

UMS SUMMARY TEST REPORT

PAGE 1 OF 7

ISSUED BY:
CRANAGE EMC TESTING LIMITED
STABLE COURT
OAKLEY
MARKET DRAYTON
SHROPSHIRE, TF9 4AG



Report No: **U0063R** Date of Issue: **25th January 2016**

This document summarises the results of testing to ascertain the appropriate Elexon Charge Codes for inclusion in BSCP520

Tested & Inspected for: **Ericsson Ltd (Region Western & Central Europe),
4 Midleton Gate,
Guildford business park,
Guildford,
Surrey.
GU2 8SG.**

Test Dates: **11th January 2016 - 14th January 2016**
Initial Receipt Date of Test Item: **11th January 2016**

Sample 1

Test Item Description: **Radio Base Station**
Tested on behalf of: **Ericsson Ltd (Region Western & Central Europe)**
Model Number: **RBS6501**
Serial Number: **D16N894526**

Sample 2

Test Item Description: **Remote Radio Unit**
Tested on behalf of: **Ericsson Ltd (Region Western & Central Europe)**
Model Number: **mRRU**
Serial Number: **D16N894526**

Sample 3

Test Item Description: **Radio Base Station**
Tested on behalf of: **Ericsson Ltd (Region Western & Central Europe)**
Model Number: **RBS6501**
Serial Number: **D16Q651870**

Sample 4

Test Item Description: **Remote Radio Unit**
Tested on behalf of: **Ericsson Ltd (Region Western & Central Europe)**
Model Number: **mRRU**
Serial Number: **D16Q629425**

Sample 5

Test Item Description: **Radio Base Station**
Tested on behalf of: **Ericsson Ltd (Region Western & Central Europe)**
Model Number: **RBS6501**
Serial Number: **D16Q552566**

UMS SUMMARY TEST REPORT

PAGE 2 OF 7

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Sample 6

Test Item Description: **Remote Radio Unit**
Tested on behalf of: **Ericsson Ltd (Region Western & Central Europe)**
Model Number: **mRRU**
Serial Number: **D16Q629429**

Sample 7

Test Item Description: **Radio Base Station**
Tested on behalf of: **Ericsson Ltd (Region Western & Central Europe)**
Model Number: **RBS6501**
Serial Number: **D16K910801**

Sample 8

Test Item Description: **Remote Radio Unit**
Tested on behalf of: **Ericsson Ltd (Region Western & Central Europe)**
Model Number: **mRRU**
Serial Number: **C827664089**

Sample 9*

Test Item Description: **Radio Base Station**
Tested on behalf of: **Ericsson Ltd (Region Western & Central Europe)**
Model Number: **RBS6501**
Serial Number: **D16K956771**

* Note that this sample proved to be faulty (unstable connectivity) when directly tested. This had no effect when sample 10 was directly tested in conjunction with sample 9.

Sample 10

Test Item Description: **Remote Radio Unit**
Tested on behalf of: **Ericsson Ltd (Region Western & Central Europe)**
Model Number: **mRRU**
Serial Number: **C827664110**

Sample 11

Test Item Description: **Radio Base Station**
Tested on behalf of: **Ericsson Ltd (Region Western & Central Europe)**
Model Number: **RBS6501**
Serial Number: **D16K956700**

Approved Signatories: M. Richens - Technical Director


APPROVED SIGNATORY

Verification Signatories: K. Richens – Managing Director


VERIFICATION SIGNATORY

UMS SUMMARY TEST REPORT

PAGE 3 OF 7

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Mode of Operation 1: 210 – 250V AC 50Hz mains supplied to Radio Base Station. The Radio Base Station was connected to a Remote Radio Unit via an optical control cable, simulating sector 1 and sector 2 of a 3G network. The two Radio Base Station carriers were active and set to their maximum transmit power of 5 Watts each, transmitting at 2100 MHz. The Radio Base Station was also connected to a peripheral Radio Network Controller via optical control cable, the function of which was to activate the Base Station Carriers only. The Radio base station functionality was monitored via Ethernet connected to a laptop.

Mode of Operation 2: 210 – 250V AC 50Hz supplied to Remote Radio Unit. The Remote Radio Unit was connected to a Radio Base Station via an optical control cable, simulating sector 1 and sector 2 of a 3G network. The two Remote Radio Unit carriers were active and set to their maximum transmit power of 5 Watts each, transmitting at 2100 MHz. The Remote Radio Unit functionality was monitored via Ethernet connected to a laptop.

Test Condition: - Stabilisation period of 15 minutes given prior to measurements at 230V 50Hz. Measurements were subsequently taken after 15 minutes at each voltage level. This was found to be an adequate time window for the purpose of the test measurements.

All results are rounded to 2 decimal places.

