RF EXPOSURE REPORT



Report No.: 16070923-FCC-H2 Supersede Report No.: N/A

| Applicant | SMT TELECOMM HK LIMITED | | | |
|---|-------------------------|---------------------------------|--|--|
| Product Name | Mobile Pho | Mobile Phone | | |
| Model No. | M488 | | | |
| Serial No. | N/A | | | |
| Test Standard | FCC 2.109 | 3:2015 | | |
| Test Date | August 23 | August 23 to September 05, 2016 | | |
| Issue Date | September | 06, 2016 | | |
| Test Result | Pass | Fail | | |
| Equipment complied with the specification | | | | |
| Equipment did not comply with the specification | | | | |
| Loven | Tho | David Huang | | |
| Loren Lu Test Engir | | David Huang Checked By | | |

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Test result presented in this test report is applicable to the tested sample only

Issued by:

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Laboratories Introduction

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In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

Accreditations for Conformity Assessment

| Country/Region | Scope |
|----------------|------------------------------------|
| USA | EMC, RF/Wireless, SAR, Telecom |
| Canada | EMC, RF/Wireless, SAR, Telecom |
| Taiwan | EMC, RF, Telecom, SAR, Safety |
| Hong Kong | RF/Wireless, SAR, Telecom |
| Australia | EMC, RF, Telecom, SAR, Safety |
| Korea | EMI, EMS, RF, SAR, Telecom, Safety |
| Japan | EMI, RF/Wireless, SAR, Telecom |
| Singapore | EMC, RF, SAR, Telecom |
| Europe | EMC, RF, SAR, Telecom, Safety |



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1. Report Revision History

| Report No. | Report Version | Description | Issue Date |
|-----------------|----------------|-------------|--------------------|
| 16070923-FCC-H2 | NONE | Original | September 06, 2016 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

2. Customer information

| Applicant Name | SMT TELECOMM HK LIMITED |
|------------------|---|
| Applicant Add | Unit C 8/F, CHARMHILL CTR 50 HILLWOOD RD TST KL |
| Manufacturer | SMT TELECOMM HK LIMITED |
| Manufacturer Add | Unit C 8/F, CHARMHILL CTR 50 HILLWOOD RD TST KL |

3. Test site information

| | 1 | |
|----------------------|---|--|
| Lab performing tests | SIEMIC (Shenzhen-China) LABORATORIES | |
| | Zone A, Floor 1, Building 2 Wan Ye Long Technology Park | |
| Lab Address | South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China | |
| | 518108 | |
| FCC Test Site No. | 718246 | |
| IC Test Site No. | 4842E-1 | |
| Test Software | Radiated Emission Program-To Shenzhen v2.0 | |



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4. Equipment under Test (EUT) Information

Description of EUT: Mobile Phone

Main Model: M488

Serial Model: N/A

Date EUT received: August 22, 2016

Test Date(s): August 23 to September 05, 2016

GSM850: 0.8dBi PCS1900: 1dBi

UMTS-FDD Band V: 1dBi
Antenna Gain:

UMTS-FDD Band II: 1dBi

Bluetooth/BLE/WIFI: 1dBi

GPS: 1dBi

Antenna Type: PIFA antenna

GSM / GPRS: GMSK

EGPRS: GMSK

UMTS-FDD: QPSK

Type of Modulation: 802.11b/g/n: DSSS, OFDM

Bluetooth: GFSK, π /4DQPSK, 8DPSK

BLE: GFSK GPS:BPSK

GSM850 TX: 824.2 ~ 848.8 MHz; RX: 869.2 ~ 893.8 MHz

PCS1900 TX: 1850.2 ~ 1909.8 MHz; RX: 1930.2 ~ 1989.8 MHz

UMTS-FDD Band V TX: 826.4 ~ 846.6 MHz; RX: 871.4 ~ 891.6 MHz

UMTS-FDD Band II TX:1852.4 ~ 1907.6 MHz;

RF Operating Frequency (ies): RX: 1932.4 ~ 1987.6 MHz

WIFI: 802.11b/g/n(20M): 2412-2462 MHz WIFI: 802.11n(40M): 2422-2452 MHz Bluetooth& BLE: 2402-2480 MHz

GPS: 1575.42 MHz



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GSM 850: 124CH PCS1900: 299CH

UMTS-FDD Band V: 102CH

UMTS-FDD Band II: 277CH

Number of Channels: WIFI:802.11b/g/n(20M): 11CH

WIFI:802.11n(40M): 7CH

Bluetooth: 79CH

BLE: 40CH GPS:1CH

Port: Power Port, Earphone Port, USB Port

Adapter:

Model: PC488

Input: AC100-240V~50/60Hz,0.15A

Output: DC 5.0V-500mA

Input Power: Battery:

Model: BPM488

Voltage: 3.7V

Battery Capacity: 1400mAh Charging limit voltage: 4.2V

Trade Name: N/A

GPRS/EGPRS Multi-slot class 8/10/12

FCC ID: 2AIMEM488



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5. FCC §2.1093 - Radiofrequency radiation exposure evaluation: portable devices.

5.1 RF Exposure

Standard Requirement:

According to §15.247 (i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] $\cdot \sqrt{f_{(GHz)}} \le 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, 16 where

- f_(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation¹⁷
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is ≤ 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval.

result = $P\sqrt{F}/D$

P= Maximum turn-up power in mW

F= Channel frequency in GHz

D= Minimum test separation distance in mm



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5.2 Test Result

Bluetooth Mode:

| Modulation | СН | Freque ncy | Conducted Power | Tune Up Power | Max Tune Up Power | Max Tune Up Power | Result | Limit |
|------------|------|------------|-----------------|------------------|-------------------|-------------------|---------|-------|
| Modulation | 011 | (MHz) | (dBm) | (dBm) | (dBm) | (mW) | rtoount | |
| GFSK | Low | 2402 | 4.262 | 4.5±1 | 5.5 | 3.162 | 0.98 | 3 |
| | Mid | 2441 | 4.729 | 4.5±1 | 5.5 | 3.162 | 0.99 | 3 |
| | High | 2480 | 5.050 | 4.5±1 | 5.5 | 3.162 | 1.00 | 3 |
| π /4 DQPSK | Low | 2402 | 4.028 | 4.5±1 | 5.5 | 3.162 | 0.98 | 3 |
| | Mid | 2441 | 4.528 | 4.5±1 | 5.5 | 3.162 | 0.99 | 3 |
| | High | 2480 | 4.820 | 4.5±1 | 5.5 | 3.162 | 1.00 | 3 |
| 8-DPSK | Low | 2402 | 4.148 | 4.5±1 | 5.5 | 3.162 | 0.98 | 3 |
| | Mid | 2441 | 4.641 | 4.5±1 | 5.5 | 3.162 | 0.99 | 3 |
| | High | 2480 | 4.991 | 4.5±1 | 5.5 | 3.162 | 1.00 | 3 |

BLE Mode:

| Modulation | СН | Freq (MHz) | Conducted Power (dBm) | Tune Up Power (dBm) | Max Tune Up Power (dBm) | Max Tune Up Power (mW) | Result | Limit |
|------------|------|---------------|-----------------------|---------------------------|-------------------------|------------------------|--------|-------|
| GFSK | Low | 2402 | -2.853 | -2.5±1 | -1.5 | 0.708 | 0.22 | 3 |
| | Mid | 2440 | -2.691 | -2.5±1 | -1.5 | 0.708 | 0.22 | 3 |
| | High | 2480 | -2.466 | -2.5±1 | -1.5 | 0.708 | 0.22 | 3 |

Result: Compliance

No SAR measurement is required.