

FCC 47 CFR PART 22H AND 24E CERTIFICATION TEST REPORT

FOR

SMART BRACELET

MODEL NUMBER: MICA

FCC ID: 2AB8ZND2

REPORT NUMBER: 14U19370-E2, Revision C

ISSUE DATE: DECEMBER 05, 2014

Prepared for INTEL CORPORATION 2200 MISSION COLLEGE BOULEVARD SANTA CLARA, CA 95052, U.S.A.

Prepared by UL VERIFICATION SERVICES INC. 47173 BENICIA STREET FREMONT, CA 94538, U.S.A. TEL: (510) 771-1000 FAX: (510) 661-0888

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Revision History

Rev.	lssue Date	Revisions	Revised By
	11/21/14	Initial Issue	M. Hua
A	11/26/14	Addressed TCB's questions on Section 7.2, 7.3 & 7.4	C. Pang
В	12/01/14	Addressed TCB's questions on Section for 5.3	C. Pang
С	12/05/14	Address TCB's question on Section 7	C. Pang

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1. ATTESTATION OF TEST RESULTS

	APPLICABLE STANDARDS	
DATE TESTED:	NOVEMBER 12 – DECEMBER 05, 2014	
FZMK4440002B		
MODEL:	MICA	
EUT DESCRIPTION:	SMART BRACELET	
COMPANY NAME:	INTEL CORPORATION 2200 MISSION COLLEGE BOULEVARD SANTA CLARA, CA 95052, U.S.A.	

STANDARD	TEST RESULTS
FCC PART 22H and 24E	Pass

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For UL Verification Services Inc. By:

Chin Pang Senior Engineer UL Verification Services Inc.

Tested By:

Mona Hua Lab Engineer UL Verification Services Inc.

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with TIA-603-C, FCC CFR 47 Part 2, Part 22 and Part 24.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street
Chamber A	🛛 Chamber D
Chamber B	Chamber E
Chamber C	🖂 Chamber F
	Chamber G
	Chamber H

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <u>http://ts.nist.gov/standards/scopes/2000650.htm</u>.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB) 36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	±3.52 dB
Radiated Disturbance, 30 to 1000 MHz	±4.94 dB

Uncertainty figures are valid to a confidence level of 95%.

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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a smart bracelet with cellular GPRS/WCDMA/HSDPA and Bluetooth low power.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak conducted and ERP / EIRP output powers as follows:

GSM MODES

Part 22 850MHz Band						
Frequency range	Modulation	Conducted (Peak)		ERP (Peak)		
(MHz)		dBm	mW	dBm	mW	
824 - 849	GPRS	33.30	2138.0	29.21	833.7	

Part 24 1900MHz Band							
Frequency range	Modulation	Conducted (Peak)		EIRP (Peak)			
(MHz)		dBm	mW	dBm	mW		
1850 - 1910	GPRS	30.10	1023.3	28.48	704.7		

WCDMA MODES

Part 22 850MHz Band						
Frequency range	Modulation	Conducted (Peak)		ERP (Peak)		
(MHz)		dBm	mW	dBm	mW	
004 040	REL 99	27.28	534.6	20.59	114.6	
024 - 049	HSDPA	27.20	524.8	20.29	106.9	

Part 24 1900MHz Band							
Frequency range	Modulation	Conducted (Peak)		EIRP (Peak)			
(MHz)		dBm	mW	dBm	mW		
1950 1010	REL 99	27.20	524.8	26.28	424.6		
1650 - 1910	HSDPA	26.75	473.2	25.93	391.7		

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5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a mono-pole type antenna for the following bands with a maximum peak gain as follow:

Frequency (MHz)	Gain (dBi)
Cell, 824 - 849	-7.5
PCS, 1850 - 1910	1.30

For more detail information, please see MICA 3G antenna document.

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was xmm6321_xges2_ndg_mckee2.

5.5. WORST-CASE CONFIGURATION AND MODE

Based on the investigation results, the highest peak power and enhanced data rate is the worstcase scenario for all measurements.

- For Cellular and PCS band: GPRS
- For Cellular and PCS band: UMTS, REL 99 and HSDPA

For the fundamental investigation, since the EUT is a portable device that has two orientations; X, and Y orientations and the worst among X, and Y without AC/DC adapter have been investigated. The worst case was found to be at X-position (flatbed) for all PCS bands and Y-position (portrait) for Cell bands.

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5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

N/A

I/O CABLES (RF Conducted Test)

I/O CABLE LIST									
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks			
1	RF In/Out	1	EUT	Un-shielded	1m	N/A			
2	RF In/Out	1	Spectrum Analyzer	Un-shielded	1m	N/A			
3	RF In/Out	1	Communication Test Set	Un-shielded	None	N/A			

I/O CABLES (RF Radiated Test)

	I/O CABLE LIST								
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks			
1	RF In/Out	1	Antenna	Un-shielded	5m	NA			

TEST SETUP

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CONDUCTED SETUP



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RADIATED SETUP



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6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report.

TEST EQUIPMENT LIST									
Description	Manufacturer	Model	Asset	Cal Due					
Directional Coupler	Krytar	Directional Coupler	Krytar	CNR					
Temperature / Humidity Chamber	CSZ	ZPHS-8-3.5-SCT/WC	None	04/10/15					
Signal Generator, 100KHz - 6GHz	Agilent	8665B	F00124	03/12/15					
Spectrum Analyzer, PSA, 26.5GHz	Agilent	E4440A	81018	05/01/15					
Spectrum Analyzer, PXA, 44GHz	Agilent	N9030A	None	05/17/15					
Antenna, Tuned Dipole 400~1000	ETS Lindgren	3121C DB4	C00993	01/23/15					
Highpass Filter, 2.7 GHz	Micro-Tronics	HPM13194	N02686	CNR					
Highpass Filter, 1.5 GHz	Micro-Tronics	HPM13193	N02688	CNR					
Antenna, Horn 1-18GHz	ETS Lindgren	3117	None	04/14/15					
Antenna, Horn, 18 GHz	EMCO	3115	C00872	01/06/15					
Amplifier, 1 to 18GHz	Miteq	AMF-5D-01001800-40-20P	F00394	11/27/14					
Amplifier	Sonoma	310	F00008	05/28/15					
Antenna, Biconolog, 30MHz-1 GHz	Sunol Sciences	JB3	F00027	05/05/15					
Power Supply, DC 20V 3A	Ametek	XT20-3	None	CNR					
Wideband Radio Communication	R & S	CMW500	None	05/17/15					
8960 Series 10 Wireless Communications Test Set	Agilent	E5515E	F00362	11/27/14					

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7. RF POWER OUTPUT VERIFICATION

TEST PROCEDURE

The transmitter output was connected to the input terminal of Directional Coupler via calibrated coaxial cable. The output coupling terminal of the Directional Coupler was directly connected to a spectrum analyzer while the output through terminal connected to the communication test set via calibrated coaxial cable.

The output power was measured with the spectrum analyzer at the low, middle and high channel in each band.

- Set the spectrum analyzer span wide enough or greater than the modulated signal BW.
- Set a spectrum analyzer at peak detection mode with VBW ≥ RBW ≥ 26dB BW, typically 5MHz.
- Set a marker to point the corresponding peak value.

Using CMU200 Communication Test Set

Function:	Menu select > GSM Mobile Station > GSM 850/900/1800/1900					
Press Connection con Press RESET > choose	trol to choose the differe all to reset all settings	nt menus				
Connection	Press Signal Off to turn off the signal and change settings Network Support > GSM+GPRS or GSM+EGPRS Main Service > Packet Data Service selection > Test Mode A – Auto Slot Config. off					
MS Signal	Press Slot Config bottor time slots and power se > Slot configuration	n on the right twice to select and change the number of tting > Uplink/Gamma > 33 dBm for GPRS 850/900 > 27 dBm for EGPRS 850/900 > 30 dBm for GPRS1800/1900 > 26 dBm for EGPRS1800/1900				
BS Signal	Enter the same channel number for TCH channel (test channel) and BCCH channel					
	Frequency Offset > Mode > BCCH Level > BCCH Channel >	+ 0 Hz BCCH and TCH -85 dBm (May need to adjust if link is not stable) choose desire test channel [Enter the same channel number for TCH channel (test channel) and BCCH channel				
	Channel Type > P0> Slot Config > TCH > Hopping > Main Timeslot >	Off 4 dB Unchanged (if already set under MS Signal) choose desired test channel Off 3 (Default)				
Network	Coding Scheme > Bit Stream >	CS 4 (GPRS) and MCS5-9 (EGPRS) 2E9-1PSR Bit Pattern				
AF/RF	Enter appropriate offset	s for Ext. Att. Output and Ext. Att. Input				
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Using Agilent 8960A Communication Test Set

System Config:	GSM/GPRS M	obile Test
	E1968A	A.06.31
Call Parms:	всн 🗲	Cell Band: GSM850/PCS
	ТСН 🗲	Traffic Band: GSM850/PCS
		Traffic Channel: 128/192/251 or 512/661/810
		MS Tx Level: 0
	PDTCH 🗲	Traffic Band: GSM850/PCS
		Traffic Channel: 128/192/251 512/661/810
		MS Tx Level: 0
		Coding Scheme: CS-4 (GPRS)
		Coding Scheme: MCS-5 to 9 (ÉGPRS)
		MultiSlot Config: 1up, 1 down (Assuming that the highest
conducted power)		
Control:	Active Cell ->	GSM/GPRS

RESULTS

7.1. GSM

Part 22/24

			1 time slot		2 time slots		3 time slot		4 time slots	
Mode	Ch.	f (MHz)	Peak (dBm)	Average (dBm)	Peak (dBm)	Average (dBm)	Peak (dBm)	Average (dBm)	Peak (dBm)	Average (dBm)
	128	824.2	33.30	33.20	30.70	30.60	28.80	28.70	27.90	27.80
GPRS	190	836.6	33.20	33.10	30.60	30.50	28.80	28.70	27.90	27.75
	251	848.8	33.20	33.10	30.60	30.50	28.90	28.80	27.90	27.80
	512	1850.2	29.95	29.87	27.50	27.43	25.70	25.59	24.40	24.29
GPRS	661	1880.0	30.07	29.89	27.52	27.49	25.73	25.67	24.50	24.40
	810	1909.8	30.10	29.90	27.60	27.53	25.80	25.73	24.60	24.52

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7.2. UMTS REL99

The following summary of these settings are illustrated below:

	Mode	Rel99	
	Subtest	-	
	Loopback Mode	Test Mode 1	
	Rel99 RMC	12.2kbps RMC	
	HSDPA FRC	Not Applicable	
	HSUPA Test	Not Applicable	
	Power Control Algorithm	Algorithm2	
General Settings	βc	Not Applicable	
General Settings	βd	Not Applicable	
	βec	Not Applicable	
	βc/βd	8/15	
	βhs	Not Applicable	
	βed	Not Applicable	

RESULTS

Part 22 850MHz Band

Bands	UL Ch	DL Ch	Frequency	Conducted Output Power (dBm)	
				Peak	Average
UMTS850 (Band 5)	4132	4357	826.4	27.28	23.54
	4180	4405	836.0	26.92	23.33
	4230	4455	846.0	27.25	23.48

Part 24 1900MHz Band

Bands	UL Ch	DL Ch	Frequency	Conducted Output Power (dBm)		
			- ,	Peak	Average	
UMTS1900 (Band 2)	9262	9662	1852.4	26.11	23.02	
	9400	9800	1880.0	26.65	23.15	
	9538	9938	1907.6	26.27	23.06	

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7.3. HSDPA REL 5

The following 4 Sub-tests were completed according to Release 6 procedures in section 5.2 of 3GPP TS34.121.

