



Produkte
Products

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Auftraggeber: TECHTOM Ltd. <i>Client:</i> Shiba Bldg. 5F, 5-3-11 Chuo, Nakano-ku, Tokyo 164-0011, Japan					
Gegenstand der Prüfung: Vehicle Management Device 20 <i>Test Item:</i>					
Bezeichnung: CS20-**F-*.*) (Refer to section 2.2.) <i>Identification:</i>			Serien-Nr.: N/A <i>Serial No.:</i>		
Wareneingangs-Nr.: PT0214045569 <i>Receipt No.:</i>			Eingangsdatum: <i>Date of Receipt:</i>		
Zustand des Prüfgegenstandes bei Anlieferung: Good <i>Condition of Test Item at Delivery:</i>					
Prüfört: TÜV Rheinland Japan Ltd. – Global Technology Assessment Center <i>Testing Location:</i> 4-25-2 Kita-Yamata, Tsuzuki-ku, Yokohama 224-0021, Japan					
Prüfgrundlage: FCC 47 CFR Part 22, Subpart H <i>Test Specification:</i> FCC 47 CFR Part 24, Subpart E					
Prüfergebnis: Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n). <i>Test Result:</i> <i>The test item passed the test specification(s).</i>					
Prüflaboratorium: TÜV Rheinland Japan Ltd. – Global Technology Assessment Center <i>Testing Laboratory:</i> 4-25-2 Kita-Yamata, Tsuzuki-ku, Yokohama 224-0021, Japan					
geprüft/ tested by: <div style="text-align: center; margin-top: 20px;">  2014-05-26 T. Sauter / Inspector </div>			kontrolliert/ reviewed by: <div style="text-align: center; margin-top: 20px;">  2014-05-26 R. Meiranke / Reviewer </div>		
Datum Date	Name/Stellung Name/Position	Unterschrift Signature	Datum Date	Name/Stellung Name/Position	Unterschrift Signature
Sonstiges / Other Aspects: <p>The Equipment Under Test (EUT) is a Car Sharing and Status Management Module. It contains a cellular/PCS module, an RFID unit and a GPS unit. The cellular/PCS module was already tested and certified according to FCC rules (modular approval, FCC ID: N7NSL9090).</p> <p>This test report covers only FCC 22H and 24E requirements for the cellular/PCS function. Since the cellular/PCS module was already granted a modular approval, the EUT is deemed to comply with the FCC 22H and 24E requirements without testing. Refer to section 1. General Remarks for details.</p>					
Abkürzungen: P(ass) = entspricht Prüfgrundlage F(ail) = entspricht nicht Prüfgrundlage N/A = nicht anwendbar N/T = nicht getestet			Abbreviations: P(ass) = passed F(ail) = failed 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 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 safety mark on this or similar products.</i></p>					

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1. General Remarks

The Equipment Under Test (EUT) is a Car Sharing and Status Management Module. It contains a cellular/PCS module, an RFID unit and a GPS unit.

The cellular/PCS module was already tested and certified according to FCC 22H and 24E (modular approval, FCC ID: N7NSL9090). Therefore the EUT is deemed to meet the FCC 22H and 24E requirements without testing.

For details on the tests performed on the cellular/PCS module and for the associated application documents, refer to cellular/PCS module FCC application (FCC ID: N7NSL9090).

This test report supersedes test report 50003239 002 by TÜV Rheinland Japan Ltd.

1.1 Complementary Materials

There is no attachment to this test report.

2. General Product Information

2.1 Product Function and Intended Use

The EUT (Equipment Under Test) is a M2M apparatus used in vehicular environment as car sharing and status management module. It has cellular/PCS, GPS and RFID interfaces.

The cellular/PCS function is used to send GPS position and other status information to a remote server. The RFID function is used to lock or unlock the vehicle.

2.2 System Details

Table 1: Radio Specifications

Radio Standard:	Cellular/PCS: CDMA2000 1x/EVDO Rev. A (Band 0: 800MHz, Band 1: 1900MHz) GSM/GPRS/EDGE (850/1900) WCDMA/HSPA (850/1900) GPS (L1) RFID (ISO 14443)		
Frequency Range:	CDMA2000: GSM/GPRS/EDGE: WCDMA: GPS: RFID:	Band 0: 850: 850: 1575.42MHz (RX) 13.56MHz (TX/RX)	UL: 824-849MHz, DL: 869-894MHz UL: 1850-1910MHz, DL: 1930-1990MHz UL: 824-849MHz, DL: 869-894MHz UL: 1850-1910MHz, DL: 1930-1990MHz UL: 824-849MHz, DL: 869-894MHz UL: 1850-1910MHz, DL: 1930-1990MHz
Output Power:	CDMA2000: GSM/GPRS: EDGE: WCDMA/HSPA: GPS: RFID:	Band 0: 0.265W, 850: 1.754W, 850: 0.459W, 850: 0.201W, - 60.3dBuV/m at 3m	Band 1: 0.272W 1900: 0.863W 1900: 0.337W 1900: 0.183W
Emission Designator:	CDMA2000: GSM/GPRS: EDGE: WCDMA/HSPA: GPS: RFID:	Band 0: 1M28F9W, 850: 244KGXW, 850: 248KG7W, 850: 4M13F9W, - 119HA1D	Band 1: 1M29F9W 1900: 248KGXW 1900: 242KG7W 1900: 4M14F9W
Antenna Gain:	Cellular/PCS: GPS: RFID:	2.5dBi Unspecified Unspecified	
Antenna Type:	Cellular/PCS: GPS: RFID:	Patch antenna Patch antenna Loop antenna	

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FCC classification: DXX for RFID function
PCB for cellular/PCS function

Rated voltage: DC 12V & DC24V

Rated current: Max. 8A or lower (during door lock), 300mA (during transmission), 20mA or lower during sleep condition (DC 12V)

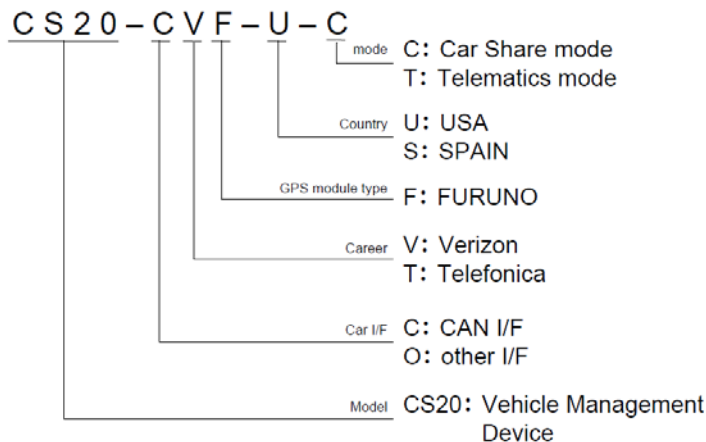
Protection class: III

The model number (product identification) of the EUT is described here below:

Model Name: Vehicle Management Device 20

Model Number: CS20-**F-**-* (ex. CS20-CVF-U-C)

How to Read the Product Type



All model numbers have the same hardware. Only internal software is different. The model used for testing had a special modified internal software for the operation of the product in appropriate test modes.

2.3 Clock Frequencies

The highest frequency generated or used by the EUT is 192MHz for the digital interface.

2.4 Noise Suppressing Parts

Refer to schematics.