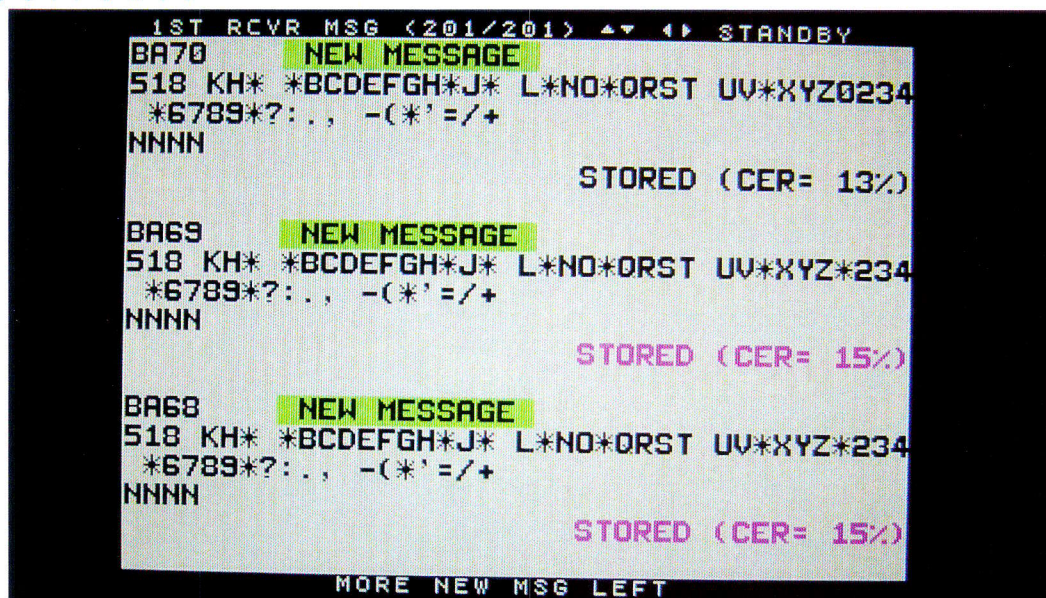




COMPLIANT

13.5 UNSATISFACTORY RECEPTION

(See 6.3.6)

This test is required for all EUTs and can be conducted using any combination of the declared receive frequencies as the source of test messages.

13.5.1 Method of measurement

An STS is applied to the EUT. The test signal shall be so composed that the message identification is correct. The signal shall contain a character error rate of >33 %. The STS shall be repeated 35 times with unique message identification for each transmission.

13.5.2 Results required

The EUT shall not store messages or message identifications. An EUT with an integral printer shall not print any of the test messages.

COMPLIANT

13.6 POWER-OFF CHECK

(See 6.3.8)

This test is required for all EUTs that do not contain an integral printer and can be conducted using any combination of the declared receive frequencies as the source of test messages.

13.6.1 Method of measurement

The STF shall be loaded into the EUT. The power shall be removed for a period of 6 h. Power shall then be applied and the contents of the non-volatile message storage shall then be checked. The previously applied settings for transmitter coverage area (B1) and message type (B2) for each receiver and any other settings that the manufacturer has declared are non-volatile shall also be checked.

13.6.2 Results required

After a 6 h power-down cycle the EUT's non-volatile message storage shall contain the set of messages defined in the STF. All settings that the manufacturer has declared as non-volatile shall be unchanged from before the power-off cycle.

COMPLIANT

13.7 BROWN-OUT TEST

(See 6.9)

This test is required for all EUTs.

This test simulates the situation where the nominal supply voltage drops to below acceptable levels and then recovers over a medium time period. This is consistent with the performance of a flat or unhealthy battery when an engine is started. The unit shall not enter into any undefined or undesirable state.

13.7.1 Method of measurement

Operate the EUT at the nominal supply voltage as indicated by the manufacturer.

Gradually reduce the supply voltage to 40 % of the nominal supply voltage over a time period of 30 s.

Gradually increase the supply voltage back to 80 % of the nominal supply voltage over a time period of 30 s.

The contents of the EUT's message and/or message identification memory, settings for transmitter coverage area (B1) and message type (B2) for each receiver and any user settings declared non-volatile by the manufacturer shall be inspected prior to and after a power supply brown-out condition.

13.7.2 Results required

After a power supply brown-out the EUT's non-volatile message storage shall contain the set of messages defined in the STF. All settings that the manufacturer has declared as non-volatile shall be unchanged from before the brown-out condition.

COMPLIANT

13.8 UTC HANDLING CHECK

(See 6.10)

This test is required for all EUTs that do not contain an integral printer and but only when the manufacturer has declared that the EUT can use a source of time (for example UTC from an external source or an internal RTC). The test can be conducted using any combination of the declared receive frequencies as the source of test messages.

13.8.1 Method of measurement

An external source of UTC shall be applied as defined by the manufacturer. The STF shall be loaded into the EUT. The power shall then be removed for a period of 6 h. Power shall then be applied for 53 h and the contents of the non-volatile message storage shall then be checked.

