

-----Original Message-----

From: David Schramm ES-Atl
Sent: Monday, September 22, 2003 5:59 PM
To: Roland Gubisch ES-Box
Cc: Danielle Fontaine ES-Box
Subject: FW: SX5 US Dual Band(FCC ID: MTFGS MUSDUAL)

Roland,

The client has answered Administrative items 1 and 2 below. I believe all that is left is Administrative item 3, which I will send shortly.

Best regards,
David Schramm

-----Original Message-----

From: John Papson
To: David Schramm ES-Atl
Cc: Matthew McKiernan
Sent: 9/22/2003 9:12 AM
Subject: RE: SX5 US Dual Band(FCC ID: MTFGS MUSDUAL)

David:

RE: Questions concerning Telular's 850/1900 GSM radio:

> 1) Please provide information on DC voltage/current into final
RF
stage,
> per 2.1033(c) (8).

3.6 volts at 2000 milliamperes maximum for 824 to 849 MHz power amp;
3.6 volts at 1500 milliamperes maximum for 1850 to 1919 MHz power
amplifier.

> 2) Please provide tune-up information, per 2.1033(c) (9).

There are no mechanical tuning adjustments within the radio.
Automated factory calibration program adjusts internal frequency
standard,
receive AGC, and transmit power levels, which are stored in non volatile
RAM.

John C Papson, Principal RF Engineer
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From: David Schramm ES-Atl
Sent: Thursday, September 11, 2003 4:58 PM
To: Roland Gubisch ES-Box

Cc: Danielle Fontaine ES-Box
Subject: RE: Certification Review of Telular FCC ID: MTFGSMUSDUAL
Roland,

Please see my responses below.

ADMINISTRATIVE

- 1) Request sent to customer.
- 2) Request sent to customer.
- 3) Request sent to customer.
- 4) Attached.
- 5) Request sent to Brian Tucker. Photographs and testing were performed.

TECHNICAL

- 1) A base station simulator was used and was set to command the EUT to its maximum power level.
- 2) Table 3-1 contained a typo. 936.4 MHz is incorrect and should be 836.4 MHz.
- 3) a) The RBW was set to 3 kHz, which is greater than 1% of the emission bandwidth (i.e. $260 \text{ kHz} \times 0.01 = 2.6 \text{ kHz}$).
 - b) For Part 24E, the RBW = VBW = 1 MHz.
 - c) Request sent to customer.
- 4) a) 1.673 GHz was the intended frequency, not 1673 GHz.

-----Original Message-----

From: Roland Gubisch ES-Box
Sent: Friday, September 05, 2003 2:15 PM
To: David Schramm ES-Atl
Cc: Brian Tucker ES-Lex; Danielle Fontaine ES-Box
Subject: Certification Review of Telular FCC ID: MTFGSMUSDUAL

David:

Review of this application is complete, and the following points are noted:

ADMINISTRATIVE

- 1) Information on DC voltage/current into final RF stage cannot be found, per 2.1033(c)(8); please indicate location or provide.
- 2) Tune-up information cannot be found, per 2.1033(c)(9); please indicate location or provide.
- 3) The parts list provided in the application is a top-level assembly list, and contains no information about the components in the RF circuitry; please provide.
- 4) External photos of the SX5E model cannot be found; please indicate location or provide.
- 5) Setup photos of the SX5E model cannot be found; please provide, or submit a justification why testing was not done.

TECHNICAL

- 1) Conducted and radiated output power, test report sections 3 and 4: please describe the method used to set maximum power. Was a base station simulator used, or an internal program?
- 2) Table 3-1, conducted output power; the frequency 936.4 MHz appears as a typo; please confirm it should be 836.4 MHz.
- 3) Out of band emissions, report section 6:

a) please indicate the specific RBW values used for measurements within 1 MHz from the outside of the block edge; they are not shown in the report.

b) the RBW value of 100 kHz listed in 6.1 for emissions beyond 1 MHz from the block edge is only valid for Part 22H. What RBW value was used for 22E data?

5) Table 7-1, spurious radiated emissions

a) the frequency 1673 MHz appears as an apparent typo; please confirm that 1.673 MHz was intended.

Once these issues are resolved, the application can proceed to certification.

Thank you,
Roland Gubisch
Intertek TCB