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RADIO TEST REPORT

Report No.: STS2111139W01

Issued for

CHEP

2901 Tasman Drive Suite 107 Santa Clara, CA 95054

Product Name:	Pallet Tracker
Brand Name:	CHEP
Model Name:	Gen 3 Ultra Wide
Series Model:	N/A
FCC ID:	2APRD-ULTRASHORT
Test Standard:	FCC Part 22H and 24E

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Shenzhen STS Test Services Co., Ltd.

A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ,
Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China

TEL: +86-755 3688 6288 FAX: +86-755 3688 6277 E-mail: sts@stsapp.com



**TEST RESULT CERTIFICATION**

Applicant's Name: CHEP
Address: 2901 Tasman Drive Suite 107 Santa Clara, CA 95054
Manufacturer's Name: Minewing (Shenzhen) Electronics Integrated Co., Ltd
Address: Floor #2, Building H2, Hongfa-Tech Park, No 32 TonG Tau Road,
ShiYan Town, Bao'An District, Shenzhen, China, 518108

Product Description

Product Name: Pallet Tracker
Brand Name: CHEP
Model Name: Gen 3 Ultra Wide
Series Model: N/A
Test Standards: FCC Part 22H and 24E
Test Procedure: KDB 971168 D01 v03r01, ANSI C63.26 (2015)

This device described above has been tested by STS, the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.
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Date of Test.....:

Date of receipt of test item.....: 22 Nov. 2021
Date (s) of performance of tests.: 22 Nov. 2021 ~ 07 Dec. 2021
Date of Issue: 07 Dec. 2021
Test Result: Pass

Testing Engineer :

(Chris Chen)

Technical Manager :

(Sean she)

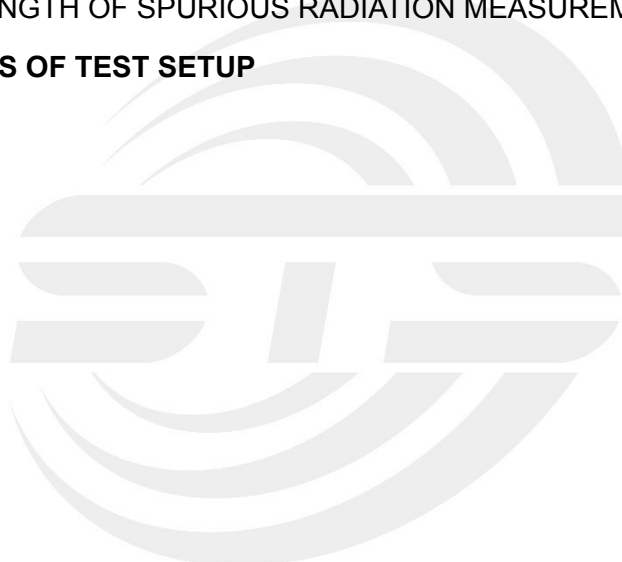
Authorized Signatory :

(Vita Li)





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**Revision History**

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	07 Dec. 2021	STS2111139W01	ALL	Initial Issue





1 INTRODUCTION

1.1 SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

The radiated emission testing was performed according to the procedures of KDB 971168 D01 v03r01 and ANSI C63.26 (2015)

FCC Rules	Test Description	Test Limit	Test Result	Reference
2.1046 22.913 24.232	Effective Radiated Power/Equivalent Isotropic Radiated Power	< 7 Watts max. ERP(Part 22) < 2 Watts max. EIRP(Part 24)	PASS	
2.1053 22.917 24.238	Field Strength of Spurious Radiation	< 43+10log10(P[Watts])	PASS	





1.2 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD

Add. : A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01

1.3 MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4-2014. All measurement uncertainty values are shown with a coverage factor of $k = 2$ to indicate a 95% level of confidence. The measurement data shown here in meets or exceeds the UCISPR measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

