

## RECEIVER SPURIOUS EMISSIONS (CONDUCTED)

SPECIFICATION: RSS-119 5.11

GUIDE: TIA-102.CAAA-C 2.1.2

**MEASUREMENT PROCEDURE:**

1. Refer Annex A for Equipment set up diagram.
2. The frequency range examined was from 30 MHz to 3 times the highest tunable frequency.
3. Spurious emissions which were attenuated more than 20 dB below the limit were not recorded.

MEASUREMENT UNCERTAINTY:  $\pm 3.0\text{dB}$

217.5 MHz Receive (Receiver Input Port)		
Emission Frequency (MHz)	Level (nW)	Level (dBm)
~	~	~
No emissions were detected within 20 dB of Limit.		

219.5 MHz Receive (Receiver Input Port)		
Emission Frequency (MHz)	Level (nW)	Level (dBm)
~	~	~
No emissions were detected within 20 dB of Limit.		

220.975 MHz Receive (Receiver Input Port)		
Emission Frequency (MHz)	Level (nW)	Level (dBm)
~	~	~
No emissions were detected within 20 dB of Limit.		

221.975 MHz Receive (Receiver Input Port)		
Emission Frequency (MHz)	Level (nW)	Level (dBm)
~	~	~
No emissions were detected within 20 dB of Limit.		

LIMIT CLAUSE: RSS-Gen 6(b)

LIMIT	30 → 1000 MHz	2 nW	- 57 dBm
		> 1000 MHz	5 nW

TRANSMITTER STANDBY SPURIOUS EMISSIONS (CONDUCTED)

SPECIFICATION: RSS-119 5.11

GUIDE: TIA-102.CAAA-C 2.1.2

MEASUREMENT PROCEDURE:

4. Refer Annex A for Equipment set up diagram.
5. The frequency range examined was from 30 MHz to 3 times highest tunable frequency.
6. Spurious emissions which were attenuated more than 20 dB below the limit were not recorded.

217.5 MHz Transmitter Standby (Transmitter RF Output Port)		
Emission Frequency (MHz)	Level (nW)	Level (dBm)
~	~	~
No emissions were detected within 20 dB of Limit.		

219.5 MHz Transmitter Standby (Transmitter RF Output Port)		
Emission Frequency (MHz)	Level (nW)	Level (dBm)
~	~	~
No emissions were detected within 20 dB of Limit.		

220.975 MHz Transmitter Standby (Transmitter RF Output Port)		
Emission Frequency (MHz)	Level (nW)	Level (dBm)
~	~	~
No emissions were detected within 20 dB of Limit.		

221.975 MHz Transmitter Standby (Transmitter RF Output Port)		
Emission Frequency (MHz)	Level (nW)	Level (dBm)
~	~	~
No emissions were detected within 20 dB of Limit.		

LIMIT CLAUSE: RSS-Gen 6(b)

