

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a TMS0002 - America's Got Talent Microphone with Bluetooth function operating in 2402-2480MHz. The EUT is powered by DC 3.7V by rechargeable battery or DC 5V by USB port. For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna

Modulation Type: GFSK, $\pi/4$ -DQPSK and 8-DPSK

Antenna Gain: 0dBi Max

Bluetooth Version: 5.0 EDR and BLE

EDR:

The normal radiated output power (e.i.r.p) is: -13.0dBm (tolerance: +/- 3dB).

The normal conducted output power is -13.0dBm (tolerance: +/- 3dB).

BLE:

The normal radiated output power (e.i.r.p) is: -9.0dBm (tolerance: +/- 3dB).

The normal conducted output power is -9.0dBm (tolerance: +/- 3dB).

According to the KDB 447498:

EDR:

The Maximum peak radiated emission for the EUT is 82.6 dB μ V/m at 3m in the frequency 2480MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -12.63dBm

which is within the production variation.

The Minimum peak radiated emission for the EUT is 79.9dB μ V/m at 3m in the frequency 2402MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -15.33dBm

which is within the production variation.

The maximum conducted output power specified is -10.0dBm=0.100mW

The source- based time-averaging conducted output power

=0.100* Duty cycle mW <0.100 mW(Duty cycle <100%)

BLE:

The Maximum peak radiated emission for the EUT is 87.0 dB μ V/m at 3m in the frequency 2480MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -8.23dBm

which is within the production variation.

The Minimum peak radiated emission for the EUT is 84.6dB μ V/m at 3m in the frequency 2402MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -10.63dBm

which is within the production variation.

The maximum conducted output power specified is -6.0dBm=0.251mW

The source- based time-averaging conducted output power

=0.251* Duty cycle mW =0.251 mW(Duty cycle =100%)

The SAR Exclusion Threshold Level:

= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)

= 3.0 * 5 / sqrt (2.480) mW

= 9.53 mW

Since the source-based time-averaging conducted output power is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.

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