No.	Item	Uncertainty
1	RF output power, conducted	$\pm 0.68\text{dB}$
2	Unwanted Emissions, conducted	$\pm 2.988\text{dB}$
3	All emissions, radiated 9K-30MHz	$\pm 2.84\text{dB}$
4	All emissions, radiated 30M-1GHz	$\pm 4.39\text{dB}$
5	All emissions, radiated 1G-6GHz	$\pm 5.10\text{dB}$
6	All emissions, radiated >6G	$\pm 5.48\text{dB}$
7	Conducted Emission (9KHz-150KHz)	$\pm 2.79\text{dB}$
8	Conducted Emission (150KHz-30MHz)	$\pm 2.80\text{dB}$



2 PRODUCT INFORMATION

Product Name:	Pallet Tracker
Trade Name:	CHEP
Model Name:	Gen 3 Ultra Wide
Series Model:	N/A
Model Difference:	N/A
Tx Frequency:	GPRS/EDGE: 850: 824 MHz ~ 849MHz 1900: 1850 MHz ~ 1910MHz
Rx Frequency:	GPRS/EDGE: 850: 869 MHz ~ 894 MHz 1900: 1930 MHz ~ 1990MHz
SIM Card:	Only support Single SIM Card.
Antenna:	PIFA
Antenna gain:	GSM850:-1.1dBi, GSM1900:-2.0dBi
Battery:	Rated Voltage:3V
GPRS/EDGE Class:	Multi-Class12
Extreme Vol. Limits:	DC 2.7V~ DC 3.3V(Normal: DC 3V)
Extreme Temp. Tolerance:	-30°C to +50°C
Hardware version number:	48JKB101.SGB
Software version number:	v01.02.0015
** Note: The High Voltage 3.3V and Low Voltage 2.7V was declared by manufacturer, The EUT couldn't be operate normally with higher or lower voltage.	



3 TEST CONFIGURATION OF EQUIPMENT UNDER TEST

Antenna port conducted and radiated test items were performed according to KDB 971168 D01 and ANSI C63.26 2015 Power Meas. License Digital Systems with maximum output power.

Radiated measurements were performed with rotating EUT in different three orthogonal test planes to find the maximum emission.

Radiated emissions were investigated as following frequency range:

1. 30 MHz to 10th harmonic for GSM850.
2. 30 MHz to 10th harmonic for GSM1900.

All modes and data rates and positions were investigated.

Test modes are chosen to be reported as the worst case configuration below:

	TEST MODES	
	RADIATED TCS	CONDUCTED TCS
BAND		
GSM 850	GPRS/EDGE CLASS 12 LINK	GPRS/EDGE CLASS 12 LINK
GSM 1900	GPRS/EDGE CLASS 12 LINK	GPRS/EDGE CLASS 12 LINK



4 MEASUREMENT INSTRUMENTS

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2021.09.30	2022.09.29
Signal Analyzer	R&S	FSV 40-N	101823	2021.09.30	2022.09.29
Signal Generator	Agilent	83752A	3610A02740	2021.09.30	2022.09.29
Wireless Communications Test Set	R&S	CMW 500	133884	2021.03.04	2022.03.03
Bilog Antenna	TESEQ	CBL6111D	34678	2020.10.12	2022.10.11
Horn Antenna	SCHWARZBECK	BBHA 9120D	02014	2021.10.11	2023.10.10
Bilog Antenna	TESEQ	CBL6111D	45873	2020.10.12	2022.10.11
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1343	2020.10.12	2022.10.11
SHF-EHF Horn Antenna (18G-40GHz)	A-INFO	LB-180400-KF	J211020657	2020.10.12	2022.10.11
Pre-Amplifier (0.1M-3GHz)	EM	EM330	060665	2021.10.08	2022.10.07
Pre-Amplifier (1G-18GHz)	SKET	LNPA-01018G-45	SK2018080901	2021.09.30	2022.09.29
Pre-Amplifier (18G-40GHz)	SKET	LNPA-1840-50	SK2018101801	2021.09.28	2022.09.27
Turn table	EM	SC100_1	60531	N/A	N/A
Antenna mast	EM	SC100	N/A	N/A	N/A
Temperature & Humidity	HH660	Mieo	N/A	2021.10.09	2022.10.08
Test SW	BALUN	BL410-E/18.905			

