Equipment Under Test (EUT): MT603FG

SW version: OS0021 ver 1.00 (8/12/2014)

Test Date: 17.05.2016
Test Conditions:

- Ambient temperature 21.6 °C
- Relative humidity: 52 %
- Atmospheric pressure: 755 mm/Hg

TEST DESCRIPTION

The spurious and harmonic emissions measurements for the 406 MHz and 121.5 MHz signals should be performed with the EUT at the minimum, maximum, and ambient temperatures. These emissions should not exceed the limits given in Figures 2-1 and 2-5, respectively, when measured in a nominal 100 Hz resolution bandwidth.

Figure 10.1 – View of the test setup for the Spurious Emissions Test

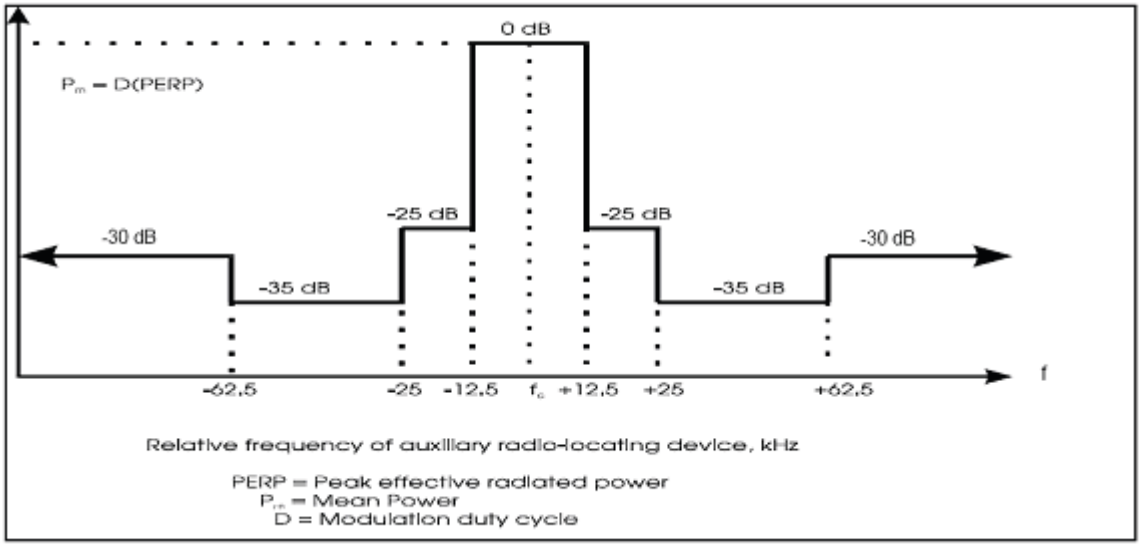

Figure 10.2 – Required Spurious Emissions for 121.5 MHz

Figure 11.1 – View of the EUT in the temperature test chamber upon completion of the Thermal Shock Test

Table 11.1 — Detailed measurement results of MT603FG upon completion of high-temperature thermal shock test

Test duration 0 h 20 m	Bursts received 25	BCH error 0	Self-Test 0		
406 MHz Transmitter Parameters	**Limits**		**Measured**		
	min	**max**	**min**	**current**	**max**
Frequency, kHz	406039.000	406041.000	406039.931	406039.931	406039.931
Power, dBm	35	39	36.28	36.28	36.34
Slope(E-9)	-1.00	1.00	–0.973	–0.456	–0.0954
Residual variations (E-9)	0.00	3.00	1.38	2.03	2.70
Short term variations (E-9)	0.00	2.00	0.175	0.215	0.246
121.5 MHz Transmitter Parameters					
Carrier Frequency, Hz	121648935				
Power, dBm	13.16				
Message					
Digital message	FFFE2F8C9E0000007FDFFA79ED3783E0F66C				

Table 11.2 — Detailed measurement results of MT603FG upon completion of low-temperature thermal shock test

Test duration 0 h 20 m	Bursts received 26	BCH error 0	Self-Test 0		
406 MHz Transmitter Parameters	**Limits**		**Measured**		
	min	**max**	**min**	**current**	**max**
Frequency, kHz	406039.000	406041.000	406039.864	406039.901	406039.998
Power, dBm	35	39	36.38	36.39	36.47
Slope(E-9)	-1.00	1.00	0.293	0.519	0.966
Residual variations (E-9)	0.00	3.00	0.276	1.51	2.95
Short term variations (E-9)	0.00	2.00	0.0386	0.0665	0.28
121.5 MHz Transmitter Parameters					
Carrier Frequency, Hz	121649665				
Power, dBm	12.63				
Message					
Digital message	FFFE2F8C9E0000007FDFFA79ED3783E0F66C				