11/01/2016

Temperature: 18°C

Humidity: 51% rh

12/01/2016

Temperature: 19°C

Humidity: 45% rh

14/01/2016

Temperature: 16°C

Humidity: 44% rh

UMS SUMMARY TEST REPORT

PAGE 4 OF 7

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Mode 1

Watts					
Voltage (Vrms)	Sample No.				
	Sample 1 (linked to sample 2)	Sample 3 (linked to sample 4)	Sample 5 (linked to sample 6)	Sample 7 (linked to sample 8)	Sample 11 (linked to sample 10)
210	218.35	249.32	217.62	220.95	210.16
220	227.57	248.86	227.68	230.69	217.29
230	231.08	245.23	234.96	229.63	224.39
240	228.73	244.1	232.79	227.69	220.22
250	227.77	243.92	231.21	226.96	222.57
VA					
Voltage (Vrms)	Sample No.				
	Sample 1 (linked to sample 2)	Sample 3 (linked to sample 4)	Sample 5 (linked to sample 6)	Sample 7 (linked to sample 8)	Sample 11 (linked to sample 10)
210	226.06	256.69	226.01	229.12	218.69
220	236.24	257.48	237.12	239.85	226.86
230	241.17	255.27	245.65	240.1	235.14
240	240.65	255.79	245.09	239.82	232.86
250	241.48	257.47	245.41	240.89	236.98

UMS SUMMARY TEST REPORT

PAGE 5 OF 7

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Mode 2

Watts					
Voltage (Vrms)	Sample No.				
	Sample 2 (linked to sample 1)	Sample 4 (linked to sample 3)	Sample 6 (linked to sample 5)	Sample 8 (linked to sample 7)	Sample 10 (linked to sample 9)
210	104.84	107.41	112.19	104.23	106.26
220	104.82	107.87	112.05	104.93	106.27
230	104.89	108.16	112.06	105.45	106.34
240	104.81	108.4	111.84	105.66	106.3
250	104.85	108.64	111.8	105.95	106.32
VA					
Voltage (Vrms)	Sample No.				
	Sample 2 (linked to sample 1)	Sample 4 (linked to sample 3)	Sample 6 (linked to sample 5)	Sample 8 (linked to sample 7)	Sample 10 (linked to sample 9)
210	112.87	115.55	120.21	113.19	114.96
220	114.26	117.44	121.26	115.29	116.62
230	115.63	119.22	122.76	117.32	118.45
240	117.2	121.08	124.27	119.18	120.25
250	119.16	123.1	126.02	121.67	123.02

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PAGE 6 OF 7

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Test Equipment

Asset Number	Description	Calibration Date	Calibration Due
AN288	Power Source	-	-
AN1162	Power Analyser	27/07/2015	27/07/2016
AN434	Timer	-	-

Peripheral Equipment

Description	Model	Serial Number
Radio network controller	EGEM2 Sub-rack	TU8N000597

Radio Base Station monitoring software: CXP9023291/1_R3FA10.
Radio Network Controller monitoring software: CXP9021776/2_R4JA15.

Photographs of the Test Item



Above: Radio Base Station under test.

UMS SUMMARY TEST REPORT

PAGE 7 OF 7

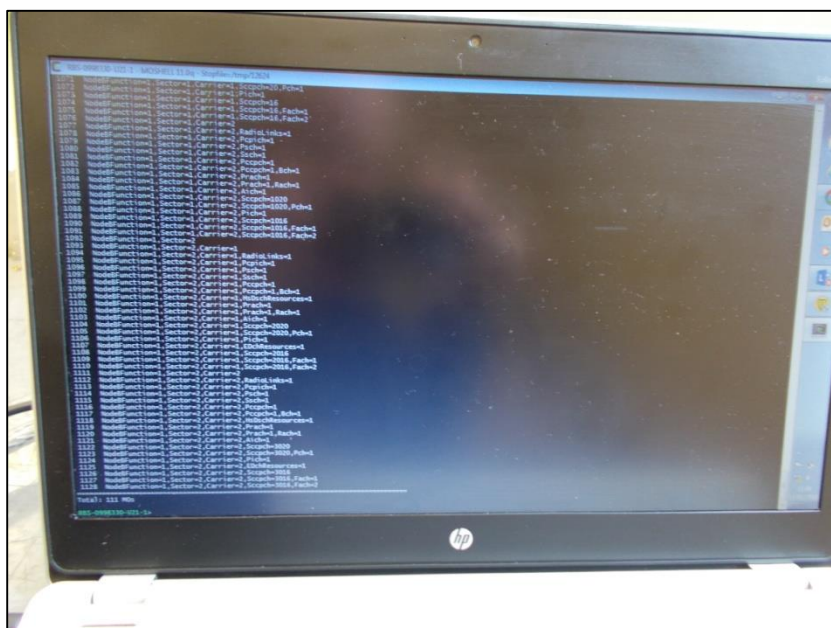
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Above: Remote Radio Unit under test.



Above: Monitoring software.

Measurement Uncertainty

The 95 % confidence measurement uncertainty for the AC Power (Analyser) is 0.17%.