



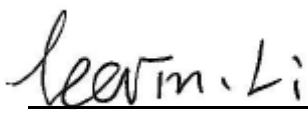
FCC RF EXPOSURE REPORT

Applicant	: Measurement Specialties (China), Ltd.
Address	: No. 26 Langshan Road Shenzhen High-Tech Park (North) Nanshan District Shenzhen 518057 China
Equipment	: Wireless Pressure Sensor
Model No.	: 6XX1N-XX-X-XX (X is variable. For more details refer to model naming rule.)
Trade Name	: TE Connectivity
FCC ID.	: 2A85PA6XX1N

I HEREBY CERTIFY THAT :

The sample was received on Mar. 23, 2023 and the testing was completed on Apr. 07, 2023 at CerpPASS Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of CerpPASS Technology Corp., the test report shall not be reproduced except in full.

Approved by:



Leevin Li /Supervisor



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History of this test report

Version No.	Report No	Date	Description
Rev.01	DEFJ2211182	Apr. 14, 2023	Initial Issue



1. Test Configuration of Equipment under Test

1.1 Feature of Equipment

Equipment	Wireless Vibration Sensor
Model Name	6XX1NXXXXX (X is variable. For more details refer to product model naming rules.)
Model Discrepancy	All the models are electrical identical including the same and hardware design (RF Chip, Hardware, Schematics), same mechanical structure and design (including product enclosure, materials, etc.), the only difference is the model name and software. Model 6911N-EX-A-F5 was chosen for final test.
Operation Frequency Range	Bluetooth: 2400MHz-2483.5MHz LoRa: 902MHz~928MHz
Center Frequency Range	Bluetooth: 2402MHz-2480MHz LoRa: 125KHz:902.3MHz~914.9MHz 500KHz:903MHz~914.2MHz
Antenna Gain.	Bluetooth: 0dBi LoRa: 0.68dBi
Antenna Type	monopole Antenna
Operating Voltage	From battery:3.6Vdc
Working Temperature	-30°C to +75°C
FVIN	65X1N Series: SW_65XX_HCC512B 69X1N Series: SW_69XX_HCC512B

Note: For more details, please refer to the User's manual of the EUT.



Product Model Naming Rules for 6XX1N-XX-X-XX

6		X		X		1		N		-	X	X	-	X		-	X		X					
SENSOR TYPE		COMMUNICATION		PRESSURE REF		TECHNOLOGY		PLATFORM			CERTIFICATION			REGION			PRESSURE RANGE		PORT					
Code	Product	Code	Type	Code	Type	Code	Type	Code	Type		Code	Type		Code	Type		Code	BAR STD	Code	Type				
6	Pressure	5	BLE5	1	Absolute	1	Ultra	N	Initial IOT		NX	None		A	915MHz US		C	007B	2	1/4-19 BSPP				
		9	BLE+LoRaWAN	2	Compound						EX	ATEX		B	BLE5		F	035B	5	1/4-18 NPT				
																H	350B							
Note: 1) Disabled Lora by software (software due to disable LoRa, not any RF parameter change. RF Chip, Hardware, Schematics still are the same) 2) The circuit design and layout between of all model numbers are the same. 3)The Region code depends on Communication code, e.g: if Communication code is "5", the region code should be "B"; if Communication code is "9", the region code can be "A" or "E" 4) For this application is only for Region code "A" or "B".																								



1.2 General Information of Test

Test Site	CerpPASS Technology Corporation(CerpPASS Laboratory) Address: Room 102, No. 5, Xing'an Road, Chang'an Town, Dongguan City, Guangdong Province Tel: +86-769-8547-1212 Fax: +86-769-8547-1912
FCC Designation No.:	CN1288



2. Radio Frequency Exposure

Device category	☐ Portable (<20cm separation) ☒ Mobile (>20cm separation)
Exposure classification	☐ Occupational/Controlled exposure (S = 5mW/cm ²) ☒ General Population/Uncontrolled exposure (S=1mW/cm ²)
Antenna diversity	☒ Single antenna ☐ Multiple antennas ☐ Tx diversity ☐ Rx diversity ☐ Tx/Rx diversity
Evaluation applied	☒ MPE Evaluation* ☐ SAR Evaluation ☐ N/A

TEST RESULTS

No non-compliance noted.

Calculation

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{3770}$

Where E = Field strength in Volts / meter
 P = Power in Watts
 G = Numeric antenna gain
 d = Distance in meters
 S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{3770 d^2}$$

Changing to units of mW and cm, using:

$$P \text{ (mW)} = P \text{ (W)} / 1000 \text{ and}$$

$$d \text{ (cm)} = d \text{ (m)} / 100$$

Yields

$$S = \frac{30 \times (P/1000) \times G}{3770 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2} \quad \text{Equation 1}$$

Where d = Distance in cm
 P = Power in mW
 G = Numeric antenna gain
 S = Power density in mW / cm²

**Maximum Permissible Exposure**

Mode	Channel Frequency (MHz)	Max. Conducted output power (dBm)	Max. Tune up power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)
Bluetooth LE	2402-2480	4.88	5.88	0	20	0.001
LoRa(125KHz)	902.3-914.9	5.842	6.842	0.68	20	0.0011
LoRa(500KHz)	903.0-914.2	4.748	5.748	0.68	20	0.0009

Conclusion

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

-----**End of the report** -----