Summary of settings are illustrated below:

	Mode	Rel5 HSDPA				
	Subtest	1	2	3	4	
	Loopback Mode	Test Mode 1				
	Rel99 RMC	12.2kbps RMC				
	HSDPA FRC	H-Set1				
	Power Control Algorithm	Algorithm 2				
Gonoral	βc	2/15	12/15	15/15	15/15	
Settings	βd	15/15	15/15	8/15	4/15	
Settings	Bd (SF)	64				
	βc/βd	2/15	12/15	15/8	15/4	
	βhs	4/15	24/15	30/15	30/15	
	MPR (dB)	0	0	0.5	0.5	
	D _{ACK}	8				
	D _{NAK}	8				
церра	DCQI	8				
Specific	Ack-Nack repetition factor	3				
Settings	CQI Feedback (Table 5.2B.4)	4ms				
Settings	CQI Repetition Factor (Table					
	5.2B.4)	2				
	Ahs =βhs/βc	30/15				

<u>Result</u>

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Band	Subtest	UL Ch	DL Ch	Frequency	Conducted Output Power (dBm)		
					Peak	Average	
		4132	4357	826.4	27.20	23.30	
	1	4180	4405	836.0	26.83	23.12	
		4230	4455	846.0	27.16	23.24	
		4132	4357	826.4	27.14	23.25	
	2	4180	4405	836.0	27.10	23,10	
UMTS850		4230	4455	846.0	27.15	23.20	
(Band 5)		4132	4357	826.4	26.80	22.70	
	3	4180	4405	836.0	26.90	22.80	
		4230	4455	846.0	26.80	22.80	
		4132	4357	826.4	26.79	22.80	
	4	4180	4405	836.0	26.75	22.84	
		4230	4455	846.0	26.78	22.75	

Part 24 1900MHz Band

Band	Subtest	UL Ch	DL Ch	Frequency	Conducted Output Power (dBm)	
					Peak	Average
		9262	9662	1852.4	26.56	22.82
	1	9400	9800	1880.0	26.75	23.01
		9538	9938	1907.6	26.40	22.97
		9262	9662	1852.4	26.50	22.80
	2	9400	9800	1880.0	26.70	23.00
UMTS1900		9538	9938	1907.6	26.60	22.95
(Band 2)		9262	9662	1852.4	26.10	22.50
	3	9400	9800	1880.0	26.20	22.45
		9538	9938	1907.6	25.90	22.35
	4	9262	9662	1852.4	26.00	22.40
		9400	9800	1880.0	25.88	22.37
		9538	9938	1907.6	25.85	22.35

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7.4. HSPA REL 6 (HSDPA & HSUPA)

TEST PROCEDURE

The following summary of these settings are illustrated below:

		Rel6	Rel6	Rel6	Rel6	Rel6		
	Mode	HSUPA	HSUPA	HSUPA	HSUPA	HSUPA		
	Subtest	1	2	3	4	5		
	Loopback Mode	Test Mode 1						
	Rel99 RMC	12.2kbps RMC						
	HSDPA FRC			H-Set1				
	HSUPA Test		Н	SUPA Loopba	ck			
	Power Control Algorithm Algorithm2							
General	βc	11/15	6/15	15/15	2/15	15/15		
Settings	βd	15/15	15/15	9/15	15/15	0		
Oettings	βec	209/225	12/15	30/15	2/15	5/15		
	βc/βd	11/15	6/15	15/9	2/15	-		
	βhs	22/15	12/15	30/15	4/15	5/15		
				47/15				
	βed	1309/225	94/75	47/15	56/75	47/15		
	DACK			8				
	DNAK			8				
	DCQI	8						
HSDPA	Ack-Nack repetition factor	3						
Specific	CQI Feedback (Table							
Settings	5.2B.4)	4ms						
	CQI Repetition Factor							
	(Table 5.2B.4)			2				
	Ahs = βhs/βc			30/15				
	D E-DPCCH	6	8	8	5	7		
	DHARQ	0	0	0	0	0		
	AG Index	20	12	15	17	12		
	ETFCI (from 34.121 Table							
	C.11.1.3)	75	67	92	71	67		
	Associated Max UL Data							
	Rate kbps	242.1	174.9	482.8	205.8	308.9		
HSUPA		E-TF	CI 11		E-TF	CI 11		
Specific		E-TFC	I PO 4		E-TFC	I PO 4		
Settings		E-TF	CI 67		E-TF	CI 67		
		E-TFC	PO 18		E-TFC	PO 18		
	Potoronoo E TECIo	E-TFCI 71		E-TFCI 11	E-TF	CI 71		
	Reference E_TFCIS	E-TFC	PO 23	E-TFCI PO	E-TFC	PO 23		
		E-TF	CI 75	4	E-TF	CI 75		
		E-TFC	PO 26	E-TFCI 92	E-TFC	PO 26		
		E-TF	CI 81	E-TFCI PO	E-TF	CI 81		
		E-TFC	PO 27	18	E-TFC	PO 27		

RESULTS

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Band	Subtest	UL Ch	DL Ch	Frequency	Conducted Output Power (dBm)	
23.13					Peak	Average
		4132	4357	826.4	27.15	22.26
	1	4180	4405	836.0	26.80	22.16
		4230	4455	846.0	27.14	22.24
		4132	4357	826.4	25.00	20.36
	2	4180	4405	836.0	24.41	20.25
		4230	4455	846.0	24.57	20.32
UMTS HSUPA	3	4132	4357	826.4	26.50	21.50
850MHz		4180	4405	836.0	26.60	21.60
(Band 5)		4230	4455	846.0	26.65	21.65
	4	4132	4357	826.4	24.98	20.47
		4180	4405	836.0	24.49	20.38
		4230	4455	846.0	24.50	20.43
		4132	4357	826.4	27.13	22.20
	5	4180	4405	836.0	27.01	22.10
		4230	4455	846.0	27.12	21.15

Part 24 1900MHz Band

Band	Subtest	UL Ch	DL Ch	Frequency	Conducted Output Power (dBm)	
					Peak	Average
		9262	9662	1852.4	26.40	22.00
	1	9400	9800	1880.0	26.50	22.06
		9538	9938	1907.6	26.60	22.09
		9262	9662	1852.4	25.00	20.35
	2	9400	9800	1880.0	25.20	20.50
		9538	9938	1907.6	25.10	20.40
UMTS HSUPA	3	9262	9662	1852.4	26.00	21.05
1900MHz		9400	9800	1880.0	26.15	21.10
(Band 2)		9538	9938	1907.6	26.38	21.20
	4	9262	9662	1852.4	25.10	20.38
		9400	9800	1880.0	25.25	20.63
		9538	9938	1907.6	25.27	20.80
		9262	9662	1852.4	26.00	22.00
	5	9400	9800	1880.0	26.41	21.90
		9538	9938	1907.6	26.45	22.05

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8. CONDUCTED TEST RESULTS

8.1. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049

<u>LIMITS</u>

For reporting purposes only

TEST PROCEDURE

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at the low, middle and high channel in each band. The 99% and -26dB bandwidths was also measured and recorded.

MODES TESTED

- GPRS
- UMTS, REL 99 and HSDPA

RESULTS

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GPRS MODE

Part 22 850MHz Band

Band	Mode	Channel	f (MHz)	99% BW (KHz)	-26dB BW (KHz)
CELL	GPRS	128	824.2	249.8210	306.196
		190	836.6	242.8435	304.811
		251	848.8	239.3551	317.295

Part 24 1900MHz Band

Band	Mode	Channel	f (MHz)	99% BW (KHz)	-26dB BW (KHz)
		512	1850.2	247.0060	307.368
PCS	GPRS	661	1880.0	251.2732	302.043
		810	1909.8	248.9907	304.427

WCDMA PART 22 AND 24

Band	Mode	DL Channel	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
		4357	826.40	4.0066	4.525
850MHz		4408	836.00	3.9427	4.472
	UMTS	4458	846.60	4.0498	4.479
	Rel. 99	9662	1852.40	4.1070	4.496
1900MHz		9800	1880.00	3.9569	4.496
		9938	1907.60	4.0341	4.488

WCDMA PART 22 AND 24

Band	Mode	DL Channel	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
		4357	826.40	4.0785	4.485
850MHz		4408	836.00	4.0346	4.498
	UMTS	4458	846.60	3.9632	4.493
	HSDPA	9662	1852.40	4.0358	4.571
1900MHz		9800	1880.00	4.1271	4.500
		9938	1907.60	4.1043	4.455

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8.1.1. GSM-GPRS

850MHz BAND



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HIGH CH				
🔆 Agilent 13:49:29 Nov 12	2, 2014		RT	Freq/Channel
Ch Freq 84 Occupied Bandwidth	8.8 MHz		Trig Free	Certer Freq 848.800000 MHz
				Start Freq 848.300000 MHz
Ref 35 dBm Atter #Samp	1 40 dB	14 2		Stop Freq 849.300000 MHz
10 dB/ Offst 10.6		A A A A A A A A A A A A A A A A A A A	A	CF Step 100.000000 kHz Auto Man
dB			Span 1 MHz	Freq Clfset 0.00000000 Hz
#Res BW 10 kHz	#VBW 30 kHz	Sweep 30.24 r	ns (601 pts)	
Occupied Bandw 239.	idth 3551 kHz	Occ BW % Pwr x dB	99.00 % -26.00 dB	Signal Track ^{On <u>Cif</u>}
Transmit Freq Error x dB Bandwidth	1.321 kHz 317.295 kHz*			
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1900MHz BAND



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MID CH	FreqiChennel
A Agricia 14:14:31 Nov 12, 2014	Freq/Channel
Ch Freq 1.88 GHz Trig Free Occupied Bandwidth	Center Freq 1.88000000 GHz
	Start Freq 1.87950000 GHz
Ref 35 dBm Atten 40 dB #Samp	Stop Freq 1.88050000 GHz CF Step 100.000000 kHz <u>Auto Man</u> Freq Otfset
Center 1.880 000 0 GHz Span 1 MHz	0.00000000 Hz
#Res BW 10 kHz #VBW 30 kHz Sweep 30.24 ms (601 pts)	
Occupied Bandwidth Occ BW % Pwr 99.00 % 251.2732 kHz x dB -26.00 dB	Signal Track On <u>C</u> !f
Transmit Freq Error -2.090 kHz x dB Bandwidth 302.043 kHz*	
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8.1.2. UMTS Rel. 99

850MHz BAND





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HIGH CH * Agilent 14:43:08 Ncv 12, 2014 R T	Freq/Channel
Ch Freq 846 MHz Trig Free Occupied Bandwidth	Center Freq 846.000000 MHz
	Start Freq 841.000000 MHz
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Stop Freq 851.000000 MHz 1.00000000 MHz <u>Auto Man</u> Freq Ctfset
Center 846.00 MHz Span 10 MHz #Res BW 100 kHz #VBW 1 MHz Sweep 2.933 ms (1001 pts)	0.00000000 Hz
Occupied Bandwidth Occ BW % Pwr 99.00 % 4.0498 MHz x dB -26.00 dB	On <u>Cif</u>
Transmit Freq Error -22.637 kHz x dB Bandwidth 4.479 MHz*	
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1900MHz BAND



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MID CH * Agilent 14:38:43 Ncv 12, 2014 R T	Freq/Channel
Ch Freq 1.88 GHz Trig Free Occupied Bandwidth	Certer Freq 1.88000000 GHz
	Start Freq 1.87500000 GHz
Ref 35 dBm Atten 40 dB #Samp	Stop Freq 1.88500000 GHz CF Step 1.00000000 MHz
11 11<	Freq Clifset
Occupied Bandwidth Occ BW % Pwr 99.00 % 3.9569 MHz x dB -26.00 dB	Signal Track ^{On <u>Cif</u>}
Transmit Freq Error -19.738 kHz x dB Bandwidth 4.496 MHz*	
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REPORT NO: 14U19370-E2C EUT: SMART BRACELET