13.8.2 Results required

After a 6 h power-down cycle the EUT's non-volatile message storage shall contain the set of messages defined in the STF.

NOT APPLICABLE

14 MISCELLANEOUS TESTS

14.1 SPURIOUS EMISSIONS

Spurious emissions are any radio-frequency emissions generated in the EUT and radiated by conduction from the antenna.

14.1.1 Method of measurement

The EUT shall be connected to the artificial antenna specified in 7.8 and the r.m.s. value of any component of the spurious emissions shall be measured. The measurements shall cover the frequency range from 9 kHz to 2 GHz.

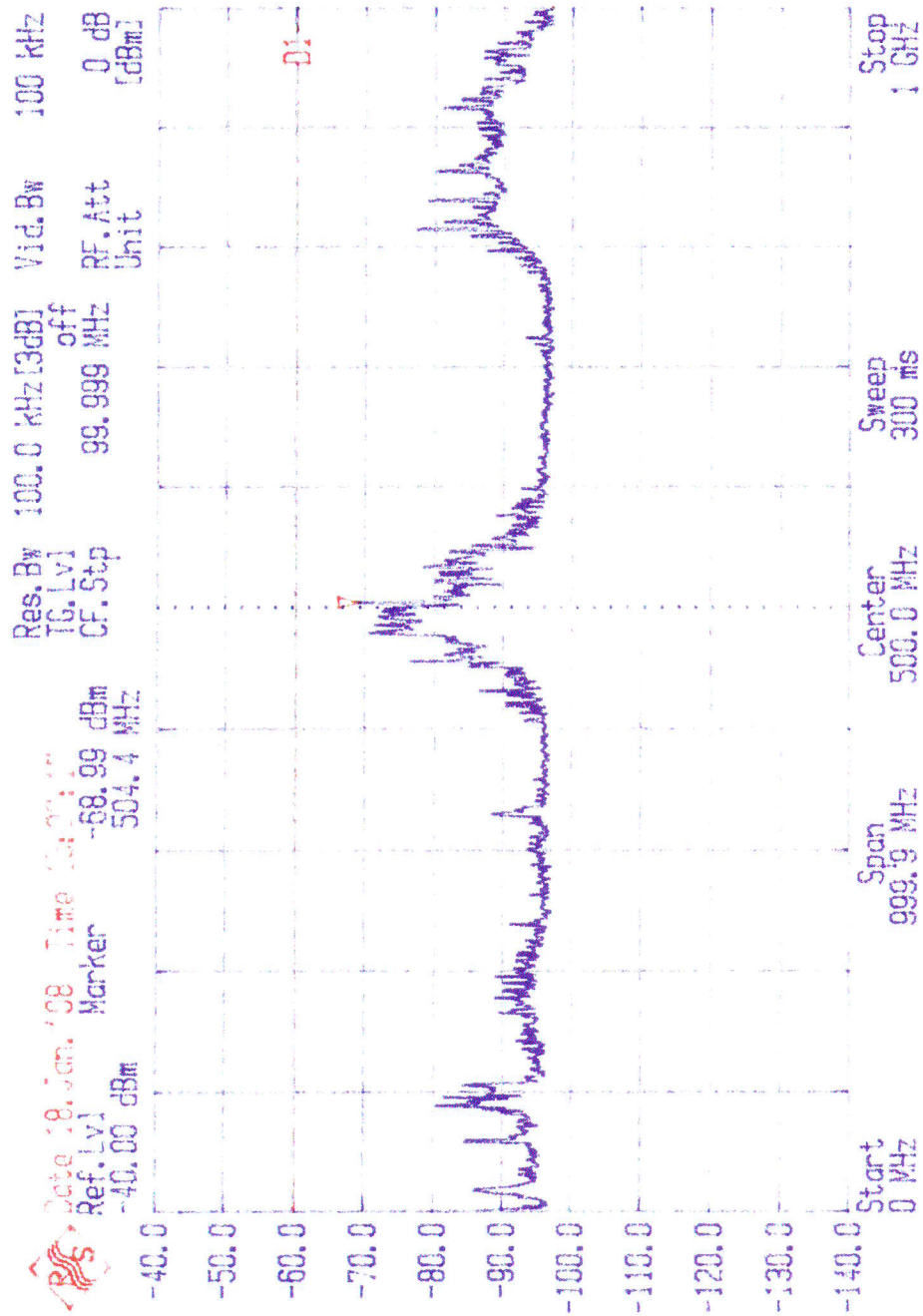
14.1.2 Results required

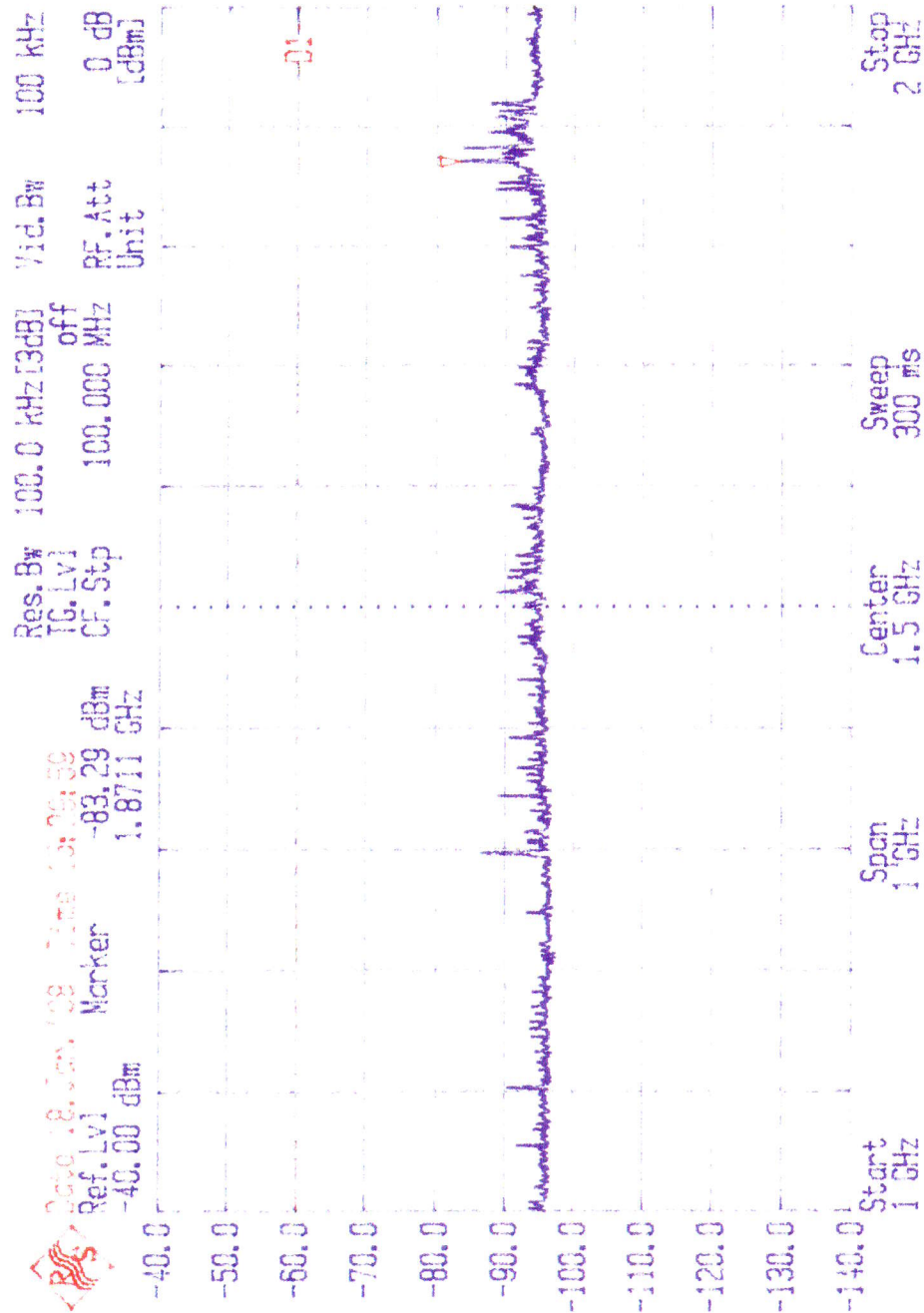
The power of any discrete component shall be $\leq 1 \times 10^{-9}$ W.

14.1.3 Results**14.1.3.1 Radiated by conduction from the antenna**

Frequency (MHz)	Results (dBm)	Limits (dBm)
504.4	-68.99	-60 (1nW)
1871.1	-83.29	-60 (1nW)

