

MEASUREMENT AND TECHNICAL REPORT

MEDTRONIC MINIMED 18000 Devonshire Street Northridge, CA 91325

DATE: 06 January 2006

This Report Concerns:	Original Grant: X		Class II Change:							
Equipment Type:	TGMS II									
Deferred grant requested per 47 0.457(d)(1)(ii)?	CFR	Yes: Defer until:	No: X							
Company Name agrees to notify Commission by: of the intended date of announc date.		N/A duct so that the (grant can be issued on that							
Transition Rules Request per 15	.37? Yes:	No: X*								
(*) FCC Part 15, Paragraph(s) 15.231(a), 15.231(c), and 15.231(e)										
Report Prepared b	y:	TÜV AMERICA, 10040 Mesa Rin San Diego, CA 9 Phone: 858 678 Fax: 858 546	n Road 92121-2912 1400							



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1.0 GENERAL INFORMATION

1.1 Product Description

None

1.2 Related Submittal Grant

None

1.3 Tested System Details

The FCC ID's for all equipment, plus descriptions of all cables used in the tested system are:

None

1.4 Test Methodology

Purpose of Test: To demonstrate compliance with the following tests.

Test Summary												
	Paragraph											
Test Description			Mid Channel	High Channel	Pass/Fail							
Deactivation	15.231(a)		50 mS		Pass							
Emissions Bandwidth	15.231(c)		60.2 kHz		Pass							
			68.8 dBμV/m @									
Field Strength of Emissions	15.231(e)		418 MHz		Pass							

Testing was performed according to the procedures in FCC/ANSI C63.4 and CSA 108.8-M1983.

Report No. SC506393-08



1.5 Test Facility

The open area test site and conducted measurement data were tested by:

TÜV AMERICA, INC 10040 Mesa Rim Road San Diego, CA 92121-2912 Phone: 858 678 1400 Fax: 858 546 0364

The Test Site Data and performance comply with ANSI C63.4 and are registered with the FCC, 7435 Oakland Mills Road, Columbia Maryland 21046. All Measurement Data is acquired according to the content of FCC Measurement Procedure and ANSI C63.4, unless supplemented with additional requirements as noted in the test report.



2.0 SYSTEM TEST CONFIGURATION

2.1 Justification

The EUT was initially tested for FCC emissions in the following configuration:

See Test Setup Photos Exhibit

2.2 EUT Exercise Software

None

2.3 Special Accessories

None

2.4 Equipment Modifications

None

2.5 Configuration of Test System

See Test Setup Photos Exhibit



3.0 DEACTIVATION EQUIPMENT/DATA EMISSION BANDWIDTH EQUIPMENT/DATA FIELD STRENGTH OF EMISSIONS EQUIPMENT/DATA

Test Conditions: DEACTIVATION: FCC Part 15.231(a)

EMISSION BANDWIDTH: FCC Part 15.231(c)

FIELD STRENGTH OF EMISSIONS: FCC Part 15.231(e)

The following measurements were performed at the San Diego Testing Facility:

☐ - Test not applicable

■ - Roof (Small Open Area Test Site)

Test Equipment Used:

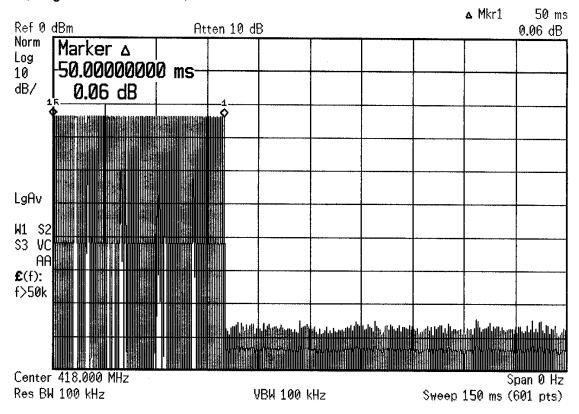
Model No.	Prop. No.	Description	Manufacturer	Serial No./Version No.	Date Cal'ed			
3146	243	Log Periodic Dipole Antenna	EMCO	106X	06/05			
3146	418	Log Periodic Antenna	EMCO	9402-3775	03/05			
3115	453	Double Ridge Antenna	EMCO	9412-4364	08/05			
E4440A	6814	Spectrum Analyzer	Hewlett Packard	MY42510441	12/04			
HFOATS		Test Software	TUV America	Beta231	N/A			

Remarks: One year calibration cycle for all test equipment and sites.



FCC Part 15.231(a) - Deactivation

* Agilent 11:24:39 Dec 12, 2005

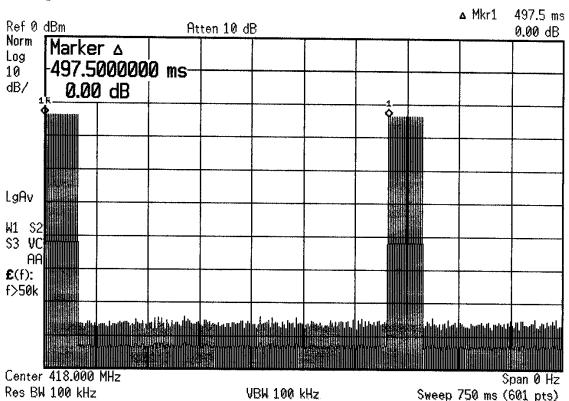




5-second interval cycle. "No transmit activity occurs prior to triggered graph" for the deactivation graph.