8.1.3. UMTS HSDPA

850MHz BAND



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HIGH CH	RT	Freq/Channel
Ch Freq 846 MHz Occupied Bandwidth	Trig Free	Certer Freq 846.000000 MHz
		Start Freq 841.000000 MHz
Ref 35 dBm Atten 40 dB #Samp Log	inh u lu (, lo	Stop Freq 851.000000 MHz
10 dB/ Offst 10.6		CF Step 1.00000000 MHz <u>Auto Man</u>
dB	Span 10 MHz	Freq Clfset 0.00000000 Hz
#Res BW 100 kHz #VBW 1 MHz	Sweep 2.933 ms (1001 pts)	Signal Track
Occupied Bandwidth 3.9632 MHz	Occ BW % Pwr 99.00 % x dB -26.00 dB	On <u>C</u> !f
Transmit Freq Error6.758 kHzx dB Bandwidth4.493 MHz*		
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1900MHz BAND



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MID CH	
₩ Agilent 09:44:33 Nov 13, 2014 R T	Freq/Channel
Ch Freq 1.88 GHz Trig Free Occupied Bandwidth	Center Freq 1.88000000 GHz
	Start Freq 1.87500000 GHz
Ref 35 dBm Atten 40 dB #Samp Log 10	Stop Freq 1.88500000 GHz
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	CF Step 1.0000000 MHz <u>Auto Man</u>
dB Center 1.880 00 GHz Span 10 MHz	Freq Clfset 0.00000000 Hz
#Res BW 100 kHz	Oiereal Tea als
Occupied Bandwidth Occ BW % Pwr 99.00 % 4.1271 MHz x dB -26.00 dB	Signal Track On <u>Cif</u>
Transmit Freq Error 26.559 kHz x dB Bandwidth 4.500 MHz*	
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8.2. BAND EDGE

RULE PART(S)

FCC: §22.359, §24.238

<u>LIMITS</u>

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

Compliance with the provisions of paragraphs above of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;

TEST PROCEDURE

The transmitter output was connected to a Agilent 8960 Test Set and configured to operate at maximum power. The band edge emissions were measured at the required operating frequencies in each band on the Spectrum Analyzer. For each band edge measurement:

- Set the spectrum analyzer span to include the block edge frequency (824, 849, 1850, 1910MHz)
- Set a marker to point the corresponding band edge frequency in each test case.
- Set display line at -13 dBm
- Set resolution bandwidth to at least 1% of emission bandwidth.

MODES TESTED

- GPRS
- UMTS, REL 99 and HSDPA

RESULTS

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8.2.1. GSM-GPRS

850MHz BAND





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1900MHz BAND





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8.2.2. UMTS Rel. 99

850MHz BAND





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1900MHz BAND





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8.2.3. UMTS HSDPA

850MHz BAND





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1900MHz BAND





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8.3. OUT OF BAND EMISSIONS

RULE PART(S)

FCC: §2.1051, §22.901, §22.917, §24.238

<u>LIMITS</u>

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

TEST PROCEDURE

The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worst-case emissions were caught.

For each out of band emissions measurement:

- Set display line at -13 dBm
- Set RBW & VBW to 100 kHz for the measurement below 1 GHz, and 1 MHz for the measurement above 1 GHz.
- •

MODES TESTED

- GPRS
- UMTS, REL 99 and HSDPA

RESULTS

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8.3.1. GSM-GPRS

850MHz BAND





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w Agrient 13.57	. 10 110 12, 2014			R I	Freq/Channel
Ref 35 dBm	Atten 40 dB		M	kr1 7.027 GHz -26.59 dBm	Certer Freq
#Peak					3.0100000 0112
10					Start Fred
dB/					30.0000000 MHz
Offst					
10.6					Stop Freg
					10.0000000 GHz
.13.0					
dBm					CF Step
#PAvg					Auto Ma
V1 S2	A CONTRACTOR OF A CONTRACTOR	and a second second second	with the local property in the second second	- alter and the second and the	Freq Offset
S3 FC					0.00000000 Hz
p(f):					
FTun					Signal Track
Swp					On <u>C</u> t
Start 30 MHz	1 1		St	op 10.000 GHz	-11
#Res BW 1 MHz	#\	/BW 1 MHz	Sweep 16.66 r	ns (2000 pts)	

1900MHz BAND



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8.3.2. UMTS Rel. 99

850MHz BAND



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🔆 Agilent 14:	9:59 Nev 12, 2014			RT	Freq/Channel
Ref 35 dBm #Peak	Atten 40 dB		MF	kr1 3.227 GHz -28.32 dBm	Certer Freq 5.01500000 GHz
Log 10 dB/					Start Freq 30.0000000 MHz
dB					Stop Freq 10.000000 GHz
.13.0 dBm					CF Step 997.000000 MHz
#PAvg V1 S2		And the second s	Lang-allowed and a state of the	The state of the s	Auto Mar Freq Olfset
AA ¤(1): FTun Swp					Signal Track
Start 30 MHz #Res BW 1 MHz	. #	VBW 1 MHz	Sto Sweep 16.66 m	op 10.000 GHz ns (2000 pts)	

1900MHz BAND



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🔆 Aglient 14	:56:06 1	NCV 12, 2014				Mbrt	3 756 2		Freq/Channel
Ref 35 dBm		Atten 40 dB					-24.34	dBm	Certer Freq
#Реак Log									
10 dB/									Start Freq 30.0000000 MHz
Offst 11 dB									Stop Freq 20.000000 GHz
13.0 dBm									CF Step
#PAvg	1								Auto Ma
V1 S2 S3 FC When the	an a sha	Annun alla and alla a	te peridenantia	No. of the second s	n geligelike	en dara bijiki	Aller Aller Aller Aller		Freq Clfset 0.00000000 Hz
AA ¤(f): FTun Swp									Signal Track ^{On <u>C</u>::}
Start 30 MHz #Res BW 1 MH	7	#	VRW 1 M	H7 (Sween	Sto 49 98 m	p 20.00 s (2000	U GHz	



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8.3.3. UMTS HSDPA

850MHz BAND



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Agilent 10:00:	47 Nev 13, 2014			R T	Freq/Channel
Ref 35 dBm #Peak	Atten 40 dB			-26.76 dBm	Certer Freq 5.01500000 GHz
Log 10 dB/					Start Freq 30.0000000 MHz
dB DI					Stop Freq 10.0000000 GHz
-13.0 dBm #PAvg					CF Step 997.000000 MHz Auto Mar
V1 S2 S3 FC		later interaction		******	Freq Ctfset 0.00000000 Hz
¤(f): FTun Swp					Signal Track
Start 30 MHz #Res BW 1 MHz	#VB	W 1 MHz	Sweep 16.66	top 10.000 GHz ms (2000 pts)	1

1900MHz BAND



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🔆 Agilent ()9:58:13 I	Vev 13, 3	2014					F	R T	Freq/Channel
Ref 35 dBm #Peak		Atten 4	10 dB			1	Mkr1	3.756 2 -22.96	7 GHz dBm	Certer Freq 10.0150000 GHz
Log 10 dB/										Start Freq 30.0000000 MHz
dB DI										Stop Freq 20.0000000 GHz
.13.0 dBm #PAvg	1									CF Step 1.99700000 GHz Auto Ma
V1 S2 S3 FC	a and the second	added, 1945	a particular and	r fabilities af helpe	- Alexandress	anima, ^{men}	and the stand	hhumbori) H		Freq Clfset 0.00000000 Hz
¤(f): FTun Swp										Signal Track ^{On <u>C</u>!}
Start 30.00 M #Res BW 1 N			 #V	BW 1 N	/ /Hz	Sweep	Stop 20 49.98 m).000 0(s (2000) GHz pts)	



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9. FREQUENCY STABILITY

RULE PART(S)

FCC: §2.1055, §22.355 & §24.235

LIMITS

22.355 - The carrier frequency shall not depart from the reference frequency in excess of ± 2.5 ppm for mobile stations.

§24.235 - The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

- Temp. = -30° to +50°C
- Voltage = (85% 115%)

Frequency Stability vs Temperature:

The EUT is place inside a temperature chamber. The temperature is set to 20°C and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until +50°C is reached.

Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case).

MODES TESTED

- GPRS
- UMTS REL 99

RESULTS

See the following pages.

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9.1. GSM

<u>GPRS 850</u>

Limit		824	849		
Condition		F low @ -13dBm	F high @ -13dBm	Delta (Hz)	Frequency Stability
Temperature	Voltage	(MHz)	(MHz)	(12)	(ppm)
Normal (25C)		824.0218	848.9699		
Extreme (50C)	Normal	824.0218	848.9699	15.7	0.019
Extreme (40C)		824.0218	848.9699	18.3	0.022
Extreme (30C)		824.0218	848.9699	15.1	0.018
Extreme (10C)		824.0218	848.9699	13.9	0.017
Extreme (0C)		824.0218	848.9699	17.4	0.021
Extreme (-10C)		824.0218	848.9699	8.7	0.010
Extreme (-20C)		824.0218	848.9699	10.5	0.013
Extreme (-30C)		824.0218	848.9699	11.6	0.014
			-	-	
	10%	824.0218	848.9699	9.2	0.011
25C	-10%	824.0218	848.9699	16.3	0.019
	End Point	824.0218	848.9699	12.7	0.015

GPRS 1900

Limit		1850	1910		
Condition		F low @ -13dBm	F high @ -13dBm	Delta (Hz)	Frequency Stability
Temperature	Voltage	(MHz)	(MHz)	(12)	(ppm)
Normal (25C)		1850.0315	1909.9737		
Extreme (50C)		1850.0315	1909.9737	-19.2	-0.010
Extreme (40C)	Normal	1850.0315	1909.9737	25.3	0.013
Extreme (30C)		1850.0315	1909.9737	22.4	0.012
Extreme (10C)		1850.0315	1909.9737	-22.1	-0.012
Extreme (0C)		1850.0315	1909.9737	-25.6	-0.014
Extreme (-10C)		1850.0315	1909.9737	-20.3	-0.011
Extreme (-20C)		1850.0315	1909.9737	-22.5	-0.012
Extreme (-30C)		1850.0315	1909.9737	-19.7	-0.010
			-	-	
	10%	1850.0315	1909.9737	-23.3	-0.012
25C	-10%	1850.0315	1909.9737	19.6	0.010
	End Point	1850.0315	1909.9737	24.2	0.013

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9.2. WCDMA

WCDMA REL99 BAND 2

Limit		1850	1910					
Condition		F low @ -13dBm	F high @ -13dBm	Delta (Hz)	Frequency Stability			
Temperature	Voltage	(MHz)	(MHz)	()	(ppm)			
Normal (25C)		1850.1415	1909.8482					
Extreme (50C)		1850.1414	1909.8481	-51.7	-0.027			
Extreme (40C)	Normal	1850.1414	1909.8481	-51.4	-0.027			
Extreme (30C)		1850.1414	1909.8481	-52.5	-0.028			
Extreme (10C)		1850.1414	1909.8481	-53.3	-0.028			
Extreme (0C)		1850.1415	1909.8482	50.2	0.027			
Extreme (-10C)		1850.1415	1909.8482	10.1	0.005			
Extreme (-20C)		1850.1414	1909.8481	-49.6	-0.026			
Extreme (-30C)		1850.1415	1909.8482	49.7	0.026			
	10%	1850.1414	1909.8481	-50.3	-0.027			
25C	-10%	1850.1414	1909.8481	-51.7	-0.027			
	End Point	1850.1415	1909.8482	49.9	0.027			

WCDMA REL99 BAND 5

Limit		824	849		
Condition		F low @ -13dBm	F high @ -13dBm	Delta (Hz)	Frequency Stability
Temperature	Voltage	(MHz)	(MHz)	(112)	(ppm)
Normal (25C)		824.1765	848.2338		
Extreme (50C)		824.1765	848.2338	-26.0	-0.031
Extreme (40C)		824.1765	848.2338	24.5	0.029
Extreme (30C)		824.1765	848.2338	-25.9	-0.031
Extreme (10C)	Normal	824.1765	848.2338	-24.6	-0.029
Extreme (0C)		824.1765	848.2338	25.7	0.031
Extreme (-10C)	1	824.1765	848.2338	6.2	0.007
Extreme (-20C)		824.1765	848.2338	-26.1	-0.031
Extreme (-30C)		824.1765	848.2338	-27.2	-0.033
	10%	824.1765	848.2338	25.4	0.030
25C	-10%	824.1765	848.2338	25.1	0.030
	End Point	824.1765	848.2338	24.2	0.029

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10. RADIATED TEST RESULTS

10.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

FCC: §2.1046, §22.913, §24.232

LIMITS

§22.913(a) - The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

§24.232(c) - Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

In addition, when the transmitter power is measured in terms of average value, the peak-toaverage ratio of the power shall not exceed 13 dB.