COMPLIANT





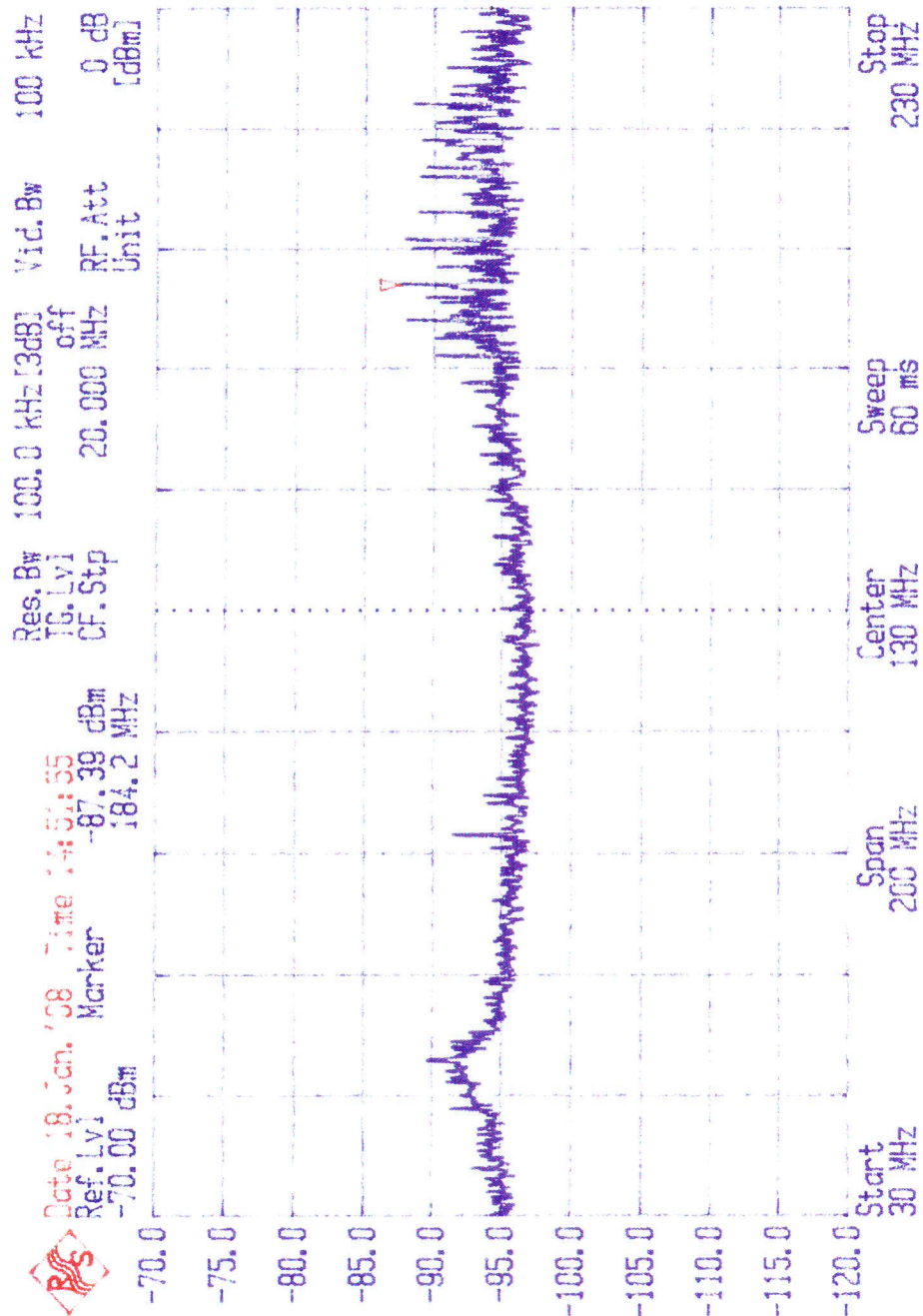
14.1.3.2 Emissions generated in the EUT

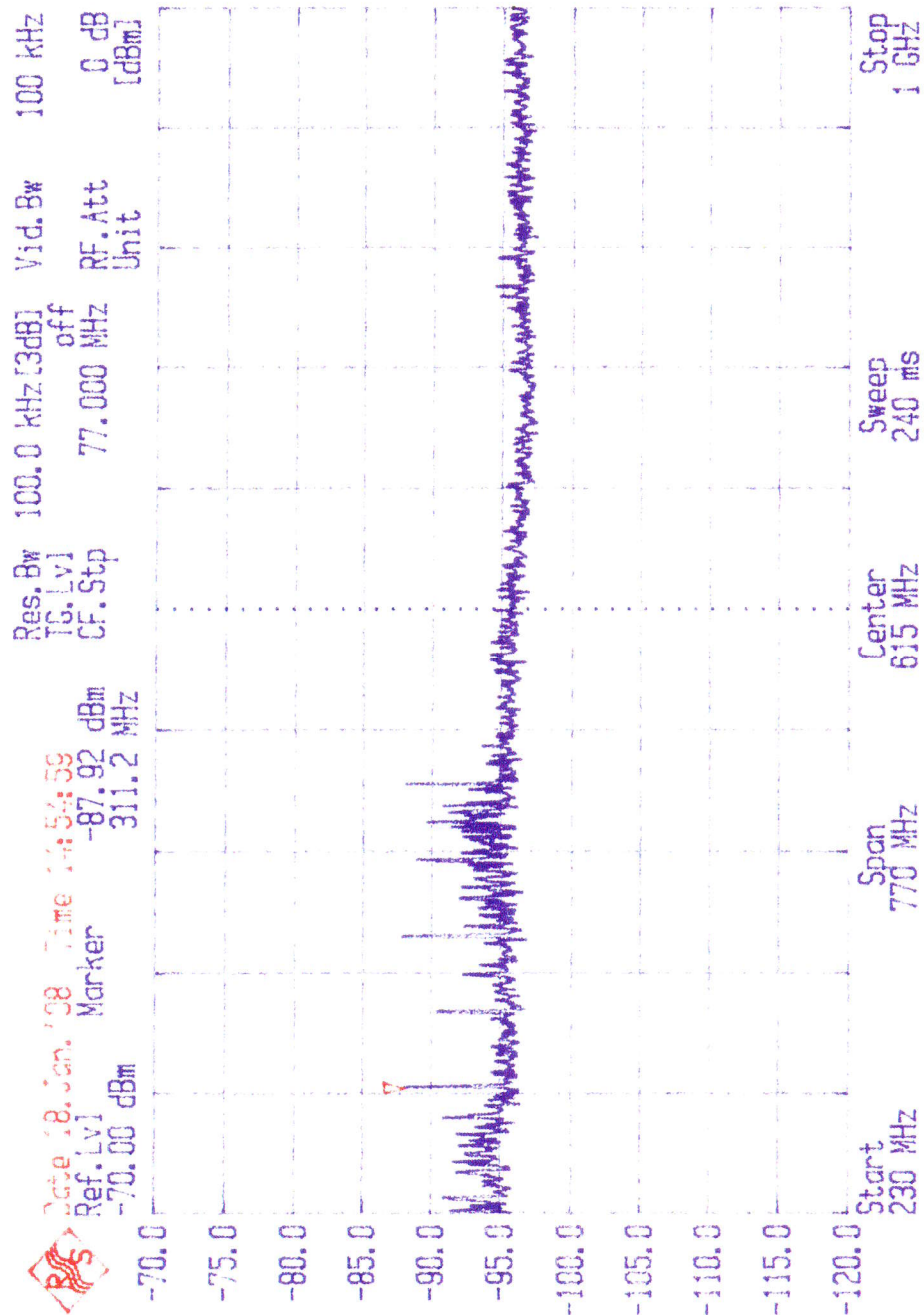
HORIZONTAL POLARIZATION		
FREQUENCY BAND : 30MHz – 2GHz		
Frequency (MHz)	Results (dBm)	Limits (dBm)
184.2	-62.5	-60 (1nW)
311.2	-61.3	-60 (1nW)
1955.5	-73.6	-60 (1nW)

