



Prüfbericht-Nr.: <i>Test Report No.:</i>	50090486 001	Auftrags-Nr.: <i>Order No.:</i>	154238236	Seite 1 von 7 <i>Page 1 of 7</i>
Kunden-Referenz-Nr.: <i>Client Reference No.:</i>	52184186	Auftragsdatum: <i>Order date:</i>	06.04.2017	
Auftraggeber: <i>Client:</i>	Delphi Electronics & Safety 2151 E.Lincoln Road M/S C2E, Kokomo, Indiana, United States			
Prüfgegenstand: <i>Test item:</i>	SGM 318 Integrated			
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	S318 FCC ID: L2C0070TR			
Auftrags-Inhalt: <i>Order content:</i>	Complete test			
Prüfgrundlage: <i>Test specification:</i>	FCC KDB # 447498 D01 V06			
Wareneingangsdatum: <i>Date of receipt:</i>	20.05.2017	Refer to the External Photos		
Prüfmuster-Nr.: <i>Test sample No.:</i>	A000516297-001			
Prüfzeitraum: <i>Testing period:</i>	Refer to the test report			
Ort der Prüfung: <i>Place of testing:</i>	MRT Technology(Suzhou) Co., Ltd.			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shanghai) Co., Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von / tested by:		kontrolliert von / reviewed by:		
12.07.2017  Elliot Zhang / Assistant Project Manager Datum Name / Stellung Unterschrift Date Name / Position Signature		12.07.2017  Shi Li / Department Manager Datum Name / Stellung Unterschrift Date Name / Position Signature		
Sonstiges / Other				
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>		Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>		
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend Legend: 1 = very good 2 = good 3 = satisfactory P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s)		4 = ausreichend 5 = mangelhaft 4 = sufficient 5 = poor N/A = nicht anwendbar N/T = nicht getestet N/A = not applicable N/T = not tested		
<p>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.</p> <p><i>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.</i></p>				

v04

TEST SUMMARY

2.2.1 FCC EVALUATION FOR BLUETOOTH CLASSIC

RESULT: Pass

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1. General Product Information

1.1 Product Function and Intended Use

The EUT (Equipment Under Test) is a Bluetooth car radio.

The aim of this report is to evaluate the RF Exposure of the EUT.

For details refer to the User Manual and Circuit Diagram.

1.2 Ratings and System Details

Table 1: Technical Specification of EUT

General Description of EUT	
Product Name:	SGM 318 Integrated
Model No.:	S318
Rated Voltage:	DC 12V
Bluetooth Classical	
Frequency Range:	2402 – 2480MHz
Modulation Type:	BR: GFSK EDR: $\pi/4$ -DQPSK; 8DPSK
Antenna Type:	PCB Antenna
Antenna Gain:	2dBi

2. RF Exposure

2.1 FCC Requirement and Limit

According to FCC KDB # 447498 D01 V06, Clause 4.3.1

- (a) For 100MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

$$\frac{(\text{max. power of channel, including tune - up tolerance, mW})}{(\text{min. test separation distance, mm})} \times \sqrt{f(\text{GHz})}$$

≤ 3.0 , for 1-g SAR, and ≤ 7.5 , for 10-g extremity SAR

2.2 FCC Evaluation Results

2.2.1 FCC Evaluation for Bluetooth Classic

RESULT:
Pass

According to the Bluetooth Classic RF test report No. 50090484 001 issued by TÜV Rheinland (Shanghai) Co., Ltd. And the maximum conducted output power declared in the user manual. The maximum peak conducted output power is

Frequency [GHz]	Maximum Conducted Peak Output Power measured [dBm]	Maximum Conducted Peak Output Power Declared in the UM [dBm]	Maximum Conducted Peak Output Power [mW]
2.480	-0.902	0	1

And the EIRP is:

Frequency [GHz]	Maximum Conducted Peak Output Power [dBm]	Maximum Antenna Gain [dBi]	Maximum EIRP [mW]
2.480	0	2	1.584893192

And for the frequency 2.480GHz, the SAR test exclusion thresholds at the test separation distance 5mm is,

1-g SAR test exclusion thresholds = 9.525009525mW
 10-g SAR test exclusion thresholds = 23.81252381mW

Note: The distance 5mm was used to determine the SAR test exclusion. But the actually distance in normal using is much larger than 5mm.

Conclusion

The device is excluded for SAR test and complies with the FCC exposure requirements since the maximum conducted peak output power is lower than the SAR test exclusion thresholds.

3. List of Tables

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