TEST PROCEDURE

ANSI / TIA / EIA 603C Clause 2.2.17

KDB 971168 v02r01 RF Power output using broadband peak and average power meter method

MODES TESTED

- GPRS
- UMTS, REL 99 and HSDPA

RESULTS

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Part 22 850MHz Band							
Band	Modo	Channel	f (MHz)	ERP (Peak)			
	woue			dBm	mW		
		128	824.2	28.32	679.20		
CELL	GPRS	190	836.6	28.54	714.50		
		251	848.8	29.21	833.68		

Part 24 1900MHz Band							
Band	Mode	Channel	f (MHz)	EIRP (Peak)			
Dariu	Mode	Channel	1 (1011 12)	dBm	mW		
PCS		512	1850.2	27.83	606.74		
	GPRS	661	1880.0	28.20	660.69		
		810	1909.8	28.48	704.69		

Part 22 850MHz	Band				
1 art 22 05010112	Danu				
Band	Mode	Channel	f (MHz)	ERP	(Peak)
Danu	WOUE	Channel	1 (1011 12)	dBm	mW
		4357	826.4	19.88	97.27
	UMTS,REL 99	4405	836.0	20.28	106.66
CELL		4455	846.0	20.59	114.55
CELL		4357	826.4	19.58	90.78
	UMTS, HSDPA	4405	836.0	20.08	101.86
		4455	846.0	20.29	106.91

Part 24 1900MH	z Band				
Band	Mode	Channel	f (MHz)	EIRP	(Peak)
Danu	WIDGE	Channel	1 (IVII 12)	dBm	mW
		9662	1852.4	26.28	424.62
	UMTS,REL 99	9800	1880.0	25.48	353.18
PCS		9938	1907.6	23.92	246.60
F03		9662	1852.4	25.93	391.74
	UMTS, HSDPA	9800	1880.0	24.68	293.76
		9938	1907.6	25.22	332.66

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`omnanıı		Intol								
ompany.	•	Intel 44U40700								
roject #:		14019730								
)ate:		11/26/14								
fest Engi	neer:	Francisco G								
Configura	tion:	EUT Only								
lode:		GSM 850MHz	!							
ubstituti	on: Dipole S/N		OIL SIMA CADI	•						
f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	ERP	EIRP	ERP Limit	EIRP Limit	Margin	Notes
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
f MHz Low Ch	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
f MHz Low Ch 824.20 824 20	SG reading (dBm)	Ant. Pol. (H/V) V	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm) 21.69 28.32	EIRP (dBm) 23.84 30.47	ERP Limit (dBm) 38.45	EIRP Limit (dBm) 40.60	Margin (dB) -16.8	Notes
f MHz Low Ch 824.20 824.20	SG reading (dBm) 22.3 28.9	Ant. Pol. (H/V) V H	Cable Loss (dB) 0.6 0.6	Antenna Gain (dBd) 0.0 0.0	ERP (dBm) 21.69 28.32	EIRP (dBm) 23.84 30.47	ERP Limit (dBm) 38.45 38.45	EIRP Limit (dBm) 40.60 40.60	Margin (dB) -16.8 -10.1	Notes
f MHz Low Ch 824.20 824.20 Mid Ch	SG reading (dBm) 22.3 28.9	Ant. Pol. (H/V) V H	Cable Loss (dB)	Antenna Gain (dBd) 0.0 0.0	ERP (dBm) 21.69 28.32	EIRP (dBm) 23.84 30.47	ERP Limit (dBm) 38.45 38.45	EIRP Limit (dBm) 40.60 40.60	Margin (dB) -16.8 -10.1	Notes
f MHz Low Ch 824.20 824.20 Mid Ch 836.60	SG reading (dBm) 22.3 28.9 23.3	Ant. Pol. (H/V) V H	Cable Loss (dB) 0.6 0.6 0.6	Antenna Gain (dBd) 0.0 0.0	ERP (dBm) 21.69 28.32 22.71	EIRP (dBm) 23.84 30.47 24.86	ERP Limit (dBm) 38.45 38.45 38.45	EIRP Limit (dBm) 40.60 40.60 40.60	Margin (dB) -16.8 -10.1 -15.7	Notes
f MHz Low Ch 824.20 824.20 Mid Ch 836.60 836.60	SG reading (dBm) 22.3 28.9 23.3 29.2	Ant. Pol. (H/V) V H	Cable Loss (dB) 0.6 0.6 0.6 0.6	Antenna Gain (dBd) 0.0 0.0 0.0	ERP (dBm) 21.69 28.32 22.71 28.54	EIRP (dBm) 23.84 30.47 24.86 30.69	ERP Limit (dBm) 38.45 38.45 	EIRP Limit (dBm) 40.60 40.60 40.60 40.60	Margin (dB) -16.8 -10.1 -15.7 -9.9	Notes
f MHz Low Ch 824.20 824.20 Mid Ch 836.60 836.60	SG reading (dBm) 22.3 28.9 23.3 29.2	Ant. Pol. (H/V) V H V H	Cable Loss (dB) 0.6 0.6 0.6 0.6	Antenna Gain (dBd) 0.0 0.0 0.0	ERP (dBm) 21.69 28.32 22.71 28.54	EIRP (dBm) 23.84 30.47 24.86 30.69	ERP Limit (dBm) 38.45 38.45 38.45 38.45	EIRP Limit (dBm) 40.60 40.60 40.60 40.60	Margin (dB) -16.8 -10.1 -15.7 -9.9	Notes
f MHz Low Ch 824.20 824.20 Mid Ch 836.60 836.60 High Ch	SG reading (dBm) 22.3 28.9 23.3 29.2	Ant. Pol. (H/V) V H	Cable Loss (dB) 0.6 0.6 0.6 0.6	Antenna Gain (dBd) 0.0 0.0 0.0 0.0	ERP (dBm) 21.69 28.32 22.71 28.54	EIRP (dBm) 23.84 30.47 24.86 30.69	ERP Limit (dBm) 38.45 38.45 38.45 38.45 38.45	EIRP Limit (dBm) 40.60 40.60 40.60 40.60	Margin (dB) -16.8 -10.1 -15.7 -9.9	Notes
f MHz Low Ch 824.20 824.20 Mid Ch 836.60 836.60 High Ch 848.80	SG reading (dBm) 22.3 28.9 23.3 29.2 24.8	Ant. Pol. (H/V) V H V H	Cable Loss (dB) 0.6 0.6 0.6 0.6 0.6	Antenna Gain (dBd) 0.0 0.0 0.0 0.0 0.0	ERP (dBm) 21.69 28.32 22.71 28.54 24.14 20.24	EIRP (dBm) 23.84 30.47 24.86 30.69 26.29 24.26	ERP Limit (dBm) 38.45 38.45 38.45 38.45 38.45 38.45	EIRP Limit (dBm) 40.60 40.60 40.60 40.60 40.60	Margin (dB) -16.8 -10.1 -15.7 -9.9 -14.3 0.2	Notes

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REPORT NO: 14U19370-E2C EUT: SMART BRACELET GPRS, 1900MHz BAND

omnany:		Intel						
roject #:		141110270						
roject#.		14019370						
ate:		11/26/14						
est Engl	neer:	Francisco G.						
onfigura	tion:	EUT Only						
et Equi	nmont:							
ceiving	: Horn T344 ar	nd Chamber [SMA Cables					
.hetituti	on: Horn T50 G	ubstitution	and 9ft SMA Cak					
ubstituti		,						
f	SG reading	Ant Pol	Cable Loss	Antenna Gain	FIRP	Limit	Margin	Notes
f	SG reading (dBm)	Ant. Pol.	Cable Loss	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
f GHz Low Ch	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
f GHz Low Ch 1.851 1.851	SG reading (dBm) 20.9 20.1	Ant. Pol. (H/V) V H	Cable Loss (dB) 0.98 0.98	Antenna Gain (dBi) 7.88 7.88	EIRP (dBm) 27.83 27.01	Limit (dBm) 33.0 33.0	Margin (dB) -5.2 -6.0	Notes
f GHz Low Ch 1.851 1.851	SG reading (dBm) 20.9 20.1	Ant. Pol. (H/V) V H	Cable Loss (dB) 0.98 0.98	Antenna Gain (dBi) 7.88 7.88	EIRP (dBm) 27.83 27.01	Limit (dBm) 33.0 33.0	Margin (dB) -5.2 -6.0	Notes
f GHz Low Ch 1.851 1.851 Mid Ch	SG reading (dBm) 20.9 20.1	Ant. Pol. (H/V) V H	Cable Loss (dB) 0.98 0.98	Antenna Gain (dBi) 7.88 7.88	EIRP (dBm) 27.83 27.01	Limit (dBm) 33.0 33.0	Margin (dB) -5.2 -6.0	Notes
f GHz Low Ch 1.851 1.851 Mid Ch 1.880	SG reading (dBm) 20.9 20.1 21.3	Ant. Pol. (H/V) V H	Cable Loss (dB) 0.98 0.98 0.98	Antenna Gain (dBi) 7.88 7.88 7.88	EIRP (dBm) 27.83 27.01 28.20	Limit (dBm) 33.0 33.0 33.0	Margin (dB) -5.2 -6.0 -4.8	Notes
f GHz Low Ch 1.851 1.851 Mid Ch 1.880 1.880	SG reading (dBm) 20.9 20.1 21.3 20.5	Ant. Pol. (H/V) V H	Cable Loss (dB) 0.98 0.98 0.98 0.98	Antenna Gain (dBi) 7.88 7.88 7.88 7.86 7.86	EIRP (dBm) 27.83 27.01 28.20 27.38	Limit (dBm) 33.0 33.0 33.0 33.0 33.0	Margin (dB) -5.2 -6.0 -4.8 -5.6	Notes
f GHz Low Ch 1.851 1.851 Mid Ch 1.880 1.880 High Ch	SG reading (dBm) 20.9 20.1 21.3 20.5	Ant. Pol. (H/V) V H V H	Cable Loss (dB) 0.98 0.98 0.98 0.98	Antenna Gain (dBi) 7.88 7.88 7.88 7.86 7.86	EIRP (dBm) 27.83 27.01 28.20 27.38	Limit (dBm) 33.0 33.0 33.0 33.0 33.0	Margin (dB) -5.2 -6.0 -4.8 -5.6	Notes
f GHz Low Ch 1.851 1.851 1.851 1.850 1.880 1.880 High Ch 1.910	SG reading (dBm) 20.9 20.1 21.3 20.5	Ant. Pol. (H/V) V H V H	Cable Loss (dB) 0.98 0.98 0.98 0.98	Antenna Gain (dBi) 7.88 7.88 7.88 7.86 7.86	EIRP (dBm) 27.83 27.01 28.20 27.38	Limit (dBm) 33.0 33.0 33.0 33.0 33.0 33.0 33.0	Margin (dB) -5.2 -6.0 4.8 -5.6	Notes
f GHz Low Ch 1.851 1.851 1.851 1.880 1.880 1.880 High Ch 1.910	SG reading (dBm) 20.9 20.1 21.3 20.5 21.6 20.8	Ant. Pol. (H/V) V H V H	Cable Loss (dB) 0.98 0.98 0.98 0.98 0.98	Antenna Gain (dBi) 7.88 7.88 7.86 7.86 7.86 7.84 7.84	EIRP (dBm) 27.83 27.01 28.20 27.38 28.48 27.62	Limit (dBm) 33.0 33.0 33.0 33.0 33.0 33.0 33.0	Margin (dB) -5.2 -6.0 -4.8 -5.6 -4.5 -5.4	Notes

