



MOTOROLA

Date: July 1, 2005

Subject: Request for additional information regarding FCC ID: IHDT56ES1 (Portable Cellular/PCS GSM transceiver with embedded Bluetooth transceiver)

Reference:

Application Received:	5/6/2005
Correspondence Reference Number:	150506A.IHD
Confirmation Number:	1505060227/0248
Date of Original Email:	6/09/2005

Prepared by:

Andrew Bachler, Principal Staff Engineer
Motorola Personal Communications Sector
Libertyville, Illinois

Questions and responses follow:

1. Please submit radiated emission data for spurious emissions located in restricted bands.

Response: Please refer to the following:

Additional Test Data Showing Compliance to Restricted band Limits per CFR47 Part 15.205

Tabular data for restricted bands below 1 GHz follow. This data identifies spurs using a peak detector. The original report contained restricted band data above 1GHz.

**MOTOROLA
CELL PHONE
E398**

**CH 00 AXIS X
RED:HORIZONTAL GREEN:VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1	Limit:2
----------	-----------------	------------------------	-----------------------	------------------------	----------------	---------	---------

Range: 4 300 - 1000MHz

1	851.6	36.3 pk	-31.9	22.8	27.2	35.6	37
Azimuth:347 Height:199 Vert				Margin	[dB]	-8.4	-9.8

LIMIT 1: CFR 47 Part 15 Class B 10m

LIMIT 2: CISPR Class B 10 m

**MOTOROLA
CELL PHONE
E398
CH 00 AXIS Y
RED:HORIZONTAL GREEN:VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit: 1	Limit: 2
1	851.6	35 pk	-31.9	22.8	25.9	35.6	37
				Margin(dB)		-9.7	-11.1

Range: 4 300 - 1000MHz

Azimuth:116 Height:100 Vert

LIMIT 1: CFR 47 Part 15 Class B 10m
LIMIT 2: CISPR Class B 10 m

**MOTOROLA
CELL PHONE
E398
CH 00 AXIS Z
RED:HORIZONTAL GREEN:VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit: 1	Limit: 2
1	851.6	34.9 pk	-31.9	22.8	25.8	35.6	37
				Margin(dB)		-9.8	-11.2

Range: 4 300 - 1000MHz

Azimuth:357 Height:199 Vert

LIMIT 1: CFR 47 Part 15 Class B 10m
LIMIT 2: CISPR Class B 10 m

**MOTOROLA
CELL PHONE
E398
CH 78 AXIS X
RED:HORIZONTAL GREEN:VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit: 1	Limit: 2
1	851.6	38.1 pk	-31.9	22.8	29	35.6	37
				Margin(dB)		-6.6	-8

Range: 4 300 - 1000MHz

Azimuth:288 Height:199 Vert

LIMIT 1: CFR 47 Part 15 Class B 10m
LIMIT 2: CISPR Class B 10 m

- Please provide a statement specifically confirming compliance with the following Rule Parts (previously on occasion, a general statement of compliance with the industry standard has been accepted, however, the FCC requires attestations of compliance with the specific rule parts): (a) the hopping sequence must be pseudorandom (15.247(a)(1)); (b) all Channels are used equally on average (15.247(a)(1)); (c) the receiver input bandwidth is approximately equal to the transmit bandwidth (15.247(a)(1)); (d) the receiver hops in sequence with the transmitted signal (15.247(a)(1)); (e) the system

is designed to comply with all of the regulations in Section 15.247 when the transmitter is presented with a continuous data (or information) stream (15.247(g)); (f) the system does not coordinate its channel selection/hopping sequence with other frequency hopping systems for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters (15.247(h)).

Response: Please refer to exhibit 2A

3. What is the gain of the Bluetooth antenna? Please provide a description.

Response: The Bluetooth antenna is a printed PCB, inverted F-type antenna. The antenna gain is -2.25 dBi.

4. The equipment listed in the 15.247 test report is past its cal due date. Please address.

Response: The corrected equipment list (at the time of the original test) follows.

Manufacturer Name	Item Name Description	Model #	Serial Number	Calibration Due Date
Hewlett Packard	QP Adapter	85650A	2811A01069	1/08/05
Hewlett Packard	S/A Display	8566B	2542A12974	1/08/05
Hewlett Packard	S/A	8566B	2637A03376	1/08/05
Hewlett Packard	RF Preselector	85685A	2810A00692	1/08/05
Rohde & Schwarz	S/A	FSEK20	DE2525315	1/09/05
EMCO	Horn Antenna 1-18GHz	3115	2638	7/10/04
EMCO	Horn Antenna 18-26.5GHz	3160-09	9904-1165	N/A*
Chase	Bi-Con Antenna 30-300MHz	VBA6106A	1246	6/23/04
Chase	Log-Periodic Antenna	UPA6108	1120	6/23/04
Hewlett Packard	EMC Analyzer	E7405	US40240219	04/04/2005
Weinschel	10dB Attenuator	AS-6	6675	10/14/2004
Agilent	Bluetooth Call Box	N4010A	GB44140209	N/A

* Per ANSI C63.5-1998 (Revision of ANSI C63.5-1988) pg. 6, under 5.1 General " It is unnecessary to calibrate standard gain horn antennas for use above 1GHz; rather, they are used as gain standards to calibrate other antennas (see 12.3.1 of IEEE Std 149-1979)."

5. The statement required by Section 15.19(a)(3) must be placed in the user's manual, since it is not on the ID label.

Response: In addition to the user's manual, a separate safety booklet is included with the product. Please refer to page 20 in exhibit 8A, *IMPORTANT SAFETY AND LEGAL INFORMATION* booklet,