



BUREAU
VERITAS

Test Report No.: W7L-P20210616-2SA02



RF EXPOSURE REPORT

Product: BL28RW-RD1

Model Name: BL28RW-RD1

FCC ID: LHJ-BL28RWRD1

Applicant: Continental Automotive Systems, Inc.

Address: 21440 W Lake Cook Rd., Deer Park, IL 60010, USA

Manufacturer: Continental Automotive Systems, Inc.

Address: 21440 W Lake Cook Rd., Deer Park, IL 60010, USA

Prepared by: BV 7Layers Communications Technology (Shenzhen) Co. Ltd

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Report No.: W7L-P20210616-2SA02

Received Date: Jun. 15, 2021

Test Date: Jun. 16, 2021 ~ Jul. 26, 2021

Issued Date: Aug. 11, 2021

This report should not be used by the client to claim product certification, approval, or endorsement by A2LA or any government agencies.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
W7L-P20210616-2SA02	Original release	Aug. 11, 2021



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1 CERTIFICATION

PRODUCT: BL28RW-RD1

BRAND NAME: Continental

MODEL NAME: BL28RW-RD1

APPLICANT: Continental Automotive Systems, Inc.

TESTED: Jun. 16, 2021 ~ Jul. 26, 2021

TEST SAMPLE: Identical Prototype

STANDARDS: FCC Part 2 (Section 2.1091)

FCC OET Bulletin 65, Supplement C (01-01)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1

The above equipment has been tested by **BV 7Layers Communications Technology (Shenzhen) Co. Ltd** and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Simon, **DATE:** Aug. 11, 2021
(Simon Wang / Engineer)

APPROVED BY : Luke Lu, **DATE:** Aug. 11, 2021
(Luke Lu / Manager)



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2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	BL28RW-RD1	
MODEL NAME	BL28RW-RD1	
NOMINAL VOLTAGE	EUT 4.0V	
OPERATING TEMPERATURE RANGE	-30-75°C	
MODULATION TYPE	GPS/ GLONASS / BDS/ GALILEO/SBAS	BPSK
	GSM/GPRS/EDGE	GMSK, 8PSK
	WCDMA	BPSK, QPSK
	LTE	QPSK, 16QAM
OPERATING FREQUENCY	GPS/GLONASS/ BDS/ GALILEO/SBSA	1559MHz ~ 1610MHz
	GSM/GPRS/EDGE	824.2MHz ~ 848.8MHz (FOR GSM 850) 1850.2MHz ~ 1909.8MHz (FOR GSM 1900)
	WCDMA	1852.4MHz ~ 1907.6MHz (FOR WCDMA II) 1712.4MHz ~ 1752.6MHz (FOR WCDMA IV) 826.4MHz ~ 846.6MHz (FOR WCDMA V)
	LTE	1850.7MHz ~ 1909.3MHz (FOR LTE Band2) 1710.7MHz ~ 1754.3MHz (FOR LTE Band4) 824.7MHz ~ 848.3MHz (FOR LTE Band5) 2502.5MHz ~ 2567.5MHz (FOR LTE Band7)
ANTENNA GAIN	GSM 850	Dipole Antenna with 0.82dBi gain
	GSM 1900	Dipole Antenna with 1.52dBi gain
	WCDMA II	Dipole Antenna with 1.52dBi gain
	WCDMA IV	Dipole Antenna with 0.68dBi gain
	WCDMA V	Dipole Antenna with 0.82dBi gain
	LTE Band 2	Dipole Antenna with 1.52dBi gain
	LTE Band 4	Dipole Antenna with 0.68dBi gain
	LTE Band 5	Dipole Antenna with 0.82dBi gain
HW VERSION	LTE Band 7	Dipole Antenna with 3.35dBi gain
		P4.0



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SW VERSION	MODEM9x28_64.01.15
I/O PORTS	Refer to user's manual
CABLE SUPPLIED	N/A

NOTE:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.



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3 RF EXPOSURE

3.1 LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm ²)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	F/1500	30
1500-100,000	1.0	30

F = Frequency in MHz

3.2 MPE CALCULATION FORMULA

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

where

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

3.3 CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user.



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3.4 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

Band	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum EIRP (W)	Average EIRP (mW)	Power Density at 20cm (mW/cm^2)	Limit (mW/cm^2)
GSM 850	7.1	33.5	40.601	11.484	1445.766	0.288	0.549
GSM 1900	2.5	30.5	33.010	2.000	251.785	0.050	1.000
WCDMA Band 5	9.5	24.5	34.000	2.512	2511.886	0.500	0.536
WCDMA Band 4	5.5	24.5	30.000	1.000	1000.000	0.199	1.000
WCDMA Band 2	8.5	24.5	33.010	2.000	2000.000	0.398	1.000
LTE Band 5	10.0	24.0	34.000	2.512	2511.886	0.500	0.549
LTE Band 4	6.0	24.0	30.000	1.000	1000.000	0.199	1.000
LTE Band 2	9.0	24.0	33.010	2.000	2000.000	0.398	1.000
LTE Band 7	9.0	24.0	33.010	2.000	2000.000	0.398	1.000

--END--