-118A	551039	31 May 2025
Electro-Metrics Horn Antenna (1GHz - 18GHz)	EM-6961	6553	11 Jun 2025
Peak Power Spectral Density			
Agilent Spectrum Analyzer	E4440A	MY45304764	08 Nov 2025

A large, semi-transparent watermark of the TÜV SÜD logo is centered on the page. The logo consists of the word "TÜV" in a large, bold, sans-serif font above a horizontal line, and the word "SÜD" in a slightly smaller font below it, all contained within a large octagonal shape.



## 5 Measurement Uncertainty

All measured results are traceable to the SI units. The uncertainty of the measurement is at a confidence level of approximately 95%, with a coverage factor of 2.

Test Name	Measurement Uncertainty
Conducted Emissions at Mains Terminals	1.1dB (9kHz to 30MHz)
Radiated Emissions	<p><u>10m Anechoic Chamber (Lab 4)</u></p> <p>2.3dB (9kHz to 30MHz @ 10m) 3.5dB (30MHz to 1GHz @ 10m) 4.0dB (30MHz to 1GHz @ 3m) 4.3dB (&gt;1GHz to 40GHz @ 3m)</p> <p><u>3m RF Chamber (Lab7)</u></p> <p>4.0dB (30MHz to 1GHz @ 3m) 4.3dB (&gt;1GHz to 40GHz @ 3m)</p>
Maximum Permissible Exposure	2.53% (0.01kHz to 400kHz) – H-field 1.3dB (0.3MHz to 18GHz) - E-field 2.3dB (1MHz to 40GHz) - E-field



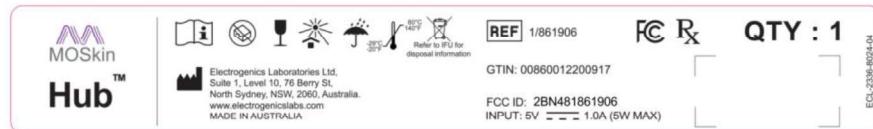


## 6 Annex A – FCC Label and Position

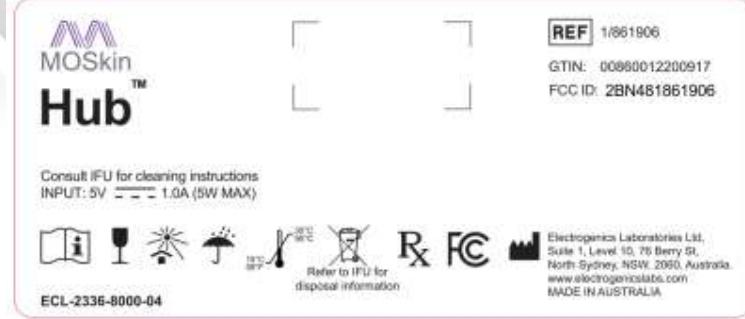
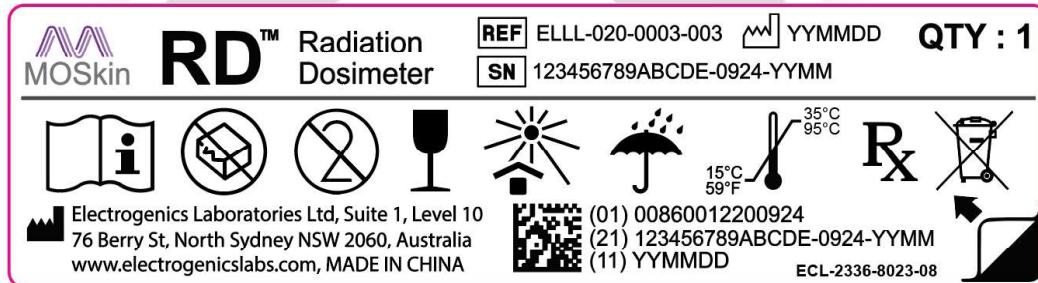
Labelling requirements per Section 2.925 & 15.19

The label shown will be permanently affixed at a conspicuous location on the device and be readily visible to the user at the time of purchase.

CAD ECL-2336-8024 DAT PACKAGING ARTWORK



CAD ECL-2336-8023 ARTWORK - BLISTER WRAPPER





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Effective 27 March 2024



End of the Test Report