TEST DETAILS

Figure 13.1 – General view of test equipment for low-duty cycle light test

Figure 13.2 – General view of graphic luxmeter

Figure 13.3 – General view of rotation and inclination device inside of the climatic chamber

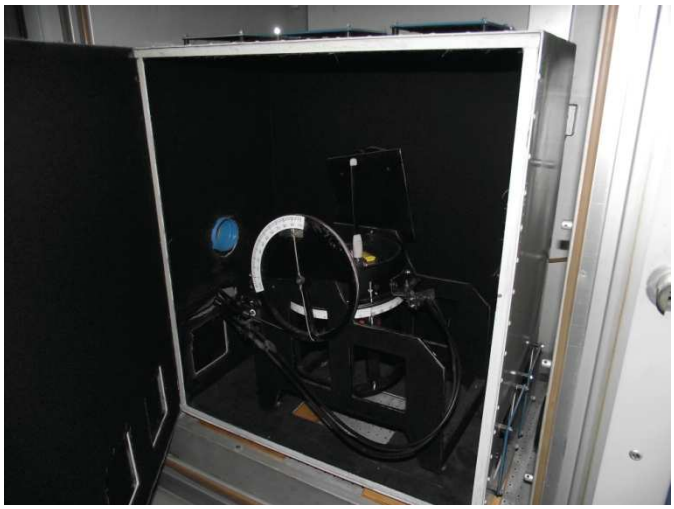

Figure 13.4 – Inside view of rotation and inclination device

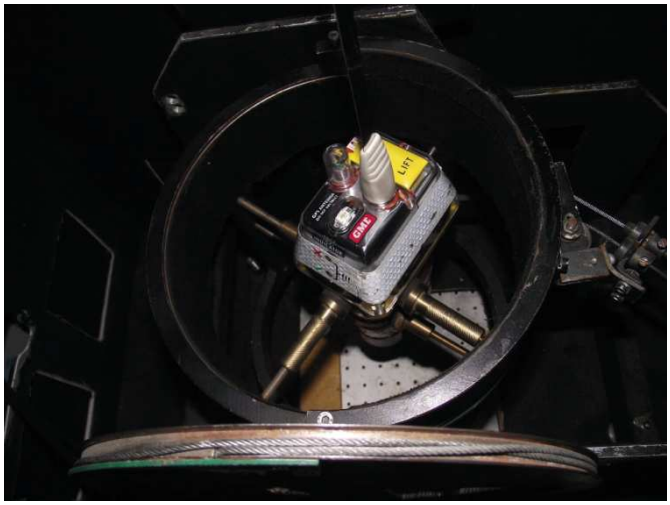

Figure 13.5 –The EUT in the climatic chamber

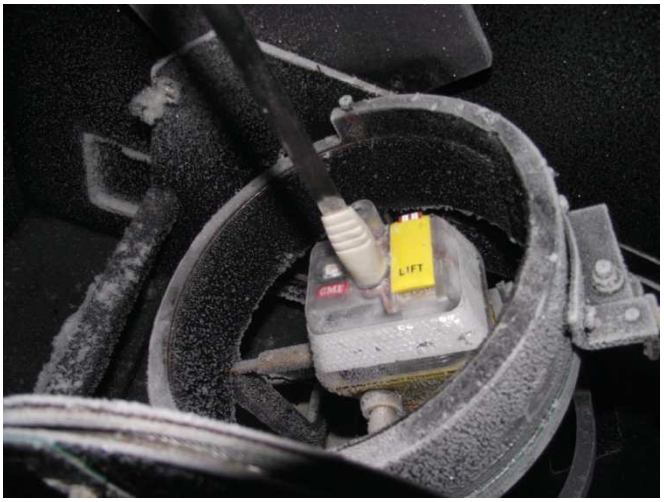

Figure 13.6 – View of the EUT upon completion of the low-duty cycle test at minimum temperature

Figure 17.7 - View of EUT (MT603G) upon completion of inadvertent activation test

Figure 17.8 - View of EUT (MT603FG) upon completion of inadvertent activation test

FINAL RESULTS OF THE MT603G AND MT603FG OF INADVERTENT ACTIVATION TEST (A16.0 RTCM 11000.2 Version 2.1):

PARAMETERS TO BE MEASURED DURING TESTS	RANGE OF SPECIFICATION	UNITS	TEST RESULTS	COMMENTS (PASS/FAULT)
• Release	EUT should not be released from bracket	√	√	PASS
• Activation	EUT should not be automatically activated	√	√	PASS