RF Connected Test

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Universal Radio communication tester	R&S	CMU200	111058	2021.09.29	2022.09.28
Wireless Communications Test Set	R&S	CMW 500	133884	2021.03.04	2022.03.03
Signal Analyzer	Agilent	N9020A	MY52440124	2021.03.04	2022.03.03
Temperature & Humidity test chamber	Safety test	AG80L	171200018	2021.03.04	2022.03.03
Programmable power supply	Agilent	E3642A	MY40002025	2021.10.08	2022.10.07
Temperature & Humidity	SW-108	SuWei	N/A	2021.03.04	2022.03.03
Test SW	FARAD	LZ-RF /LzRf-3A3			

Equipment with a calibration date of "NCR" shown in this list was not used to make direct calibrated measurements.



5 TEST ITEMS

5.1 TRANSMITTER RADIATED POWER (EIRP/ERP)

TEST OVERVIEW

Effective Radiated Power (ERP) and Equivalent Isotropic Radiated Power (EIRP) measurements are performed using the substitution method described in ANSI C63.26 2015 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically polarized broadband horn antennas. All measurements are performed as RMS average measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

TEST PROCEDURE

1. The testing follows FCC KDB 971168 D01 Section 5.2.2 (for GSM/GPRS/EDGE) and ANSI C63.26-2015 Section 5.2.
2. The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.
3. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.
4. The frequency range up to tenth harmonic of the fundamental frequency was investigated.
5. Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a nonradiating cable. The absolute levels of the spurious emissions were measured by the substitution.
6. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to ANSI C63.26-2015. The EUT was replaced by the substitution antenna at same location, and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna.
 $EIRP = S.G \text{ Level} + \text{Gain} - \text{Cable loss}$; $ERP = S.G \text{ Level} + \text{Gain} - \text{Cable loss} - 2.15$.



TEST RESULT

Radiated Power (ERP) for GSM 850 MHz								
Mode	Frequency	Result						Conclusion
		S G.Level (dBm)	Cable loss	Gain(dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization	
							Of Max. ERP	
GSM850	824.2	23.95	0.44	6.5	2.15	27.86	Horizontal	Pass
	824.2	26.33	0.44	6.5	2.15	30.24	Vertical	Pass
	836.6	23.69	0.45	6.5	2.15	27.59	Horizontal	Pass
	836.6	26.15	0.45	6.5	2.15	30.05	Vertical	Pass
	848.8	24.01	0.46	6.5	2.15	27.90	Horizontal	Pass
	848.8	26.49	0.46	6.5	2.15	30.38	Vertical	Pass
GPRS850	824.2	23.87	0.44	6.5	2.15	27.78	Horizontal	Pass
	824.2	26.06	0.44	6.5	2.15	29.97	Vertical	Pass
	836.6	23.96	0.45	6.5	2.15	27.86	Horizontal	Pass
	836.6	26.21	0.45	6.5	2.15	30.11	Vertical	Pass
	848.8	23.50	0.46	6.5	2.15	27.39	Horizontal	Pass
	848.8	25.76	0.46	6.5	2.15	29.65	Vertical	Pass
Limit	ERP<7W=38.45dBm							

Radiated Power (EIRP) for PCS 1900 MHZ							
Mode	Frequency	Result					Conclusion
		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization	
						Of Max. EIRP	
PCS1900	1850.2	17.24982	2.41	10.35	25.19	Horizontal	Pass
	1850.2	18.465334	2.41	10.35	26.41	Vertical	Pass
	1880	15.904262	2.42	10.35	23.83	Horizontal	Pass
	1880	16.371924	2.42	10.35	24.30	Vertical	Pass
	1909.8	16.028234	2.43	10.35	23.95	Horizontal	Pass
	1909.8	18.141916	2.43	10.35	26.06	Vertical	Pass
GPRS1900	1850.2	16.755865	2.41	10.35	24.70	Horizontal	Pass
	1850.2	18.469635	2.41	10.35	26.41	Vertical	Pass
	1880	16.494259	2.42	10.35	24.42	Horizontal	Pass
	1880	18.383674	2.42	10.35	26.31	Vertical	Pass
	1909.8	15.994913	2.43	10.35	23.91	Horizontal	Pass
	1909.8	18.534257	2.43	10.35	26.45	Vertical	Pass
Limit	EIRP<2W=33dBm						



5.2 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

TEST OVERVIEW

Radiated spurious emissions measurements are performed using the substitution method described in ANSI C63.26-2015 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using horizontally and vertically polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized horn antennas. All measurements are performed as peak measurements while the EUT is operating at maximum power and at the appropriate frequencies.