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High Frequency Substitution Measurement UL Fremont Radiated Chamber D

 Company:
 Intel

 Project #:
 14U19370

 Date:
 11/21/14

 Test Engineer:
 M. Hua

 Configuration:
 EUT Only

 Mode:
 WCDMA Rel 99 850MHz

Test Equipment:

Receiving: Sunol T407, and Chamber D Cable Substitution: Dipole S/N: 00022117, 8ft SMA Cable

f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	ERP	ERP Limit	EIRP Limit	Margin	Notes
MHz	(dBm)	(H/V)	(dB)	(dBd)	(dBm)	(dBm)	(dBm)	(dB)	
Low Ch									
826.40	20.5	V	0.6	0.0	19.88	38.45	40.60	-18.6	
826.40	15.8	Н	0.6	0.0	15.18	38.45	40.60	-23.3	
Mid Ch									
836.00	20.9	V	0.6	0.0	20.28	38.45	40.60	-18.2	
836.00	15.5	Н	0.6	0.0	14.90	38.45	40.60	-23.5	
High Ch									
846.00	21.2	V	0.6	0.0	20.59	38.45	40.60	-17.9	
946 00	16.9	Н	0.6	0.0	16.28	38.45	40.60	-22.2	

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		UL Fr	remont Radi	ated Chamber [0				
Company:		Intel							
Project #:		14U19370							
Date:		11/21/14							
Test Engi	neer:	M. Hua							
Configura	tion:	EUT w/ AC Ad	lapter						
Mode:		WCDMA HSD	PA 850MHz						
leceiving	r Sunol T407								
Substituti	on: Dipole S/N	and Chambo : 00022117,	er D Cable 8ft SMA Cabl	le		·	·		
Substituti	on: Dipole S/N SG reading	and Chambo : 00022117, Ant. Pol.	er D Cable 8ft SMA Cabl Cable Loss	e Antenna Gain	ERP	ERP Limit	EIRP Limit	Margin	Notes
Substituti f MHz	on: Dipole S/N SG reading (dBm)	Ant. Pol. (H/V)	er D Cable 8ft SMA Cabl Cable Loss (dB)	e Antenna Gain (dBd)	ERP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
f MHz Low Ch	on: Dipole S/N SG reading (dBm)	And Chambo : 00022117, Ant. Pol. (H/V)	er D Cable 8ft SMA Cabl Cable Loss (dB)	e Antenna Gain (dBd)	ERP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
f MHz Low Ch 826.40	SG reading (dBm)	And Chambo : 00022117, Ant. Pol. (H/V)	er D Cable 8ft SMA Cabl Cable Loss (dB)	e Antenna Gain (dBd)	ERP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm) 40.60	Margin (dB) -18.9	Notes
f MHz Low Ch 826.40 826.40	SG reading (dBm) 20.2 15.1	And Chambo : 00022117, Ant. Pol. (H/V) V H	er D Cable 8ft SMA Cabl Cable Loss (dB) 0.6 0.6	e Antenna Gain (dBd) 0.0 0.0	ERP (dBm) 19.58 14.45	ERP Limit (dBm) 38.45 38.45	EIRP Limit (dBm) 40.60 40.60	Margin (dB) -18.9 -24.0	Notes
f MHz Low Ch 826.40 826.40 Mid Ch	SG reading (dBm) 20.2 15.1	And Chamb : 00022117, Ant. Pol. (H/V) V H	er D Cable 8ft SMA Cable Cable Loss (dB) 0.6 0.6	e Antenna Gain (dBd) 0.0 0.0	ERP (dBm) 19.58 14.45	ERP Limit (dBm) 38.45 38.45	EIRP Limit (dBm) 40.60 40.60	Margin (dB) -18.9 -24.0	Notes
f MHz Low Ch 826.40 826.40 Mid Ch 836.00	on: Dipole S/N SG reading (dBm) 20.2 15.1 20.7	And Chambi : 00022117, Ant. Pol. (H/V) V H	er D Cable 8ft SMA Cabl Cable Loss (dB) 0.6 0.6 0.6	Antenna Gain (dBd) 0.0 0.0	ERP (dBm) 19.58 14.45 20.08	ERP Limit (dBm) 38.45 38.45 38.45	EIRP Limit (dBm) 40.60 40.60 40.60	Margin (dB) -18.9 -24.0 -18.4	Notes
Substituti f MHz Low Ch 826.40 826.40 Mid Ch 836.00 836.00	on: Dipole S/N SG reading (dBm) 20.2 15.1 20.7 15.3	And Chambi : 00022117, Ant. Pol. (H/V) V H	er D Cable 8ft SMA Cabl Cable Loss (dB) 0.6 0.6 0.6 0.6	e Antenna Gain (dBd) 0.0 0.0 0.0	ERP (dBm) 19.58 14.45 20.08 14.70	ERP Limit (dBm) 38.45 38.45 	EIRP Limit (dBm) 40.60 40.60 40.60 40.60	Margin (dB) -18.9 -24.0 -18.4 -23.7	Notes
f MHz Low Ch 826.40 826.40 Mid Ch 836.00 Bib Ch	on: Dipole S/N SG reading (dBm) 20.2 15.1 20.7 15.3	And Chambi : 00022117, Ant. Pol. (H/V) V H	er D Cable 8ft SMA Cabl Cable Loss (dB) 0.6 0.6 0.6 0.6	e Antenna Gain (dBd) 0.0 0.0 0.0	ERP (dBm) 19.58 14.45 20.08 14.70	ERP Limit (dBm) 38.45 38.45 	EIRP Limit (dBm) 40.60 40.60 40.60 40.60	Margin (dB) -18.9 -24.0 -18.4 -23.7	Notes
Substituti f MHz Low Ch 826.40 826.40 Mid Ch 836.00 High Ch 846.00	on: Dipole S/N SG reading (dBm) 20.2 15.1 20.7 15.3 20.9	And Chambi : 00022117, Ant. Pol. (H/V) V H	er D Cable 8ft SMA Cabl Cable Loss (dB) 0.6 0.6 0.6 0.6 0.6	e Antenna Gain (dBd) 0.0 0.0 0.0	ERP (dBm) 19.58 14.45 20.08 14.70	ERP Limit (dBm) 38.45 38.45 38.45 38.45 38.45	EIRP Limit (dBm) 40.60 40.60 40.60 40.60	Margin (dB) -18.9 -24.0 -18.4 -23.7	Notes

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REPORT NO: 14U19370-E2C EUT: SMART BRACELET UMTS REL 99, 1900MHz BAND

High Frequency Substitution Measurement UL Fremont Radiated Chamber D

Company:	Intel
Project #:	14U19370
Date:	11/14/14
Test Engineer:	M. Hua
Configuration:	EUT Only
Mode:	WCDMA Rel 99 1900MHz

Test Equipment:

Receiving: Horn T344 and Chamber D SMA Cables Substitution: Horn T59 Substitution, and 8ft SMA Cable

f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	EIRP	Limit	Margin	Notes
GHz	(dBm)	(H/V)	(dB)	(dBi)	(dBm)	(dBm)	(dB)	
Low Ch								
1.852	15.4	V	0.98	7.88	22.33	33.0	-10.7	
1.852	19.4	Н	0.98	7.88	26.28	33.0	-6.7	
Mid Ch								
1.880	14.1	V	0.98	7.86	20.97	33.0	-12.0	
1.880	18.6	Н	0.98	7.86	25.48	33.0	-7.5	
High Ch								
1.908	15.3	V	0.98	7.84	22.11	33.0	-10.9	
1 908	17.1	Н	0.98	7.84	23.92	33.0	-9.1	

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REPORT NO: 14U19370-E2C EUT: SMART BRACELET UMTS HSDPA, 1900MHz BAND

High Frequency Substitution Measurement UL Fremont Radiated Chamber D

 Company:
 Intel

 Project #:
 14U19370

 Date:
 11/14/14

 Test Engineer:
 M. Hua

 Configuration:
 EUT Only

 Mode:
 WCDMA HSDPA 1900MHz

Test Equipment:

Receiving: Horn T344 and Chamber D SMA Cables Substitution: Horn T59 Substitution, and 8ft SMA Cable

f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	EIRP	Limit	Margin	Notes
GHz	(dBm)	(H/V)	(dB)	(dBi)	(dBm)	(dBm)	(dB)	
Low Ch								
1.852	15.2	V	0.98	7.88	22.13	33.0	-10.9	
1.852	19.0	Н	0.98	7.88	25.93	33.0	-7.1	
Mid Ch								
1.880	14.4	V	0.98	7.86	21.25	33.0	-11.8	
1.880	17.8	Н	0.98	7.86	24.68	33.0	-8.3	
High Ch								
1.908	15.0	V	0.98	7.84	21.81	33.0	-11.2	
1.908	18.4	Н	0.98	7.84	25.22	33.0	-7.8	

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10.2. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238

<u>LIMIT</u>

§22.917 (e) and §24.238 (a): Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

TEST PROCEDURE

For Cellular equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

For PCS equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The

emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

MODES TESTED

- GPRS
- UMTS, REL 99 and HSDPA

<u>RESULTS</u>

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Company:		Intel								
Project #:		14U19730								
Date:		11/15/14								
Test Engine	er:	T Wang								
Configuratio	n:	EUT only								
Mode:		GSM GPRS 8	50							
Test Equipm Substitution	<u>ent:</u> : Horn T59 Sul	ostitution. an	d 8ft SMA Ca	ble						
		,					1			
	Chamb	ber		Pre-amplifer		Filter			Limit	
3	m Chamber F	•	3m	Chamber F	▼ Fi	ilter	-	Pa	rt 22 🗸	ĺ
-	0.0		Distant	Path Loss	B			1.1	D-#-	Neter
(GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	@ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
ow Channel	(824-2MHz)	()		(
1 648	_44 7	н	3.0	0.0	33.7	10	.32 7	-13.0	-19.7	
2.472	-57.6	H	3.0	-8.8	34.1	1.0	-42.0	-13.0	-29.0	
1.648	-45.8	V	3.0	1.1	33.7	1.0	-31.6	-13.0	-18.6	
2.472	-55.8	V	3.0	-6.4	34.1	1.0	-39.5	-13.0	-26.5	
Mid Channel	836 6MHz)									
1 673	_39.4	Н	3.0	5.5	33.7	1.0	.27.2	-13.0	-14 2	
2.510	-56.2	Н	3.0	-7.6	34.1	1.0	-40.7	-13.0	-27.7	
1.673	-41.7	v	3.0	5.3	33.7	1.0	-27.4	-13.0	-14.4	
2.510	-55.3	V	3.0	-6.1	34.1	1.0	-39.2	-13.0	-26.2	
	(040 0MU-)									
	13.7	н	3.0	14	33.7	1.0	21 3	13.0	18.3	
1 609	-43.7	н	3.0	6.4	34.2	1.0	-31.3	-13.0	-10.3	
1.698 2.546	-33.2	N N	3.0	-0.4	33.7	1.0	-31.3	-13.0	-20.0	
1.698 2.546 1.698	45.6			1.4	JJ.1	1.0	-31.3	-13.0	-10.J	
1.698 2.546 1.698 2.546	-45.6 -53.7	V	3.0	4.3	34.2	1.0	-37.5	-13.0	-24.5	