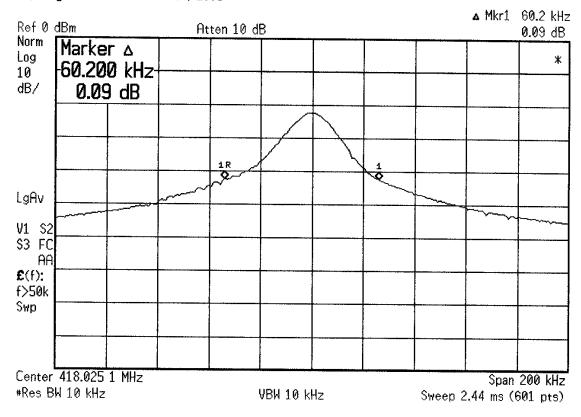
* Agilent 11:26:11 Dec 12, 2005





FCC Part 15.231(c) - Emission Bandwidth

* Agilent 11:47:07 Dec 12, 2005





						Notes		ambient		ambient	ambient	ambient	ambient	ambient	ambient											
						Antenna Helght	-				+							-		1			+	+		
					Reda 6814	EUT Rotation	87		127	1								-			+		-	+		
FCC Part 15 para 15.231(e)					हत्युर	MARGIN (dB) pk av	-3.5	-4.6	-18.3	-24.1	-47.3	-14.5	-14.6	-13.2	-15.3											
15 para	3 Meters	Roof	A/A	418	453	MARG	-11.5			-32.1		-22.4	-22.6	-21.1	-23.2		+	T				1	T	+	П	
CC Part		.51	٠,		(e) (X	SPEC LIMIT (dBuV/m) pk av	_	₩	\rightarrow	52.3			\vdash	\dashv	52.3											
u.	TEST DIST:	TEST SITE:	BICONICAL:	106:	OTHER: by Cycle) uty Cycle) tor Loss		92.3	72.3	72.3	72.3	72.3	72.3	72.3	72.3	72.3	_		L								
SPEC:	Ë	Ë	BIC		20LOG(Du 20LOG(D • Preselec	L (dBuV/m) av	68.8	47.7	8.0 0.0	28.2	35.0	37.9	37.7	39.7	37.1											
TESTER: RALPH COLE					Duty Cycle= 25% No other emissions detected above 1GHz: RBW & VBW 1 MHz for Pk; AVG = PK - 20LOG(Duty Cycle) below 1GHz: RBW & VBW 100 kHz for Pk; AVG = PK - 20LOG(Duty Cycle) CF = Antenna Factor + Cable Loss - Preamplifier Gain + Preselector Loss	CF (dB/m) MAX LEVEL (dBuV/m)	80.9	59.8	46.0	40.3	47.0	49.9	49.8	51.2	49.1									•		
HAYH					25% No other emissions detected N & VBW 1 MHz for Pk; AVG = PK - V & VBW 100 KHz for Pk; AVG = PK - ttor + Cable Loss - Preamplifier Gain	CF (dB/m)	16.3	22.6	28.3	31.2	34.6	36.9	38.3	39.7	40.1											
R: 19					No othe W 1 MH W 100 kl	HORIZ (dBuv) pk DCav	52.5	25.2	5.7	-2.9	0.4	1.0	-0.5	-0.5	-3.0									T		
TESTE	jed jed	13421		2005	25% W & VB W & VB		64.6	37.2	17.7	10.3	12.4	13.0	11.5	11.5	9.0											
33	cs Minin	SN: 11	ter	December 12, 2005	de= SHz: RB SHz: RB enna Fa	VERT. (dBuv) pk DCav	37.7	20.3	0.3	4.7	9.0-	9.0-	-0.5	-0.5	-3.0											
SC50636	Medtroni	TGMS II SN: 1143421	Transmit	Decen	Duty Cycle= above 1GHz: below 1GHz: CF = Antenna	VERT.	49.7	32.3	11.7	19.7	11.4	11.4	11.5	11.5	9.0											
REPORT No: SC506393	CUSTOMER: Medtronics Minimed	EUT:	EUT MODE: Transmitter	DATE:	NOTES:	FREQ (MHz)	418.050	836.100	1254.150	2000 250	2508,300	2926.350	3344.400	3762.450	4180.500											



4.0 ATTESTATION STATEMENT

GENERAL REMARKS:

SUMMARY:

All tests were performed per CFR 47, Part(s) 15.231(a), 15.231(c), and 15.231(e)

■ - Performed

The Equipment Under Test

■ - Fulfills the requirements of CFR 47, Part(s) 15.231(a), 15.231(c), and 15.231(e)

Testing Start Date: 12 December 2005

Testing End Date: 12 December 2005

- TÜV AMERICA, INC. -

Reviewing Engineer:

David Gray

(EMC Engineer In Charge)

Wail Ufue

Test Engineer:

Ralph Cole

(EMC Engineer)