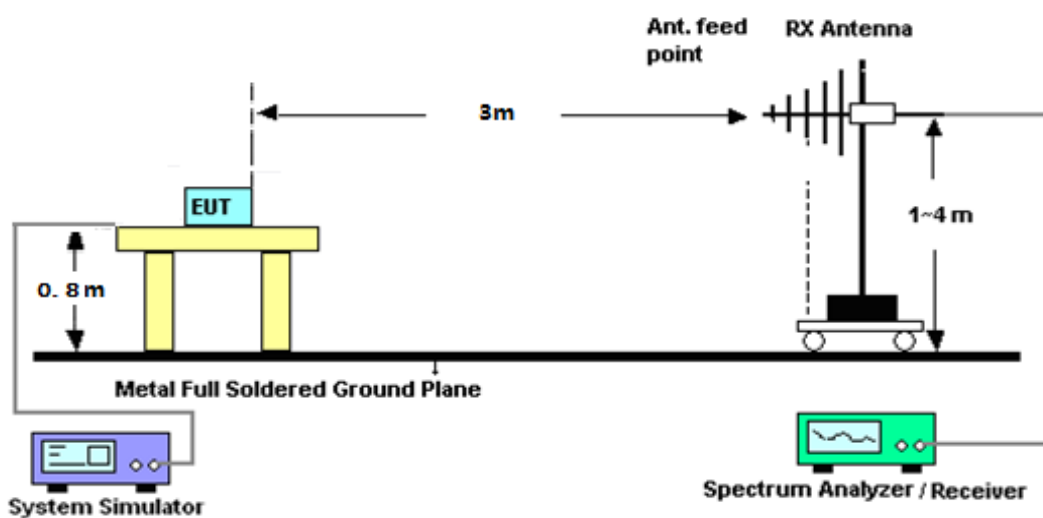
It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

TEST PROCEDURE

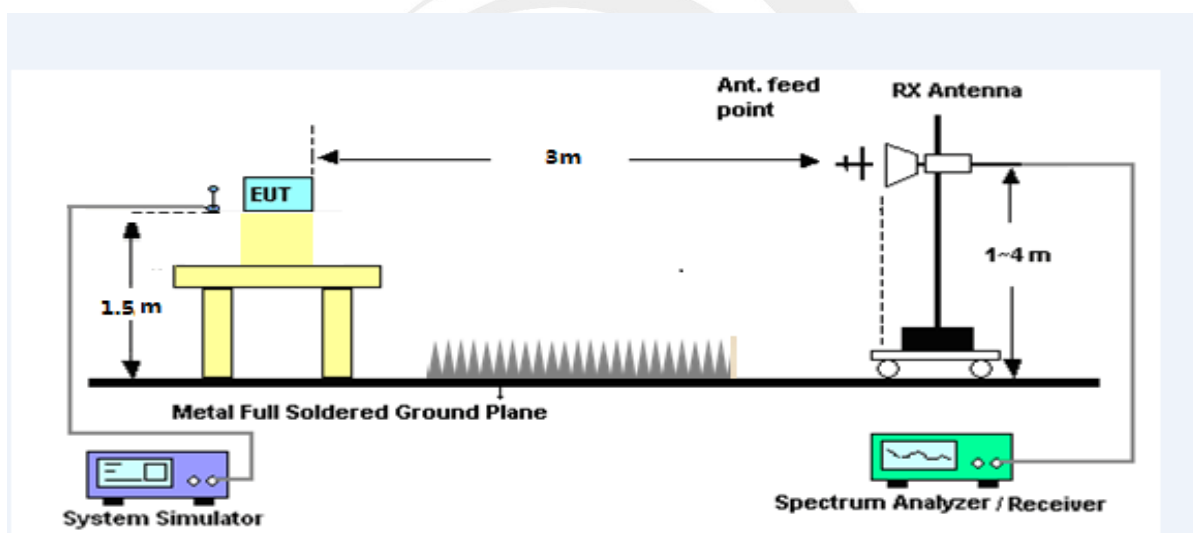
1. The testing FCC KDB 971168 D01 Section 5.8 and ANSI C63.26-2015-Section 5.5.
2. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
3. VBW $\geq 3 \times$ RBW
4. Span = 1.5 times the OBW
5. No. of sweep points $> 2 \times$ span/RBW
6. Detector = Peak
7. Trace mode = max hold
8. The trace was allowed to stabilize
9. Effective Isotropic Spurious Radiation was measured by substitution method according to TIA/EIA-603-E. The EUT was replaced by the substitution antenna at same location, and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna.
 $P_{Mea} = S.G \text{ Level} + \text{Ant-Cable loss}$; $\text{Margin} = P_{Mea} - \text{Limit}$.