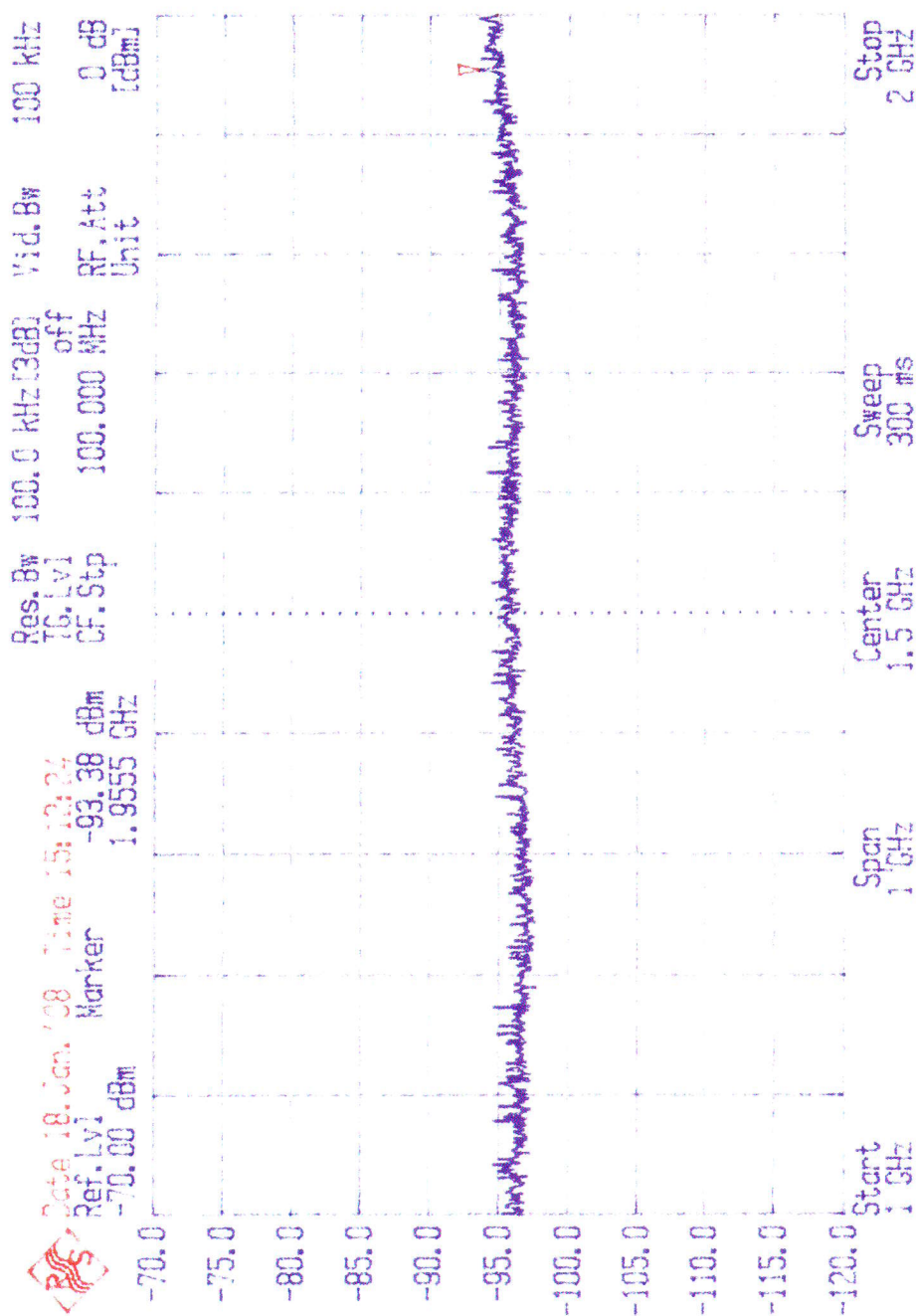
VERTICAL POLARIZATION		
FREQUENCY BAND : 30MHz – 2GHz		
Frequency (MHz)	Results (dBm)	Limits (dBm)
56	-63	-60 (1nW)
431.9	-65.4	-60 (1nW)
1971.1	-71.9	-60 (1nW)