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REPORT NO: 14U19370-E2C EUT: SMART BRACELET GPRS, 1900MHz BAND

		UL Fr	emont Radia	ated Chambe	r					
Company:		Intel								
Project #:		14U19370								
Date:		11/15/14								
Test Engine	er:	T Wang								
Configurati	on:	EUT only								
Mode:		GSM GPRS 19	00MHz							
<u>Test Equip</u> Substitutio	<u>nent:</u> n: Horn T59 Si	ubstitution, a	ind 8ft SMA C	Cable						
	Cham	ber	P	re-amplifer		Filter			Limit	
[3m Chamber	F	3m	Chamber F	- Filt	er	•	Part	24	•
				Path Loss						
Frequency	SA reading	Ant. Pol.	Distance	@ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channe	(dBm)	(1.0.0)		(ubiii)						
3.700	-43.2	Н	3.0	7.1	34.5	1.0	-26.4	-13.0	-13.4	
5.551	-56.6	Н	3.0	-3.7	33.6	1.0	-36.4	-13.0	-23.4	
3.700	-44.4	v	3.0	6.2	34.5	1.0	-27.3	-13.0	-14.3	
5.551	-53.6	V	3.0	-0.5	33.6	1.0	-33.2	-13.0	-20.2	
	(4000.0)									
and Channal	(1880.0)	Ц	20	80	24.5	1.0	24.6	12.0	11.6	
3 760	-41.4	Н	3.0 3.0	0.9	34.3 33.6	1.0	-24.0	-13.0	-11.0	
3.760 5.640	-32.0		3.0	7.4	34.5	1.0	-32.2	-13.0	-13.1	
3.760 5.640 3.760	-43.2	V								
3.760 5.640 3.760 5.640	-43.2 -54.3	V V	3.0	-1.1	33.6	1.0	-33.7	-13.0	-20.7	
3.760 5.640 3.760 5.640	-43.2 -54.3	V V	3.0	-1.1	33.6	1.0	-33.7	-13.0	-20.7	
3.760 5.640 3.760 5.640 High Channe	-43.2 -54.3	V V	3.0	-1.1	33.6	1.0	-33.7	-13.0	-20.7	
3.760 5.640 3.760 5.640 High Channe 3.820	-43.2 -54.3 I (1909.8MHz) -43.3	V V H	3.0 3.0 3.0	-1.1 7.1	33.6 34.5	1.0 1.0	-33.7 -26.4	-13.0 -13.0	-20.7 -13.4	
3.760 5.640 3.760 5.640 High Channe 3.820 5.729	-43.2 -54.3 I (1909.8MHz) -43.3 -53.5	V V H H	3.0 3.0 3.0 3.0	-1.1 7.1 -0.4	33.6 34.5 33.6	1.0 1.0 1.0	-33.7 -26.4 -33.0	-13.0 -13.0 -13.0	-20.7 -13.4 -20.0	
3.760 5.640 3.760 5.640 High Channe 3.820 5.729 3.820	43.2 -54.3 I (1909.8MHz) 43.3 -53.5 46.4	V V H H V	3.0 3.0 3.0 3.0 3.0	-1.1 -1.1 -0.4 -0.4 -0.4	33.6 34.5 33.6 34.5	1.0 1.0 1.0 1.0	-33.7 -26.4 -33.0 -29.2	-13.0 -13.0 -13.0 -13.0	-20.7 -13.4 -20.0 -16.2	

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REPORT NO: 14U19370-E2C EUT: SMART BRACELET UMTS REL 99, 850MHz BAND

Company:										
Project #:		14U19370								
Date:		11/15/14								
Test Engine	er:	T Wang								
Configuratio	on:	EUT only								
Mode:		WCDMA REL	99, 850MHz							
lest Equipr	nent:									
Substitution	: Horn T59 Su	ubstitution,	and 8ft SMA (Cable						
			Bro	amplifer		E 114				1
	Chambe	.r	-16	ampiner		Filter	l		Limit	
3n	n Chamber F	•	3m Ch	namber F 🚽	Filter	-		Part 22	-	
				Path Loss						
Frequency	SA reading	Ant. Pol.	Distance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHZ)	(dBm)	(H/V)		(dBm)						
ow Channel	(826.4MHz)									
1.653	-65.7	Н	3.0	-21.7	34.6	1.0	-55.3	-13.0	-42.3	
2.479	-66.5	Н	3.0	-19.1	34.1	1.0	-52.2	-13.0	-39.2	
1.653	-64.9	V	3.0	-20.2	34.6	1.0	-53.7	-13.0	-40.7	
2.479	-67.2	V	3.0	-19.2	34.1	1.0	-52.3	-13.0	-39.3	
lid Channel	(836MHz)									
1.673	-62.5	Н	3.0	-18.4	34.5	1.0	-52.0	-13.0	-39.0	
2.510	-65.9	H	3.0	-18.4	34.1	1.0	-51.5	-13.0	-38.5	
1.673	-64.1	v	3.0	-19.3	34.5	1.0	-52.8	-13.0	-39.8	
2.510	-67.2	v	3.0	-19.1	34.1	1.0	-52.2	-13.0	-39.2	
ligh Chapr-	1 (946MH~)									
1 693	64.8	Н	3.0	20.6	34.5	1.0	54.2	13.0	41.2	
2 540	-66.3	Н	3.0	-20.0	34.5	1.0	-54.2	-13.0	-41.2 -38.8	
4 000	-65.7	v	3.0	-20.8	34.5	1.0	-54.3	-13.0	-30.0	
1.69.5	-66.1	v	3.0	-17.9	34.1	1.0	-51.1	-13.0	-38.1	
2.540	-66.3 -65.7 -66.1	H V V	3.0 3.0 3.0	-18.7 -20.8 -17.9	34.1 34.5 34.1	1.0 1.0 1.0	-51.8 -54.3 -51.1	-13.0 -13.0 -13.0	-38.8 -41.3 -38.1	