LIMIT	30 → 1000 MHz	2 nW	- 57 dBm
		> 1000 MHz	5 nW

## TEST EQUIPMENT LIST

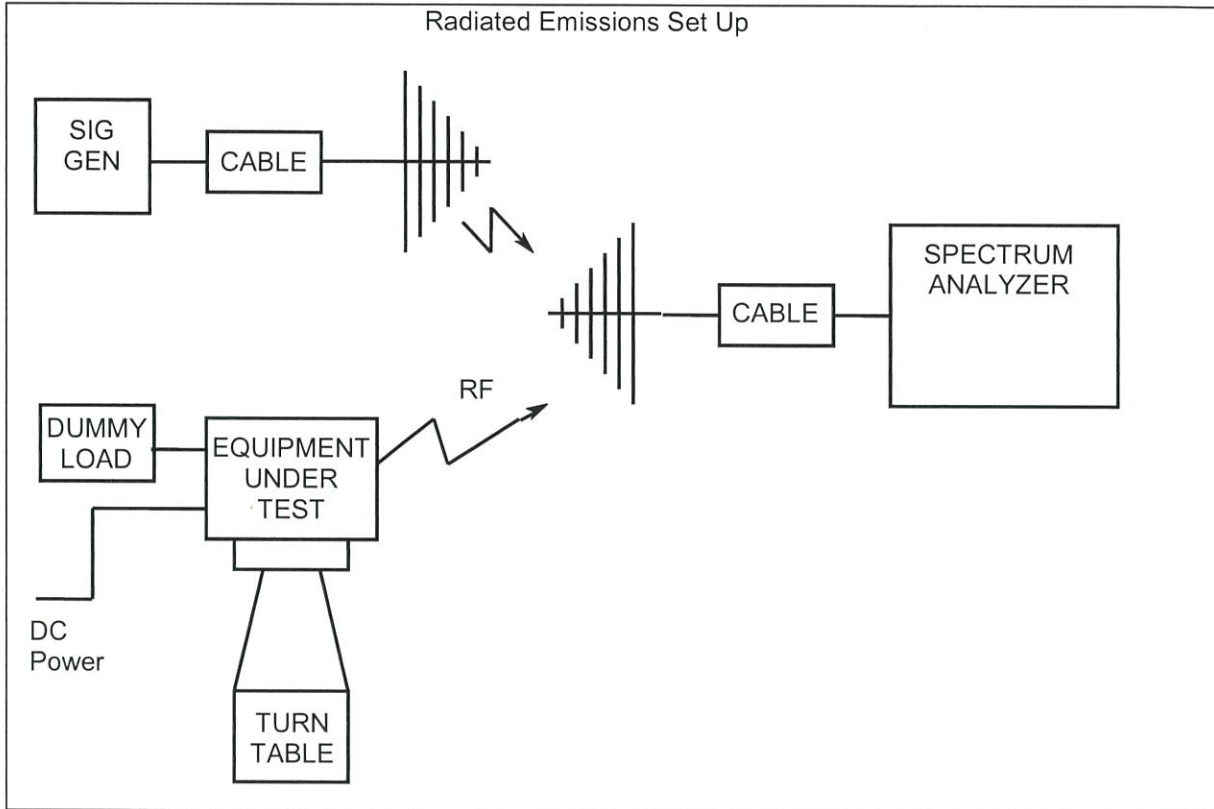
<b>Equipment Type</b>	<b>Information</b>	<b>Manufacturer</b>	<b>Model No</b>	<b>Serial No#</b>	<b>Tait ID</b>	<b>Cal Due</b>
AC Voltmeter		Tait		1		8-Sep-17
Antenna	Reference Dipoles	Emco	3121C DB1	9510-1164	E3559	14-Apr-19
Antenna	18GHz DRG	Emco	DRG3115	9512-4638	E3560	29-Apr-19
Antenna	Log Periodic	Schwarzbeck	VUSLP	9111-219	E4617	
Antenna	Reverb - 1-18GHz DRG	Schwarzbeck	BBHA 9120 D	9120D-885	E4857	
Antenna	Reverb - 1-18GHz DRG	Schwarzbeck	BBHA 9120 D	9120D-884	E4858	
Audio Analyser	TREVA1	Hewlett Packard	HP8903A	2437A04625	E4986	13-Oct-17
Audio Analyser	TREVA2	Hewlett Packard	HP8903B	2818A04275	E3710	11-Oct-17
Coax Cable	2m Black	Suhner	RG214HF/Nm/ Nm/2000	TeltestBlack2	E4623	1-Dec-17
Coax Cable	2m Black	Suhner	RG214HF/Nm/ Nm/2000	TeltestBlack3	E4624	28-Nov-17
Coax Cable	OATS Turntable Cable 1	Intelcom	RG214	OATS1	E4621	8-Dec-17
Coax Cable	OATS Tower Cable	Intelcom	RG214	OATS2	E4622	8-Dec-17
Coax Cable	2m Black	Suhner	RG214HF/Nm/ Nm/2000	TeltestBlack5	E4850	28-Nov-17
Coax Cable	2m Black	Suhner	RG214HF/Nm/ Nm/2000	TeltestBlack6	E4849	28-Nov-17
Coax Cable	Reverb - 4.5m Multiflex 141	TeltestBlue6	MF 141	TeltestBlue6	E4843	6-Dec-17
Coax Cable	Reverb - 2m Multiflex 141	TeltestBlue4	MF 141	TeltestBlue4	E4845	6-Dec-17
Coax Cable	Reverb - 1m Multiflex 141	TeltestBlue3	MF 141	TeltestBlue3	E4846	6-Dec-17
Coax Cable	Reverb - 1m Multiflex 141	TeltestBlue2	MF 141	TeltestBlue2	E4847	6-Dec-17
Coax Cable	OATS Turntable Cable 2	Intelcom	RG215	OATS3	E4995	2-Dec-17
Coax Cable	2m Black	Suhner	RG214HF/Nm/ Nm/2000	TeltestBlack7	E5004	6-Dec-17
Coax Cable	2m Black	Suhner	RG214HF/Nm/ Nm/2000	TeltestBlack8	E5005	6-Dec-17
Environ. Chamber	Upright	Contherm	5400 RHSLT.M	1416	E4051	1-Aug-17
Environ. Chamber	Chest	Contherm	Chest	E3397	E3397	12-Dec-17
Modulation Analyser	TREVA1	Hewlett Packard	HP8901B (Opt 002)	2441A00393	E3073	14-Oct-17
Modulation Analyser	TREVA2	Hewlett Packard	HP8901B (Opt 002)	3704A05837	E3786	11-Oct-17
Multimeter		Fluke	77	35069359	E3237	10-Oct-17
OATS	NSA	Tait				20-Apr-17
OATS	Antenna Tower	Electrometrics	EM-4720-2	112	E4447	
OATS	Controller	Electrometrics	EM-4700	119	E4445	
OATS	Turntable	Electrometrics	EM-4704A	105	E4446	
OATS	FCC Listing Registration			837095		8-May-19
Power Meter	TREVA1 Power Head for HP8901	Hewlett Packard	HP11722A	3111A05573	E7054	13-Oct-17
Power Meter	TREVA2 Power Head for HP8901	Hewlett Packard	HP11722A	2716A02037	1575	11-Oct-17
Power Supply	AC Variac	Yamabishi	S-260-5	TX-533	E1737	
RF Amplifier	+21.7 dB 1GHz	Tait	ZFL-1000LN	E3660	E3360	
RF Amplifier	Pre-amplifier	Agilent	87405C	MY47010688	E4941	15-Oct-17
RF Attenuator	10dB 50W	Weinschel	24-10-34	AZ0401	E3388	2-Dec-17