TEST SETUP

For radiated test from 30MHz to 1GHz



For radiated test from above 1GHz



**TEST RESULT**

Note: (1) Spurious emissions which are attenuated by more than 20dB below the permissible value for frequency below 1000MHz.

(2) Above 3.5GHz amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value.

(3) Test is divided into three directions, X/Y/Z. X pattern for the worst.

GSM 850: (30-9000)MHz							
The Worst Test Results Channel 128/824.2 MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1648.02	-40.26	9.40	4.75	-35.61	-13.00	-22.61	H
2472.62	-39.93	10.60	8.39	-37.72	-13.00	-24.72	H
3296.46	-32.17	12.00	11.79	-31.96	-13.00	-18.96	H
1648.06	-43.97	9.40	4.75	-39.32	-13.00	-26.32	V
2472.37	-45.42	10.60	8.39	-43.21	-13.00	-30.21	V
3296.78	-43.57	12.00	11.79	-43.36	-13.00	-30.36	V
The Worst Test Results Channel 190/836.6 MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1672.79	-40.42	9.50	4.76	-35.68	-13.00	-22.68	H
2509.56	-39.90	10.70	8.40	-37.60	-13.00	-24.60	H
3346.38	-31.09	12.20	11.80	-30.69	-13.00	-17.69	H
1672.92	-43.32	9.40	4.75	-38.67	-13.00	-25.67	V
2509.71	-44.50	10.60	8.39	-42.29	-13.00	-29.29	V
3345.98	-43.61	12.20	11.82	-43.23	-13.00	-30.23	V
The Worst Test Results Channel 251/848.8 MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1697.44	-41.32	9.60	4.77	-36.49	-13.00	-23.49	H
2546.49	-40.13	10.80	8.50	-37.83	-13.00	-24.83	H
3395.27	-32.02	12.50	11.90	-31.42	-13.00	-18.42	H
1697.25	-44.44	9.60	4.77	-39.61	-13.00	-26.61	V
2546.22	-44.83	10.80	8.50	-42.53	-13.00	-29.53	V
3395.18	-43.04	12.50	11.90	-42.44	-13.00	-29.44	V



GPRS 850: (30-9000)MHz							
The Worst Test Results Channel 128/824.2 MHz							
Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
1648.05	-40.43	9.40	4.75	-35.78	-13.00	-22.78	H
2472.35	-39.43	10.60	8.39	-37.22	-13.00	-24.22	H
3296.75	-30.85	12.00	11.79	-30.64	-13.00	-17.64	H
1648.15	-44.34	9.40	4.75	-39.69	-13.00	-26.69	V
2472.57	-44.42	10.60	8.39	-42.21	-13.00	-29.21	V
3296.87	-43.36	12.00	11.79	-43.15	-13.00	-30.15	V
The Worst Test Results Channel 190/836.6 MHz							
Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
1672.93	-41.00	9.50	4.76	-36.26	-13.00	-23.26	H
2509.43	-39.47	10.70	8.40	-37.17	-13.00	-24.17	H
3346.39	-31.26	12.20	11.80	-30.86	-13.00	-17.86	H
1672.96	-44.55	9.40	4.75	-39.90	-13.00	-26.90	V
2509.54	-44.45	10.60	8.39	-42.24	-13.00	-29.24	V
3346.02	-43.17	12.20	11.82	-42.79	-13.00	-29.79	V
The Worst Test Results Channel 251/848.8 MHz							
Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
1697.68	-41.08	9.60	4.77	-36.25	-13.00	-23.25	H
2546.34	-40.29	10.80	8.50	-37.99	-13.00	-24.99	H
3395.00	-32.19	12.50	11.90	-31.59	-13.00	-18.59	H
1697.45	-44.33	9.60	4.77	-39.50	-13.00	-26.50	V
2546.10	-45.36	10.80	8.50	-43.06	-13.00	-30.06	V
3395.11	-43.79	12.50	11.90	-43.19	-13.00	-30.19	V



