RF EXPOSURE CALCULATIONS

Requirement:

According to USA CFR 15 §1.1307 (b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

USA REF: 1.1310, 2.1091/1093, 447498 D01 General RF Exposure Guidance v06	**Test Date:**	31-Jul-24
IC REF: RSS-102 Issue 6, Safety Code 6	**Test Engineer:**	John Nantz
Min. Sep. Distance: 20 cm (Mobile)	**EUT:**	PassiveBolt CRCM1101B1
	EUT Mode:	Worst Case
	Meas. Distance:	3 meters

						SAR Exemption					
R0						Canada ISED RSS-102 MPE			USA FCC 1.1310 MPE		
	Mode	Freq. MHz	Worst Case E3(Avg) dBuV/m	E20cm(Avg) dBuV/m	H20cm(Avg) dBuA/m	SC6 Limit (E20cm) dBuV/m	SC6 Limit (H20cm) dBuA/m	Worst Case MPE Ratio	E20cm Limit dBuV/m	H20cm Limit dBuA/m	Worst Case MPE Ratio
R1	NFC	13.560	75.1	122.1	70.8	148.8	97.2	0.0479	155.7	104.2	0.0215773
R2	LF	0.125	81.5	128.5	77.2		142.1	0.000569	175.8	124.2	0.0045
R3											
R4	Mode	Freq. MHz	Worst Case EIRP(Avg) dBm	EIRP(Avg) mW	S20cm(Avg) mW/cm2		SC6 Limit (S20cm) mW/cm2	MPE Ratio		S Limit mW/cm2	MPE Ratio
R5	BLE	2400-2483.5	3.6	2.2909	0.0005		5.47	0.0001		1.00000	0.0005
R6							**MPE Total (<1):**	**.049**		**MPE Total (<1):**	**.026**
R7							Complies?	**Yes**		Complies?	**Yes**
#	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11

(ROW)	(COLUMN)	NOTE
R0/R4	C3	As Measured / Computed from highest fundamental emission, see fundamental emission section of the respective radio reports. Includes antenna gain.
R0	C4	Conversion from 3m to 0.2m: E(3m)+40*Log10(3/0.2)
R4	C4	Conversion from EIRP dBm to EIRP(mW): 10^(EIRP dBm/10)
R0	C5	Conversion from E(20cm) to H(20cm): E(20cm) - 20*Log10(377ohm)
R4	C5	EIRP (mW) = S (mW/cm^2) x 4 x PI x 20cm^2
R1/R2	C9/C10	Limits for uncontrolled environment according to FCC 1.1310, Table 1 are converted from V/m or A/m to dBuV/m or dBuA/m via 20xLog10 (A or V/m*1000000)
R2	C9/C10	For FCC MPE, use of 300 kHz limit at 125 kHz as previously allowed by FCC.
R4	C10	Limit for uncontrolled environment according to FCC 1.1310, Table 1

Summary:

The EUT with all transmitters is compliant with both the FCC power density limit.