TELTEST Laboratories  
Tait Ltd  
Report Number 3812

<b>Equipment Type</b>	<b>Information</b>	<b>Manufacturer</b>	<b>Model No</b>	<b>Serial No#</b>	<b>Tait ID</b>	<b>Cal Due</b>
RF Attenuator	30dB 350W	Weinschel	67-30-33	BR0531	E4280	28-Nov-17
RF Attenuator	10dB 50W	Weinschel	24-10-34	BC3293	E4364	28-Nov-17
RF Attenuator	TREVA1 3dB	Weinschel	Model 1	BL9958	E4081	30-Nov-17
RF Attenuator	TREVA2 3dB	Weinschel	Model 1	BL9950	E4080	28-Nov-17
RF Attenuator	TREVA 1 20dB 150W	Weinschel	40-20-23	MF817	E4082	28-Nov-17
RF Attenuator	TREVA2 20dB 150W	Weinschel	40-20-33	CJ405	E3733	28-Nov-17
RF Chamber	S-LINE TEM CELL	Rohde & Schwarz	1089.9296.02	338232/003	E3636	
RF Chamber	Reverb - Stirrer controller for reverb chamber	Teseq	Stirrer Controller	29765.1	E4854	
RF Chamber	Reverb - 0.5 - 18GHz Reverberation Chamber	Teseq	RVC XS	29765	E4855	
RF Combiner	TREVA1	Minicircuits	ZFSC-4-1	-	E4083	
RF Combiner	TREVA2	Minicircuits	ZFSC-4-1	-	E4084	
RF Load	150W	Bird	8166	524	E3625	29-Nov-17
Signal Generator	Analog 4GHz	Agilent	E4422B	GB40050320	E3788	15-Oct-17
Signal Generator	TREVA1 Analog 3.2GHz	Agilent	E8663D	MY50420224	E4908	20-Oct-18
Signal Generator	TREVA2 Analog 3.3GHz	Rohde & Schwarz	SML03 1090.3000.13	100597	E4050	13-Oct-17
Signal Generator	Digital 4GHz	Agilent	E4437B	US39260389	E4764	19-Aug-17
Spectrum Analyser	26.5GHz	Agilent	PXA N9030A	MY49432161	E4907	18-Oct-18
Spectrum Analyser	13.2GHz	Hewlett Packard	HP8562E	3821A00779	E3715	13-Oct-17
Spectrum Analyser	13.2GHz	Agilent	E4445A	MY42510072	E4139	15-Oct-18
Temp & Humidity datalogger		Hobo	U21-011	10134275	E4980	4-Dec-17
Testware	Conducted Emissions		16/12/2015	-	-	
Testware	Frequency Vs Temperature		May 2016	-	-	
Testware	Radiated Emissions		September 2015	-	-	
Testware	Sideband Spectrum		August 2015	-	-	
Testware	TREVA		December 2015	-	-	

NOTE: Items without calibration dates are calibrated immediately before use, or set using calibrated instruments.

## ANNEX A – TEST SETUP DETAILS



All other testing is performed using the Teltest Radio **EVAL**uation system (TREVA), which is configured as shown below. The Spectrum Analyser is connected to the EUT via the attenuator network for Conducted Emissions testing, and Occupied Bandwidth.