EGPRS 850: (30-9000)MHz							
The Worst Test Results Channel 128/824.2 MHz							
Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
1648.45	-40.89	9.40	4.75	-36.24	-13.00	-23.24	H
2472.39	-39.82	10.60	8.39	-37.61	-13.00	-24.61	H
3296.51	-31.21	12.00	11.79	-31.00	-13.00	-18.00	H
1648.28	-43.45	9.40	4.75	-38.80	-13.00	-25.80	V
2472.21	-44.24	10.60	8.39	-42.03	-13.00	-29.03	V
3296.90	-43.75	12.00	11.79	-43.54	-13.00	-30.54	V
The Worst Test Results Channel 190/836.6 MHz							
Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
1672.83	-40.80	9.50	4.76	-36.06	-13.00	-23.06	H
2509.45	-39.54	10.70	8.40	-37.24	-13.00	-24.24	H
3345.98	-31.11	12.20	11.80	-30.71	-13.00	-17.71	H
1672.87	-44.02	9.40	4.75	-39.37	-13.00	-26.37	V
2509.60	-45.23	10.60	8.39	-43.02	-13.00	-30.02	V
3346.38	-42.64	12.20	11.82	-42.26	-13.00	-29.26	V
The Worst Test Results Channel 251/848.8 MHz							
Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
1697.64	-41.30	9.60	4.77	-36.47	-13.00	-23.47	H
2546.50	-40.10	10.80	8.50	-37.80	-13.00	-24.80	H
3394.93	-31.11	12.50	11.90	-30.51	-13.00	-17.51	H
1697.39	-43.49	9.60	4.77	-38.66	-13.00	-25.66	V
2546.39	-45.24	10.80	8.50	-42.94	-13.00	-29.94	V
3395.22	-43.85	12.50	11.90	-43.25	-13.00	-30.25	V



DCS 1900: (30-20000)MHz							
The Worst Test Results for Channel 512/1850.2MHz							
Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
3700.44	-33.49	12.60	12.93	-33.82	-13.00	-20.82	H
5550.56	-34.09	13.10	17.11	-38.10	-13.00	-25.10	H
7400.68	-33.01	11.50	22.20	-43.71	-13.00	-30.71	H
3700.51	-35.05	12.60	12.93	-35.38	-13.00	-22.38	V
5550.40	-33.86	13.10	17.11	-37.87	-13.00	-24.87	V
7400.53	-31.73	11.50	22.20	-42.43	-13.00	-29.43	V
The Worst Test Results for Channel 661/1880.0MHz							
Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
3760.05	-34.21	12.60	12.93	-34.54	-13.00	-21.54	H
5640.01	-34.99	13.10	17.11	-39.00	-13.00	-26.00	H
7520.13	-32.76	11.50	22.20	-43.46	-13.00	-30.46	H
3759.96	-35.07	12.60	12.93	-35.40	-13.00	-22.40	V
5639.90	-34.19	13.10	17.11	-38.20	-13.00	-25.20	V
7520.29	-32.92	11.50	22.20	-43.62	-13.00	-30.62	V
The Worst Test Results for Channel 810/1909.8MHz							
Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
3819.52	-34.91	12.60	12.93	-35.24	-13.00	-22.24	H
5729.12	-35.36	13.10	17.11	-39.37	-13.00	-26.37	H
7639.19	-32.48	11.50	22.20	-43.18	-13.00	-30.18	H
3819.73	-35.15	12.60	12.93	-35.48	-13.00	-22.48	V
5729.13	-34.54	13.10	17.11	-38.55	-13.00	-25.55	V
7639.34	-33.02	11.50	22.20	-43.72	-13.00	-30.72	V



