



RF Exposure

EUT Name: Timex OmniMOVE Wrist Watch

EUT Model: M328

FCC ID: EP9-TMXM328

IC ID: 3348A-TMXM328

FCC Title 47, Part 15C, RSS-210 Issue 8, ANSI C63.10:2013

Prepared for:

Sam Everett
Timex Group USA Inc
555 Christian Rd
Middlebury CT 06787 USA
Tel: 203-346-5603
Fax: 203-346-7163

Prepared by:

TUV Rheinland of North America
762 Park Avenue
Youngsville, NC 27596
Tel: (919) 554-3668
Fax: (919) 554-3542
<http://www.tuv.com/>

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1 RF Exposure

1.1 Exposure Requirements – FCC KDB # 447498 DO1 and RSS-102 Issue 4

FCC KDB # 447498 DO1 V05r02 - Mobile and Portable Device RF Exposure and Procedures and Equipment, Appendix A shows that the SAR Text Exclusion Threshold for a device with a separation distance of 5 mm at 2450 MHz is 10 mW

RSS-102 section 2.5.1 states that a device is exempt from SAR evaluation if the frequency is “above 2.2 GHz and up to 3 GHz inclusively, and with output power (i.e. the higher of the conducted or radiated (EiRP.) source-based, time-averaged output power) that is less than or equal to 20 mW for general public use...”.

1.1.1 Test Procedure

If the antenna is located > 20cm from the user, then an MPE calculation is acceptable.

If the antenna is located < 20cm (portable / mobile / hand-held device) from the user, then SAR evaluation is required.

1.1.2 Evaluation

The EUT will be used as a portable device where the antenna will be located less than 20cm from the user, therefore SAR evaluation is required.

1.1.2.1 Evaluation for FCC

FCC 447498 DO1 Mobile Portable RF Exposure V05r02, Appendix A shows that the SAR Text Exclusion Threshold for a device with a separation distance of 5mm at 2450 MHz is 10 mW.

The minimum power that requires SAR testing with a separation distance of 5mm at 2.445 GHz is 10 mW.

The maximum EiRP peak power output of the EUT is: 0.442 mW (See calculation next page).

The EUT is well below the 25mW power level.

1.1.2.2 Evaluation for Industry Canada

The maximum EiRP peak power output of the EUT is: 0.442 mW (See calculation next page).

The EUT is well below the 20mW power level.

1.1.3 Conclusion

SAR data is not required for either FCC or Industry Canada.

Note: The 0.442 mW power level has been time-averaged. (62.3% Duty Cycle).
This is considered to be the worst case.

1.1.4 Calculated EIRP Level

A watch modified with an SMA connector to allow for direct measurement of the transmitter output showed the following worst-case values using the EMPower ETSI Burst Measurement System:

Measurement Values					
Max e.i.r.p.	-1.44531 dBm	Min. Gap Time	0 ms	Burst Pulses	1599
Medium Utilisation	0.442169 %	Max. Sequence Time	0 ms	Measurement Time	01:33:58 PM 2/2/2016
Duty Cycle	62.2728 %	RMS	-3.54411 dBm		

The -3.54 dBm value includes the maximum gain of the antenna (0 dBi) and is equivalent to **0.442 mW.**

This is considered to be the worst-case value of this device.

Note: Values of the other all frequencies are on file at TUV Rheinland.

1.1.5 Antenna Gain:

The Antenna is a CHIP type Antenna.

The stated Maximum Gain of the antenna by the Manufacturer is 0 dBi (numeric gain = 1).