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REPORT NO: 14U19370-E2C EUT: SMART BRACELET UMTS HSDPA, 850MHz BAND

		UL Fr	emont Radia	ited Chamber						
Company:										
Project #:	-	14U19370								
Date:	-	11/15/14								
Test Engine	er: 7	T Wang								
Configuratio	in: E	Eut ONLY								
Node:	N	WCDMA HSDF	PA 850MHz							
<u>Fest Equipm</u> Substitution	<u>ient:</u> : Horn T59 Su	ıbstitution, a	and 8ft SMA C	able						
	Chamber	r 🔤	Pre	Pre-amplifer		Filter			Limit	
3m	3m Chamber F		3m Chamber F 🗸		Filter 🗸			Part 22 🗸		
				Path Loss						
Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Frequency (GHz) Low Channel	SA reading (dBm) (826.4MHz)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Frequency (GHz) Low Channel 1.653 2.479	SA reading (dBm) (826.4MHz) -66.3	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm) -21.6 -17.8	Preamp 33.7 33.7	Attenuator	EIRP -54.3	Limit 	Delta _41.3 _37.5	Notes
Frequency (GHz) ow Channel 1.653 2.479 1.653	SA reading (dBm) (826.4MHz) -66.3 -66.8	Ant. Pol. (H/V)	Distance 3.0 3.0 3.0	Path Loss @ SG End (dBm) -21.6 -17.8 -19.3	Preamp 33.7 33.7 33.7	Attenuator	EIRP -54.3 -50.5 -52.0	Limit -13.0 -13.0 -13.0	Delta -41.3 -37.5 -39.0	Notes
Frequency (GHz) ow Channel 1.653 2.479 1.653 2.479	SA reading (dBm) (826.4MHz) -66.3 -66.8 -66.2 -66.6	Ant. Pol. (H/V) H H V V	Distance 3.0 3.0 3.0 3.0 3.0	Path Loss @ SG End (dBm) -21.6 -17.8 -19.3 -17.6	Preamp 33.7 33.7 33.7 33.7 33.7	Attenuator 1.0 1.0 1.0 1.0 1.0	EIRP -54.3 -50.5 -52.0 -50.2	Limit -13.0 -13.0 -13.0 -13.0 -13.0	Delta -41.3 -37.5 -39.0 -37.2	Notes
Frequency (GHz) ow Channel 1.653 2.479 1.653 2.479	SA reading (dBm) (826.4MHz) -66.3 -66.8 -66.2 -66.2	Ant. Pol. (H/V) H H V V	Distance 3.0 3.0 3.0 3.0 3.0	Path Loss @ SG End (dBm) -21.6 -17.8 -19.3 -17.6	Preamp 33.7 33.7 33.7 33.7 33.7	Attenuator 1.0 1.0 1.0 1.0	EIRP -54.3 -50.5 -52.0 -50.2	Limit -13.0 -13.0 -13.0 -13.0	Delta -41.3 -37.5 -39.0 -37.2	Notes
Frequency (GHz) -ow Channel 1.653 2.479 1.653 2.479 Alid Channel	SA reading (dBm) (826.4MHz) -66.3 -66.8 -66.2 -66.6 836MHz)	Ant. Pol. (H/V) H H V V	3.0 3.0 <td>Path Loss @ SG End (dBm) -21.6 -17.8 -19.3 -17.6</td> <td>Preamp 33.7 33.7 33.7 33.7</td> <td>Attenuator 1.0 1.0 1.0 1.0</td> <td>-54.3 -50.5 -52.0 -50.2</td> <td>Limit -13.0 -13.0 -13.0 -13.0</td> <td>Delta -41.3 -37.5 -39.0 -37.2</td> <td>Notes</td>	Path Loss @ SG End (dBm) -21.6 -17.8 -19.3 -17.6	Preamp 33.7 33.7 33.7 33.7	Attenuator 1.0 1.0 1.0 1.0	-54.3 -50.5 -52.0 -50.2	Limit -13.0 -13.0 -13.0 -13.0	Delta -41.3 -37.5 -39.0 -37.2	Notes
Frequency (GHz) .ow Channel 1.653 2.479 1.653 2.479 Mid Channel 1.673	SA reading (dBm) (826.4MHz) -66.3 -66.8 -66.2 -66.6 	Ant. Pol. (H/V) H H V V V	Distance 3.0 3.0 3.0 3.0 3.0 3.0	Path Loss @ SG End (dBm) -21.6 -17.8 -19.3 -17.6 -20.6	Preamp 33.7 33.7 33.7 33.7 33.7 33.7	Attenuator 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	EIRP -54.3 -50.5 -52.0 -50.2 -53.3	Limit -13.0 -13.0 -13.0 -13.0 -13.0	Delta 41.3 37.5 39.0 37.2 40.3	Notes
Frequency (GHz) -ow Channel 1.653 2.479 1.653 2.479 Mid Channel 1.673 2.510	SA reading (dBm) (826.4MHz) -66.3 -66.8 -66.2 -66.6 836MHz) -65.5 -66.4	Ant. Pol. (H/V) H H V V V H H	Distance 3.0 3.0 3.0 3.0 3.0 3.0 3.0	Path Loss @ SG End (dBm) -21.6 -17.8 -19.3 -17.6 -20.6 -17.3	Preamp 33.7 33.7 33.7 33.7 33.7 33.7 33.7	Attenuator 1.0	EIRP -54.3 -50.5 -52.0 -50.2 -53.3 -50.0	Limit -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	Delta 41.3 37.5 39.0 37.2 40.3 37.0	Notes
Frequency (GHz) ow Channel 1.653 2.479 1.653 2.479 Wid Channel (1.673 2.510 1.673	SA reading (dBm) (826.4MHz) -66.3 -66.2 -66.6 (366MHz) -65.5 -66.4 -65.0	Ant. Pol. (H/V) H H V V V	Distance 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	Path Loss @ SG End (dBm) -21.6 -17.8 -19.3 -17.6 -20.6 -17.3 -20.1	Preamp 33.7 33.7 33.7 33.7 33.7 33.7 33.7 33.	Attenuator 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	EIRP -54.3 -50.5 -52.0 -50.2 -53.3 -50.0 -52.8	Limit -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	Delta 41.3 37.5 39.0 37.2 40.3 37.0 39.8	Notes
Frequency (GHz) -ow Channel 1.653 2.479 1.653 2.479 Wid Channel 1.673 2.510 1.673 2.510	SA reading (dBm) (826.4MHz) -66.3 -66.3 -66.2 -66.6 836MHz) -65.5 -66.4 -65.0 -66.4	Ant. Pol. (H/V) H H V V V H H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	Path Loss @ SG End (dBm) -21.6 -17.8 -19.3 -17.6 -20.6 -17.3 -20.1 -17.3	Preamp 33.7	Attenuator 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	EIRP -54.3 -50.5 -52.0 -50.2 -50.2 -53.3 -50.0 -52.8 -50.0	Limit -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	Delta 41.3 37.5 39.0 37.2 40.3 37.0 39.8 37.0	Notes
Frequency (GHz) -ow Channel 1.653 2.479 1.653 2.479 Wid Channel 1.673 2.510 1.673 2.510	SA reading (dBm) (826.4MHz) -66.3 -66.3 -66.4 -65.6 836MHz) -65.5 -66.4 -65.0 -66.4 -65.0 -66.4	Ant. Pol. (H/V) H H V V V H H H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	Path Loss @ SG End (dBm) -21.6 -17.8 -19.3 -17.6 - - -20.6 -17.3 -20.1 -17.3	Preamp 33.7	Attenuator 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	EIRP -54.3 -50.5 -52.0 -50.2 -50.2 -53.3 -50.0 -52.8 -50.0	Limit -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	Delta 41.3 	Notes
Frequency (GHz) ow Channel 1.653 2.479 1.653 2.479 Mid Channel 1.673 2.510 1.673 2.510 1.673 2.510	SA reading (dBm) (826.4MHz) -66.3 -66.8 -66.2 -66.6 (836MHz) -65.5 -66.4 -65.0 -66.4 -65.0 -66.4 (846MHz) -65.3	Ant. Pol. (H/V) H H V V V H H H H H	Distance 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	Path Loss @ SG End (dBm) -21.6 -17.8 -19.3 -17.6 -20.6 -17.3 -20.1 -17.3 -20.1 -17.3	Preamp 33.7	Attenuator 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	EIRP -54.3 -50.5 -52.0 -52.0 -53.3 -50.0 -52.8 -50.0 -52.8 -50.0	Limit -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	Delta 41.3 37.5 39.0 37.2 40.3 37.0 39.8 37.0 39.8 37.0	Notes
Frequency (GHz) Low Channel 1.653 2.479 1.653 2.479 Wid Channel 1.673 2.510 1.673 2.510 1.673 2.510 1.673 2.510	SA reading (dBm) (826.4MHz) -66.3 -66.3 -66.2 -66.4 -65.5 -66.4 -65.0 -66.4 -65.0 -66.4 -65.0 -66.4 -65.0 -66.4 -65.3 -66.3	Ant. Pol. (H/V) H H V V V V H H H H H H H	Distance 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	Path Loss @ SG End (dBm) -21.6 -17.8 -19.3 -17.6 -20.6 -17.3 -20.1 -17.3 -20.1 -17.3 -21.3 -17.7	Preamp 33.7	Attenuator 1.0 1	EIRP -54.3 -50.5 -52.0 -50.2 -53.3 -50.0 -52.8 -50.0 -52.8 -50.0 -53.9 -53.9	Limit -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	Delta 41.3 37.5 39.0 37.2 40.3 37.0 39.8 37.0 40.9 37.4	Notes
Frequency (GHz) Low Channel 1.653 2.479 1.653 2.479 Mid Channel 1.673 2.510 1.673 2.510 1.673 2.510 1.673 2.510 1.693	SA reading (dBm) (826.4MHz) -66.3 -66.8 -66.2 -66.6 (836MHz) -65.5 -66.4 -65.0 -66.4 (846MHz) -66.3 -66.3 -66.9	Ant. Pol. (H/V) H H V V V V H H H H H H H	Distance 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	Path Loss @ SG End (dBm) -21.6 -17.8 -19.3 -17.6 -20.6 -17.3 -20.1 -17.3 -20.1 -17.3 -21.3 -17.7 -21.1	Preamp 33.7	Attenuator 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	EIRP -54.3 -50.5 -52.0 -50.2 -50.2 -53.3 -50.0 -52.8 -50.0 -52.8 -50.0 -52.8 -50.0 -52.3 -50.0 -52.0 -52.0 -52.0 -52.0 -53.3 -50.5 -52.0 -52.0 -52.0 -52.0 -53.3 -50.5 -52.0 -52.8 -50.0 -52.8 -50.0 -52.8 -50.0 -52.8 -50.0 -52.8 -50.0 -52.8 -50.0 -53.3 -50.0 -52.8 -50.0 -53.3 -50.0 -52.8 -50.0 -53.3 -50.0 -52.8 -50.0 -53.3 -50.0 -53.3 -50.0 -53.3 -50.0 -53.3 -50.0 -53.3 -50.0 -53.3 -50.0 -53.3 -50.0 -53.3 -50.0 -53.3 -50.0 -53.3 -50.0 -53.3 -50.0 -53.3 -50.0 -53.3 -50.0 -53.3 -50.0 -53.3 -50.0 -53.3 -50.0 -53.3 -50.0 -53.3 -50.0 -53.9 -50.0 -50	Limit -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	Delta 41.3 37.5 39.0 37.2 40.3 37.0 39.8 37.0 39.8 37.0 40.9 37.4 40.7	Notes

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REPORT NO: 14U19370-E2C EUT: SMART BRACELET UMTS REL 99, 1900MHz BAND

Company:		Intel								
Project #:		14U19730								
Date:		11/15/14								
Test Engineer: T Wang Configuration: EUT only		T Wang								
		FUT only	/any Tonly							
Mode:		WCDMA REL	99, 1900MHz							
Test Equips	ent:									
Substitution	: Horn T59 Sı	ubstitution, a	and 8ft SMA C	Cable						
			Dre	a man life r			1			1
	Chamber		FIE	ampiner	Filter				Limit	
3m	1 Chamber F	•	3m Ch	amber F 🖵	Filter	-		Part 24	•	
	1 1		ł	1	1	1			-	
Frequency	SA reading	Ant Pol	Distance	Path Loss	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)	Distance	(dBm)	ricamp	Auchuator		Linit	Delta	Notes
		(****/								
Low Channel	(1852.4MHz)									
Low Channel	(1852.4MHz) -46.1	Н	3.0	4.2	34.5	1.0	-29.3	-13.0	-16.3	
Low Channel 3.705 5.557	(1852.4MHz) _46.1 _48.5	H	3.0 3.0	4.2 4.4	34.5 33.6	1.0 1.0	-29.3 -28.3	-13.0 -13.0	-16.3 -15.3	
Low Channel 3.705 5.557 3.705	(1852.4MHz) -46.1 -48.5 -46.3	H H V	3.0 3.0 3.0	4.2 4.4 4.3	34.5 33.6 34.5	1.0 1.0 1.0	-29.3 -28.3 -29.2	-13.0 -13.0 -13.0	-16.3 -15.3 -16.2	
ow Channel 3.705 5.557 3.705 5.557	(1852.4MHz) -46.1 -48.5 -46.3 -47.2	H H V V	3.0 3.0 3.0 3.0 3.0	4.2 4.4 4.3 5.9	34.5 33.6 34.5 33.6	1.0 1.0 1.0 1.0	-29.3 -28.3 -29.2 -26.8	-13.0 -13.0 -13.0 -13.0 -13.0	-16.3 -15.3 -16.2 -13.8	
Low Channel 3.705 5.557 3.705 5.557 Mid Channel	(1852.4MHz) -46.1 -48.5 -46.3 -47.2 (1880MHz)	H H V V	3.0 3.0 3.0 3.0	4.2 4.4 4.3 5.9	34.5 33.6 34.5 33.6	1.0 1.0 1.0 1.0	-29.3 -28.3 -29.2 -26.8	-13.0 -13.0 -13.0 -13.0	-16.3 -15.3 -16.2 -13.8	
Low Channel 3.705 5.557 3.705 5.557 Vid Channel 3.760	(1852.4MHz) -46.1 -48.5 -46.3 -47.2 (1880MHz) -46.0	H H V V	3.0 3.0 3.0 3.0 3.0 3.0	4.2 4.4 4.3 5.9 4.3	34.5 33.6 34.5 33.6 34.5	1.0 1.0 1.0 1.0	-29.3 -28.3 -29.2 -26.8 -29.1	-13.0 -13.0 -13.0 -13.0 -13.0	-16.3 -15.3 -16.2 -13.8 -16.1	
Low Channel 3.705 5.557 3.705 5.557 Mid Channel 3.760 5.640	(1852.4MHz) -46.1 -48.5 -46.3 -47.2 (1880MHz) -46.0 -48.2	H H V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0	4.2 4.4 4.3 5.9 4.3 4.8	34.5 33.6 34.5 33.6 34.5 34.5 33.6	1.0 1.0 1.0 1.0 1.0 1.0	-29.3 -28.3 -29.2 -26.8 -29.1 -27.8	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-16.3 -15.3 -16.2 -13.8 -16.1 -16.1 -14.8	
ow Channel 3.705 5.557 3.705 5.557 Wid Channel 3.760 5.640 3.760	(1852.4MHz) _46.1 _48.5 _46.3 _47.2 (1880MHz) _46.0 _48.2 _46.3 _46.3	H H V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	4.2 4.4 4.3 5.9 4.3 4.3 4.8 4.3	34.5 33.6 34.5 33.6 34.5 33.6 34.5 34.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0	-29.3 -28.3 -29.2 -26.8 -29.1 -27.8 -29.1	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-16.3 -15.3 -16.2 -13.8 -16.1 -16.1 -14.8 -16.1	
ow Channel 3.705 5.557 3.705 5.557 Mid Channel 3.760 5.640 3.760 5.640	(1852.4MHz) 46.1 48.5 46.3 47.2 (1880MHz) 46.0 48.2 46.3 47.5	H H V V H H V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	4.2 4.4 4.3 5.9 4.3 4.8 4.3 5.7	34.5 33.6 34.5 33.6 34.5 33.6 34.5 33.6 34.5 33.6	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-29.3 -28.3 -29.2 -26.8 -29.1 -27.8 -29.1 -26.9	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-16.3 -15.3 -16.2 -13.8 -16.1 -14.8 -16.1 -13.9	
Low Channel 3.705 5.557 3.705 5.557 Mid Channel 3.760 5.640 3.760 5.640 4.64	(1852.4MHz) 46.1 48.5 46.3 47.2 (1880MHz) 46.0 48.2 46.3 47.5 (1907.6MHz)	H H V V H H V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	4.2 4.4 4.3 5.9 4.3 4.8 4.3 5.7	34.5 33.6 34.5 33.6 34.5 33.6 34.5 33.6 34.5 33.6	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-29.3 -28.3 -29.2 -26.8 -29.1 -27.8 -29.1 -26.9	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-16.3 -15.3 -16.2 -13.8 -16.1 -14.8 -16.1 -14.8 -16.1 -13.9	
Low Channel 3.705 5.557 3.705 5.557 Mid Channel 3.760 5.640 3.760 5.640 1igh Channel 3.815	(1852.4MHz) 46.1 48.5 46.3 47.2 (1880MHz) 46.0 48.2 46.3 47.5 (1907.6MHz) 46.3	H H V H H V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	4.2 4.4 4.3 5.9 4.3 4.8 4.3 5.7 4.1	34.5 33.6 34.5 33.6 34.5 33.6 34.5 33.6 34.5 33.6 34.4	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-29.3 -28.3 -29.2 -26.8 -29.1 -27.8 -29.1 -26.9 -29.3	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-16.3 -15.3 -16.2 -13.8 -16.1 -14.8 -16.1 -14.8 -16.1 -13.9 	
Low Channel 3.705 5.557 3.705 5.557 Mid Channel 3.760 5.640 3.760 5.640 3.760 5.640 4.10 5.640 3.760 5.640 3.760 5.640 3.765 5.723	(1852.4MHz) 46.1 48.5 46.3 47.2 (1880MHz) 46.0 48.2 46.3 47.5 (1907.6MHz) 46.3 48.4	H H V V H H H V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	4.2 4.4 4.3 5.9 4.3 4.8 4.3 5.7 4.1 4.7	34.5 33.6 34.5 33.6 34.5 33.6 34.5 33.6 34.5 33.6 34.4 33.6	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-29.3 -28.3 -29.2 -26.8 -29.1 -27.8 -29.1 -26.9 -29.3 -27.8	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-16.3 -15.3 -16.2 -13.8 -16.1 -14.8 -16.1 -14.8 -16.1 -13.9 -16.3 -14.8	
Low Channel 3.705 5.557 3.705 5.557 Mid Channel 3.760 5.640 3.760 5.640 4ligh Channel 3.815 5.723 3.815	(1852.4MHz) 46.1 48.5 46.3 47.2 (1880MHz) 46.0 48.2 46.3 47.5 (1907.6MHz) 46.3 47.5 (1907.6MHz) 46.3 48.4 46.4	H H V V V H H H V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	4.2 4.4 4.3 5.9 4.3 4.8 4.3 5.7 4.1 4.7 4.3	34.5 33.6 34.5 33.6 34.5 33.6 34.5 33.6 34.5 33.6 34.4 33.6 34.4	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-29.3 -28.3 -29.2 -26.8 -29.1 -27.8 -29.1 -26.9 -29.3 -27.8 -29.3 -27.8 -29.1	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-16.3 -15.3 -16.2 -13.8 -16.1 -14.8 -16.1 -14.8 -16.1 -13.9 	