GPRS1900: (30-20000)MHz							
The Worst Test Results for Channel 512/1850.2MHz							
Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
3700.21	-33.68	12.60	12.93	-34.01	-13.00	-21.01	H
5550.37	-35.08	13.10	17.11	-39.09	-13.00	-26.09	H
7400.50	-32.57	11.50	22.20	-43.27	-13.00	-30.27	H
3700.51	-34.81	12.60	12.93	-35.14	-13.00	-22.14	V
5550.41	-33.91	13.10	17.11	-37.92	-13.00	-24.92	V
7400.93	-33.05	11.50	22.20	-43.75	-13.00	-30.75	V
The Worst Test Results for Channel 661/1880.0MHz							
Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
3759.97	-34.19	12.60	12.93	-34.52	-13.00	-21.52	H
5640.19	-35.00	13.10	17.11	-39.01	-13.00	-26.01	H
7519.82	-32.97	11.50	22.20	-43.67	-13.00	-30.67	H
3760.21	-34.81	12.60	12.93	-35.14	-13.00	-22.14	V
5640.08	-33.97	13.10	17.11	-37.98	-13.00	-24.98	V
7519.88	-31.91	11.50	22.20	-42.61	-13.00	-29.61	V
The Worst Test Results for Channel 810/1909.8MHz							
Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
3819.59	-33.62	12.60	12.93	-33.95	-13.00	-20.95	H
5729.27	-35.07	13.10	17.11	-39.08	-13.00	-26.08	H
7639.23	-33.07	11.50	22.20	-43.77	-13.00	-30.77	H
3819.59	-34.87	12.60	12.93	-35.20	-13.00	-22.20	V
5729.22	-35.18	13.10	17.11	-39.19	-13.00	-26.19	V
7639.32	-31.78	11.50	22.20	-42.48	-13.00	-29.48	V



EGPRS 1900: (30-20000)MHz							
The Worst Test Results for Channel 512/1850.2MHz							
Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
3700.23	-33.77	12.60	12.93	-34.10	-13.00	-21.10	H
5550.61	-34.20	13.10	17.11	-38.21	-13.00	-25.21	H
7400.76	-32.18	11.50	22.20	-42.88	-13.00	-29.88	H
3700.51	-34.83	12.60	12.93	-35.16	-13.00	-22.16	V
5550.21	-33.85	13.10	17.11	-37.86	-13.00	-24.86	V
7400.65	-32.70	11.50	22.20	-43.40	-13.00	-30.40	V
The Worst Test Results for Channel 661/1880.0MHz							
Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
3759.99	-34.65	12.60	12.93	-34.98	-13.00	-21.98	H
5640.24	-34.81	13.10	17.11	-38.82	-13.00	-25.82	H
7520.25	-32.87	11.50	22.20	-43.57	-13.00	-30.57	H
3759.97	-35.26	12.60	12.93	-35.59	-13.00	-22.59	V
5640.20	-33.87	13.10	17.11	-37.88	-13.00	-24.88	V
7519.85	-32.95	11.50	22.20	-43.65	-13.00	-30.65	V
The Worst Test Results for Channel 810/1909.8MHz							
Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
3819.67	-34.49	12.60	12.93	-34.82	-13.00	-21.82	H
5729.50	-34.60	13.10	17.11	-38.61	-13.00	-25.61	H
7639.03	-33.39	11.50	22.20	-44.09	-13.00	-31.09	H
3819.39	-35.60	12.60	12.93	-35.93	-13.00	-22.93	V
5729.28	-35.13	13.10	17.11	-39.14	-13.00	-26.14	V
7639.21	-32.02	11.50	22.20	-42.72	-13.00	-29.72	V



APPENDIX-PHOTOS OF TEST SETUP

Note: See test photos in setup photo document for the actual connections between Product and support equipment.

*****END OF THE REPORT*****