TEST EQUIPMENT

No	Name of test equipment	Type, model	ser. No	Calibration Due date
1	Beacon tester	BT-611	1005	11.2016
2	Installation of water washing	-	101174	04.2018
3	Stopwatch	SOSpr-2b-2	2388	10.2018

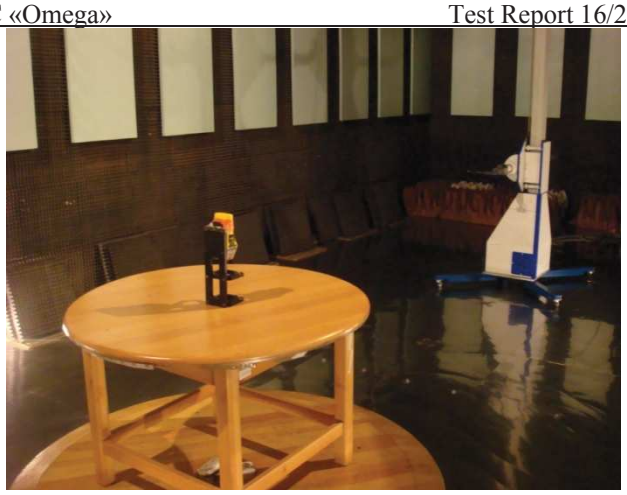

Figure 20.3 – View of the MT603G in a upside down position

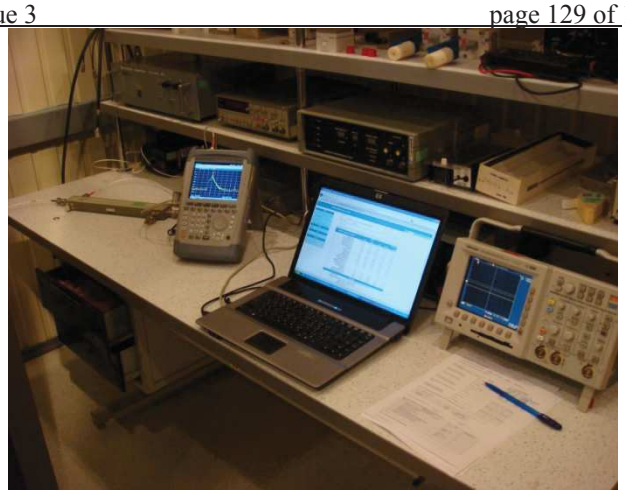

Figure 20.4 – View of the test site

Table 20.1 — Aliveness test results after EUT placed in vertical position

Test duration 0 h 1 m	Bursts received 2	BCH error 0	Self-Test 0		
406 MHz Transmitter Parameters	**Limits**		**Measured**		
	min	**max**	**min**	**current**	**max**
Frequency, kHz	406039.000	406041.000	0.000	406039.877	0.000
Power, dBm	35	39	0.00	36.58	0.00
Total burst duration, ms	514.80	525.20	0.00	519.316	0.00
121.5 MHz Transmitter Parameters					
Carrier Frequency, Hz	121498938				
Power, dBm	12.91				
Message					
Digital message	FFFE2F8C9E0000007FDFFA79ED3783E0F66C				

Table 20.2 — Aliveness test results after EUT placed in horizontal position

Test duration 0 h 1 m	Bursts received 2	BCH error 0	Self-Test 0		
406 MHz Transmitter Parameters	**Limits**		**Measured**		
	min	**max**	**min**	**current**	**max**
Frequency, kHz	406039.000	406041.000	0.000	406039.882	0.000
Power, dBm	35	39	0.00	36.56	0.00
Total burst duration, ms	514.80	525.20	0.00	519.294	0.00
121.5 MHz Transmitter Parameters					
Carrier Frequency, Hz	121498957				
Power, dBm	12.91				
Message					
Digital message	FFFE2F8C9E0000007FDFFA79ED3783E0F66C				

Table 20.3 — Aliveness test results after EUT placed in upside down position

Test duration 0 h 1 m	Bursts received 2	BCH error 0	Self-Test 0		
406 MHz Transmitter Parameters	**Limits**		**Measured**		
	min	**max**	**min**	**current**	**max**
Frequency, kHz	406039.000	406041.000	0.000	406039.879	0.000
Power, dBm	35	39	0.00	36.57	0.00
Total burst duration, ms	514.80	525.20	0.00	519.859	0.00
121.5 MHz Transmitter Parameters					
Carrier Frequency, Hz	121498941				
Power, dBm	12.91				
Message					
Digital message	FFFE2F8C9E0000007FDFFA79ED3783E0F66C				