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REPORT NO: 14U19370-E2C EUT: SMART BRACELET UMTS HSDPA, 1900MHz BAND

Company: Intel Project #: 14U19730 Date: 11/15/14 Test Engineer: T Wang Configuration: EUT Only Mode: WCDMA HSE										
<u>ment:</u> n: Horn T59 Su Chamt	ubstitution, a	and 8ft SMA (Cable re-amplifer		Filter			Limit		
3m Chamber F	•	3m (Chamber F 🚽	Filt	er	•	Part 2	24	•	
y SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes	
el (1852.4MHz)										
-46.2	H	3.0	4.1	34.5	1.0	-29.4	-13.0	-16.4		
-48.6 .46.4	H V	3.0	4.3	33.0	1.0	-28.4 -29.3	-13.0	-10.4		
-47.4	V	3.0	5.7	33.6	1.0	-27.0	-13.0	-14.0		
L (1990ML)-)										
	н	3.0	41	2/1 5	1.0	20.3	13.0	16.3		
	Н	3.0	4.6	33.6	1.0	-23.5	-13.0	-15.0		
-48.4			<u>/ 1</u>	34.5	1.0	-29.3	-13.0	-16.3		
-48.4 -46.5	V	3.0								
-48.4 -46.5 -47.4	V V	3.0 3.0	5.8	33.6	1.0	-26.8	-13.0	-13.8		
-48.4 -46.5 -47.4	V V	3.0 3.0	5.8	33.6	1.0	-26.8	-13.0	-13.8		
48.4 46.5 47.4 21 (1907.6MHz) 46.4	V V H	3.0 3.0 3.0	4.0	33.6	1.0	-26.8 -29.4	-13.0 -13.0	-13.8		
-48.4 -46.5 -47.4 ≥! (1907.6MHz) -46.4 -48.5	V V H H	3.0 3.0 3.0 3.0 3.0	4.0 4.6	33.6 34.4 33.6	1.0 1.0 1.0	-26.8 -29.4 -27.9	-13.0 -13.0 -13.0	-13.8 -16.4 -14.9		
48.4 46.5 47.4 el (1907.6MHz) 46.4 48.5 46.6	V V H H V	3.0 3.0 3.0 3.0 3.0 2.0	4.0 4.0 4.6 4.1	33.6 34.4 33.6 34.4	1.0 1.0 1.0 1.0	-26.8 -29.4 -27.9 -29.3	-13.0 -13.0 -13.0 -13.0	-13.8 -16.4 -14.9 -16.3		
	eer: ion: ment: n: Horn T59 Su Chamb 3m Chamber F y SA reading (dBm) el (1852.4MHz) - 46.2 - 48.6 - 46.4 - 47.4	Intel 14U19730 11/15/14 eer: T Wang Ion: EUT Only WCDMA HSDF ment: n: Horn T59 Substitution, a Chamber 3m Chamber F y SA reading (dBm) (H/V) Afficient Afficient Afficient (H/V) Afficient Afficient Afficient (H/V) Afficient Afficient (H/V) (H/	Intel 14U19730 11/15/14 eer: T Wang ion: EUT Only WCDMA HSDPA 1900MHz ment: n: Horn T59 Substitution, and 8ft SMA (Chamber 3m Chamber F 3m Chamber F y SA reading Ant. Pol. (1852.4MHz) H (1852.4MHz) H (1852.4MHz) H (1852.4MHz) H (1852.4MHz) H (1852.4MHz) H (1852.4MHz) H (1852.4MHz) H (1852.4MHz) H (1880.4MHz) H (1880.4MHz)	Intel 14U19730 11/15/14 eer: T Wang ion: EUT Only WCDMA HSDPA 1900MHz ment: n: Horn T59 Substitution, and 8ft SMA Cable Pre-amplifer 3m Chamber F y SA reading Ant. Pol. Distance Path Loss @ SG End (H/V) Path Loss @ SG End (dBm) H (1852.4MHz) H 3.0 4.1 46.6 H 3.0 4.3 46.4 V 3.0 4.2 47.4 V 3.0 5.7 H (1880MHz)	Intel 14U19730 11/15/14 eer: T Wang ion: EUT Only WCDMA HSDPA 1900MHz ment: n: Horn T59 Substitution, and 8ft SMA Cable Chamber 3m Chamber F Pre-amplifer 3m Chamber F g SA reading (dBm) Ant. Pol. (H/V) Path Loss @ SG End (dBm) Preamp (dBm) y SA reading Ant. Pol. (HV) Distance Path Loss @ SG End (dBm) Preamp (dBm) + Preamp (dBm) + Preamp (dBm) + 48.6 H 3.0 4.1 34.5 - 48.6 H 3.0 4.3 33.6 - 46.4 V 3.0 5.7 33.6 - 47.4 V 3.0 5.7 33.6	Intel 14U19730 11/15/14 eer: T Wang ION: EUT Only WCDMA HSDPA 1900MHz ment: n: Horn T59 Substitution, and 8ft SMA Cable Pre-amplifer Filter 3m Chamber F Filter Total Ant. Pol. Distance Path Loss @ SG End (dBm) Preamp Attenuator H 3.0 4.1 3.4.5 1.0 46.2 H 3.0 4.1 3.4.5 1.0 46.2 H 3.0 4.1 3.4.5 1.0 46.2 H 3.0 4.1 3.4.5 1.0 446.4 V 3.0 4.1 3.0 4.1 3.1 0 46.4 V 3.0 <	Intel 14/19730 11/15/14 11/15/14 eer: T Wang BUT Only WCDMA HSDPA 1900MHz ment: n: Horn T59 Substitution, and 8ft SMA Cable Filter The mappinger Filter 3m Chamber F Filter The mappinger Peath Loss Mappinger Chamber F The mappinger Peath Loss The mappinger Chamber F </td <td>Intel 14/19730 11/15/14 eer: T Wang CUT Only WCDMA HSDPA 1900MHz ment: n: Horn T59 Substitution, and 8ft SMA Cable Filter Filter The mappinger The mappinger<td>Intel 14U19730 11/15/14 eer: T Wang ion: EUT Only WCDMA HSDPA 1900MHz ment: n: Horn T59 Substitution, and 8ft SMA Cable Filter Limit Pre-amplifer 3m Chamber F Filter Limit y SA reading Ant. Pol. (dBm) Distance Path Loss @ SG End (dBm) Pre-amplifer Filter Limit Delta V SA reading Ant. Pol. (dBm) Distance Path Loss @ SG End (dBm) Pre-amplifer Filter Limit Delta V SA reading Ant. Pol. (dBm) Distance Path Loss @ SG End (dBm) Attenuator EIRP Limit Delta I 1852-4MHz) I I I 13.0 4.13.0 -15.4 46.2 H 3.0 4.13.0 -15.4 I 1.0 -29.3 -13.0 <th colsp<="" td=""></th></td></td>	Intel 14/19730 11/15/14 eer: T Wang CUT Only WCDMA HSDPA 1900MHz ment: n: Horn T59 Substitution, and 8ft SMA Cable Filter Filter The mappinger The mappinger <td>Intel 14U19730 11/15/14 eer: T Wang ion: EUT Only WCDMA HSDPA 1900MHz ment: n: Horn T59 Substitution, and 8ft SMA Cable Filter Limit Pre-amplifer 3m Chamber F Filter Limit y SA reading Ant. Pol. (dBm) Distance Path Loss @ SG End (dBm) Pre-amplifer Filter Limit Delta V SA reading Ant. Pol. (dBm) Distance Path Loss @ SG End (dBm) Pre-amplifer Filter Limit Delta V SA reading Ant. Pol. (dBm) Distance Path Loss @ SG End (dBm) Attenuator EIRP Limit Delta I 1852-4MHz) I I I 13.0 4.13.0 -15.4 46.2 H 3.0 4.13.0 -15.4 I 1.0 -29.3 -13.0 <th colsp<="" td=""></th></td>	Intel 14U19730 11/15/14 eer: T Wang ion: EUT Only WCDMA HSDPA 1900MHz ment: n: Horn T59 Substitution, and 8ft SMA Cable Filter Limit Pre-amplifer 3m Chamber F Filter Limit y SA reading Ant. Pol. (dBm) Distance Path Loss @ SG End (dBm) Pre-amplifer Filter Limit Delta V SA reading Ant. Pol. (dBm) Distance Path Loss @ SG End (dBm) Pre-amplifer Filter Limit Delta V SA reading Ant. Pol. (dBm) Distance Path Loss @ SG End (dBm) Attenuator EIRP Limit Delta I 1852-4MHz) I I I 13.0 4.13.0 -15.4 46.2 H 3.0 4.13.0 -15.4 I 1.0 -29.3 -13.0 <th colsp<="" td=""></th>	

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