COMPLIANT

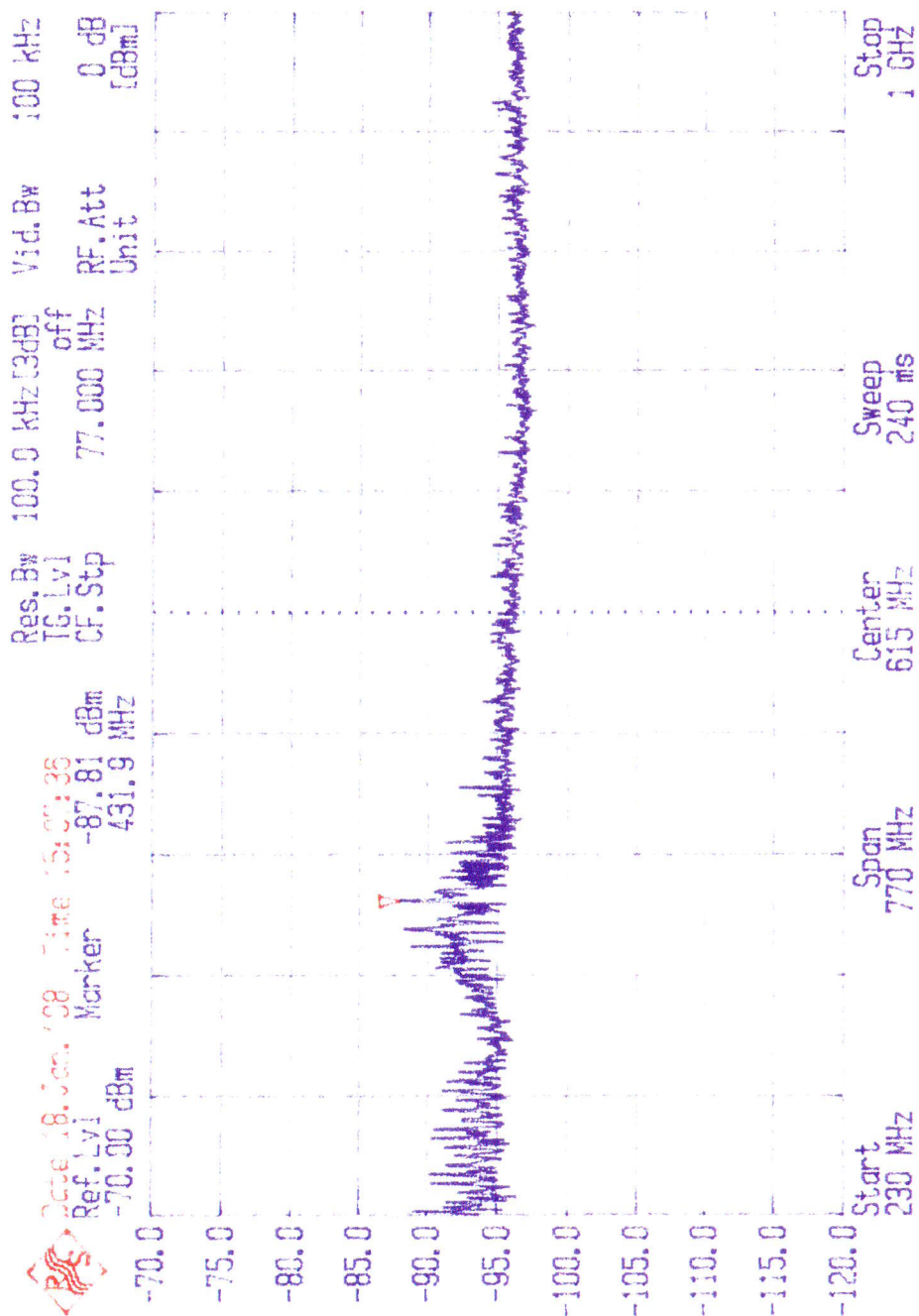
HORIZONTAL POLARIZATION

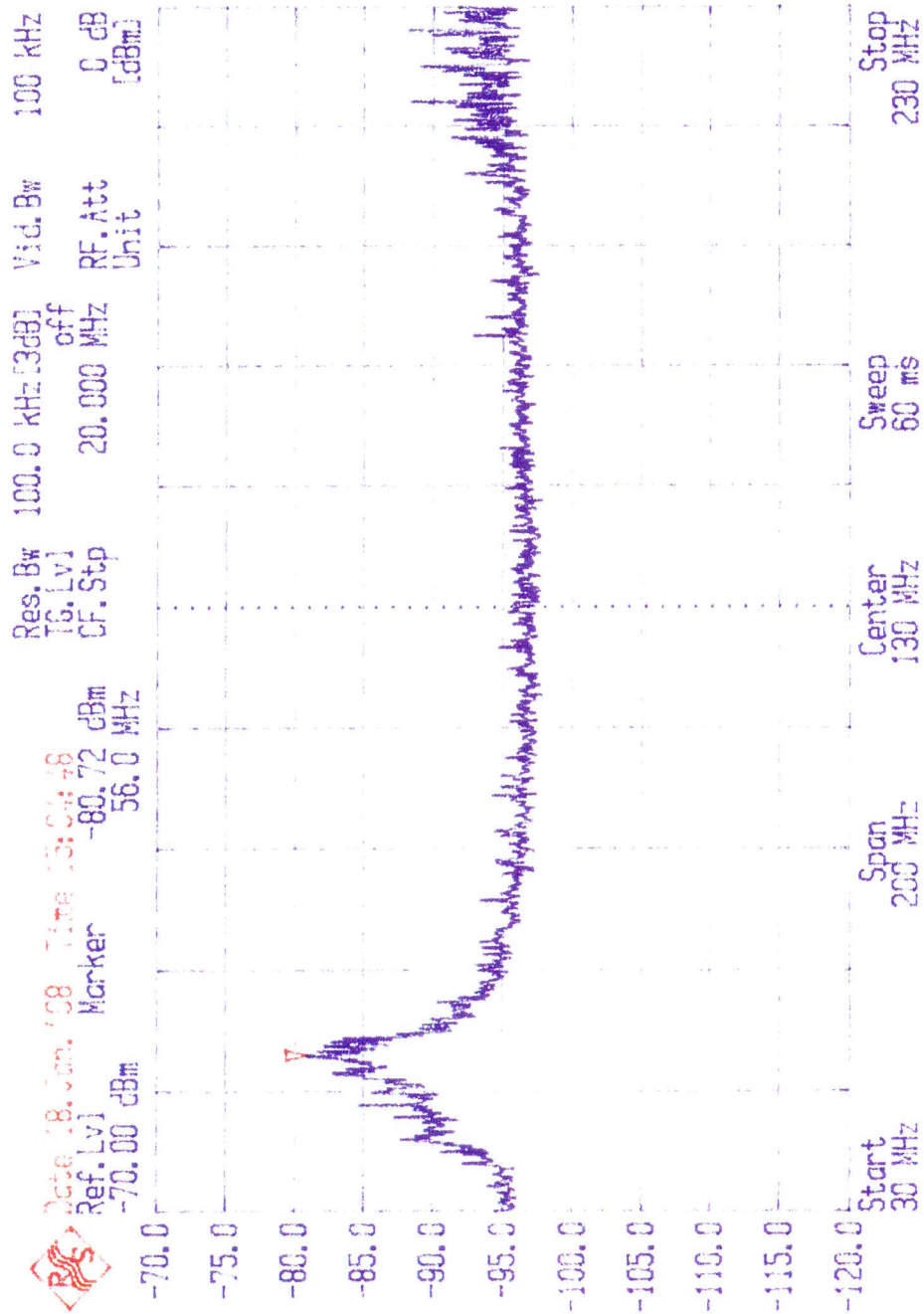


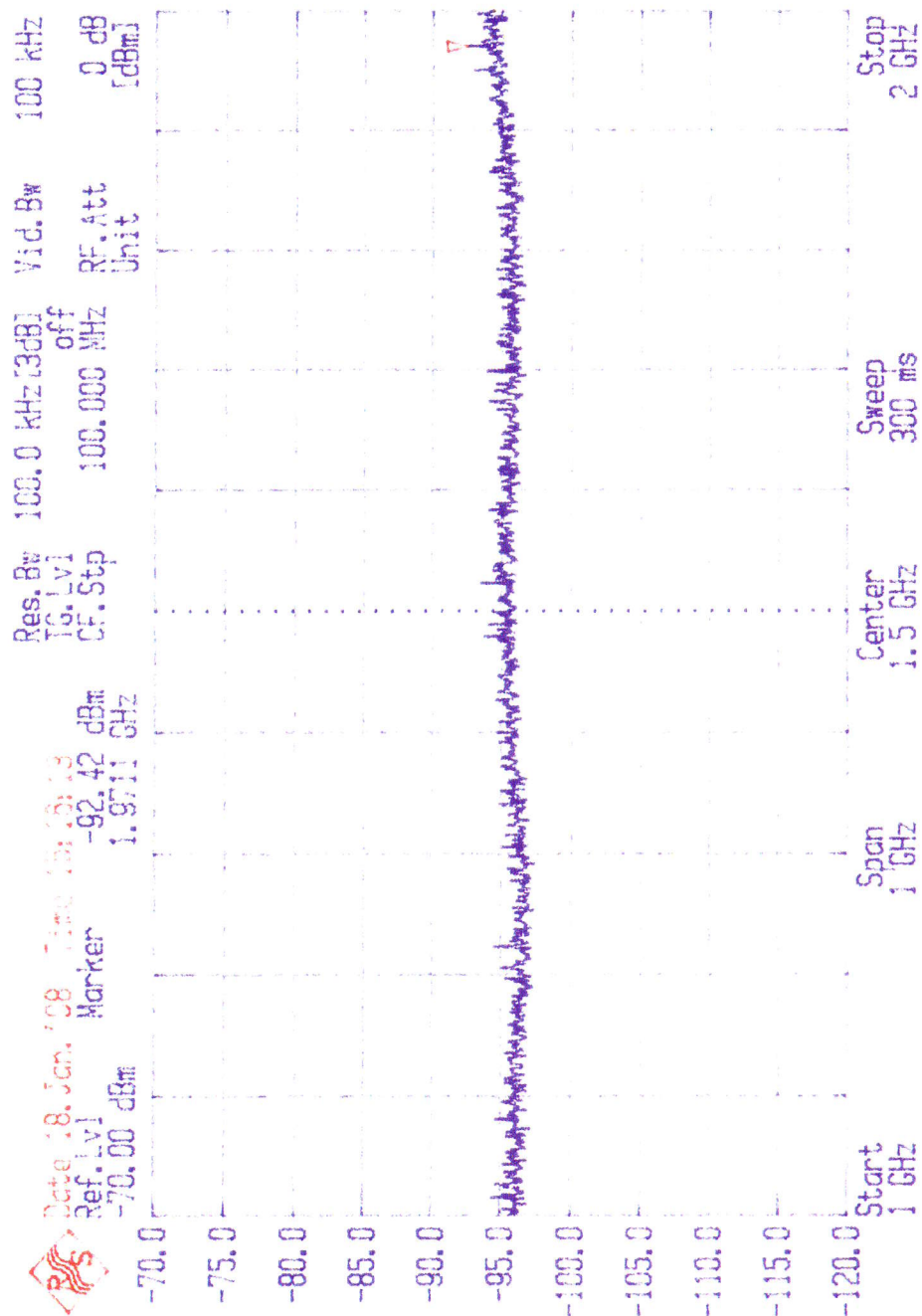




VERTICAL POLARIZATION







14.2 EQUIPMENT MANUALS – CHECKS OF THE MANUFACTURER'S DOCUMENTATION

In addition to checking that the requirements of 4.8 and Annex D of IEC 60945 are met, the manufacturer shall submit to the test laboratory sufficient technical documentation of the EUT to define its interfaces.

The following checks shall be made for the input port, if applicable:

- approved sentences against IEC 61162-1 and/or IEC 61162-2 and the requirements of Annex C of this standard;
- proprietary sentences (if any) against IEC 61162-1 and/or IEC 61162-2;
- transmission intervals and baud rates against IEC 61162-1 and/or IEC 61162-2;
