

Prüfbericht-Nr.: Test Report No.:	50209834 002	Auftrags-Nr.: Order No.:	238101437	Seite 1 von 10 Page 1 of 10
Kunden-Referenz-Nr.: Client Reference No.:	N/A	Auftragsdatum: Order date:	22-Feb-2019	
Auftraggeber: Client:	馨馳企業有限公司 高雄市仁武區澄仁東街 501 巷 31 號 1 樓			
Prüfgegenstand: Test item:	spike(R)			
Bezeichnung / Typ-Nr.: Identification / Type No.:	spike_mobile			
Auftrags-Inhalt: Order content:	NCC Test report (Zigbee)			
Prüfgrundlage: Test specification:	NCC Low-power Radio-frequency Devices Technical Regulations LP0002(2018) Section 3.10.1			
Wareneingangsdatum: Date of receipt:	N/A			
Prüfmuster-Nr.: Test sample No.:	N/A			
Prüfzeitraum: Testing period:	N/A			
Ort der Prüfung: Place of testing:	EMC/RF Laboratory Taipei			
Prüflaboratorium: Testing laboratory:	TUV Rheinland Taiwan Ltd.			
Prüfergebnis*: Test result*:	Pass			
geprüft von / tested by:		kontrolliert von / reviewed by:		
2019-03-05  Mars Y.J. Lin / Project Engineer		2019-03-05  Rene Charton / Expert, Electrical		
Datum Date (Report Date)	Name / Stellung Name / Position	Unterschrift Signature	Datum Date	Name / Stellung Name / Position
Sonstiges / Other: Customer changes brand name, type no and test item. This report only changes the product information. For all test data, please refer to the original report 50209834 001.				
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:		Prüfmuster vollständig und unbeschädigt Test item complete and undamaged		
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested				
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.				

TEST SUMMARY

4.1.1 ANTENNA REQUIREMENT

RESULT: N/A

4.1.2 PEAK OUTPUT POWER

RESULT: N/A

4.1.3 6dB BANDWIDTH

RESULT: N/A

4.1.4 POWER DENSITY

RESULT: N/A

4.1.5 CONDUCTED SPURIOUS EMISSIONS AND FREQUENCY BAND EDGE MEASURED IN 100kHz BANDWIDTH

RESULT: N/A

4.1.6 SPURIOUS EMISSION

RESULT: N/A

4.2.1 MAINS CONDUCTED EMISSIONS

RESULT: N/A

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1. General Remarks

1.1 Complementary Materials

These attachments are integral parts of this test report:

Appendix P: Photo Documentation internal view
(File Name: 50209834 002 Appendix P)

Appendix D: Test Result of Radiated Emissions
(File Name: 50209834 002 Appendix D)

Test Specifications

The following standards were applied.

Table 1: Applied Standard and Test Levels

Radio
NCC Low-power Radio-frequency Devices Technical Regulations LP0002(2018)(107 年 1 月 10 日)

2. Test Sites

2.1 Test Laboratory

TUV Rheinland Taiwan Ltd.
Taichung Branch Office

No.9, Lane 36, Minsheng Rd., Sec. 3, Daya District,
Taichung City 428
Taiwan (R.O.C.)

2.2 Test Facility

TUV Rheinland Taiwan Ltd.
Taipei Office

11F. No.758, Sec. 4, Bade Rd., Songshan Dist.
Taipei City 105
Taiwan (R.O.C.)

FCC RegistrationNo.: 340738
IC Canada Registration No.: 9465A-1
TAF Accredited NCC Test Lab. No.:0759
TAF ISO17025 Certification effective periods: 2016-Jul-1st to 2019-Jun-30th



Testing Laboratory
0759

2.3 Traceability

All measurement equipment calibrations are traceable to NML(Taiwan)/NIST(USA) or where calibration is performed outside Taiwan, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically in a suitably accredited Calibration Lab. Additionally all equipment is verified for proper performance on a regular schedule using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements .

Table 2: Emission Measurement Uncertainty

Parameter	Uncertainty
Radio Frequency	± 0.1 ppm
RF power, conducted	± 1.5 dB
RF power density, conducted	± 3 dB
spurious emissions, conducted	± 3 dB
all emissions, radiated	± 6 dB
Temperature	± 1 °C
Humidity	± 5 %
DC and low frequency voltages	± 3 %

3. General Product Information

3.1 Product Function and Intended Use

The EUT is a sensor. It contains a Zigbee compatible module enabling the user to communicate data through a Wireless interface.
For details refer to the User Guide, Data Sheet and Block Diagram.

3.2 System Details and Ratings

Table 3: Basic Information of EUT

Item	EUT information
Kind of Equipment/Test Item	spike(R)
Type Identification	spike_mobile
Brand Name	pro-micron GmbH

Table 4: Technical Specification of EUT

Technical Specification	Value
Operating Frequencies	2405MHz ~ 2480MHz
Channel Spacing	5MHz
Channel number	16
Operation Voltage	5Vdc
Modulation	OQPSK
Antenna gain	5dBi

4. Test Results

4.1 Transmitter Requirement & Test Suites

4.1.1 Antenna Requirement

RESULT: N/A

Remark : The test results will refer to the original report 50209834 001.

4.1.2 Peak Output Power

RESULT: N/A

Remark : The test results will refer to the original report 50209834 001.

4.1.3 6dB Bandwidth

RESULT: N/A

Remark : The test results will refer to the original report 50209834 001.

4.1.4 Power Density

RESULT: N/A

Remark : The test results will refer to the original report 50209834 001.

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4.1.5 Conducted spurious emissions and Frequency Band Edge measured in 100kHz Bandwidth**RESULT:****N/A**

Remark : The test results will refer to the original report 50209834 001.

4.1.6 Spurious Emission**RESULT:****N/A**

Remark : The test results will refer to the original report 50209834 001.

4.2 Mains Emissions**4.2.1 Mains Conducted Emissions****RESULT:****N/A**

Remark : The test results will refer to the original report 50209834 001.

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