- load on the line of inputs;
- electrical isolation of input circuits.

The interface connections required shall be clearly identified in the operator manual or other appropriate literature. This shall include identification of A and B signal lines for IEC 61162 interfaces.

In addition, the manuals shall include the needed information for correct siting of the antenna(s).

COMPLIANT

14.3 MARKING AND IDENTIFICATION

The markings on the EUT shall include details of the power supply from which the equipment is intended to be operated as well as those specified in 4.9 of IEC 60945.

The interface connections required shall be clearly identified in the operator manual or other appropriate literature. This shall include identification of A and B signal lines for IEC 61162 interfaces.

COMPLIANT

15 SUM UP

Call sensivity	COMPLIANT
Interference rejection and blocking immunity	COMPLIANT
Co-channel rejection.....	COMPLIANT
Intermodulation	COMPLIANT
Off-frequency transmitter	COMPLIANT
Simultaneousoperation of several receive frequencies.....	COMPLIANT
Protection of input circuit.....	COMPLIANT
Memory tests	COMPLIANT
Miscellaneous tests	COMPLIANT

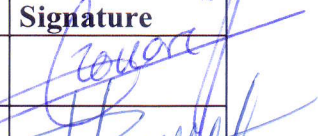
16 CONCLUSION

The product showed **COMPLIANCES** to the specifications

IEC 61097-6 Ed. 2

The results of the tests as stated in this report are exclusively applicable to the product in this report.

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Tests approved by :	JY. CHRISTIEN	April, 1 st 2008	

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