

Maximum Permissible Exposure (MPE)

Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended to comply with Section Part 22, subpart H and Part 24, subpart E and Part 27 subpart C & subpart L of the FCC CFR 47 Rules. And RSS-102 issue 4 For 47 CFR 1.1310 Radio frequency Radiation Exposure requirement.

Special Accessories

Not available for this EUT intended for grant.

Equipment Modifications

Not available for this EUT intended for grant.

Limitation

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minute)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	F/1500	30
1500-15000	/	/	1.0	30

F = frequency in MHz

* = Plane-wave equipment power density

Frequency Range (MHz)	Electric Field (V/m rms)	Magnetic Field (A/m rms)	Power Density (W/m ²)	Averaging Time (minutes)
0.003-1	280	2.19	-	6
1-10	280/f	2.19/f	-	6
10-30	28	2.19/f	-	6
30-300	28	0.073	2*	6
300-1500	1.585 f ^{0.5}	0.0042 f ^{0.5}	f/150	6
1500-15000	61.4	0.163	10	6
15000-150000	61.4	0.163	10	616000/f ^{1.2}
150000-300000	0.158 f ^{0.5}	4.21 x 10 ⁻⁴ f ^{0.5}	6.67 x 10 ⁻⁵ f	616000/f ^{1.2}

Note: f is frequency in MHz.

* Power density limit is applicable at frequencies greater than 100 MHz.

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Maximum Permissible Exposure (MPE) Evaluation

In this application we seek approval to the 1KU3. Based on the FCC OET Bulletin 65 Supplement C and 47 CFR §2.1091, we have concluded that the 1KU3 module will comply with the FCC rules on RF exposure for mobile devices in WCDMA band and HSUPA band. The following analysis will demonstrate such compliance. The analysis will be done in two US bands.

Operation in HSUPA Band II (1852.40 – 1907.60 MHz)

The EIRP of 1KU3 is 25.30dBm max in HSUPA Band II mode. The resulted power density at a distance of 20 cm can be deducted as follows:

EUT			Measurement					
Operation Band	Fundamental Frequency	CH	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
HSUPA Band II	1852.40	9262	V	23.88	4.17	-5.49	22.57	33.00
			H	23.82	4.51	-5.49	22.84	33.00
	1880.00	9400	V	22.67	4.14	-5.56	21.25	33.00
			H	23.13	4.44	-5.56	22.00	33.00
	1907.60	9538	V	26.83	4.10	-5.62	25.30	33.00
			H	22.88	4.37	-5.56	21.69	33.00

$$EIRP = 25.30dBm = 338.844mW$$

$$Power\ Density = EIRP * Duty\ Cycle / (4 \pi R^2)$$

$$= 338.844 * 1 / (4 * \pi * 20^2) = 0.067\ mW/cm^2$$

where Duty Cycle is 1 for HSUPA Band II operation and R is 20 cm.

The MPE limit for General Population/Uncontrolled Exposure is shown in the FCC OET Bulletin 65 Supplement C and can be calculated as follows:

$$MPE\ limit = 1.0mW/cm^2$$

As we can see the resulted power density is below the MPE limit, therefore 1KU3 in HSUPA Band II mode is compliant with the FCC rules on RF exposure.

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Operation in WCDMA band IV (1712.40 – 1752.60 MHz)

The EIRP of 1KU3 is 25.26dBm max in WCDMA Band IV mode. The resulted power density at a distance of 20 cm can be deducted as follows:

EUT			Measurement					
Operation Band	Fundamental Frequency	CH	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
WCDMA Band IV	1712.40	1312	V	24.69	4.40	-5.40	23.69	33.00
			H	21.96	4.79	-5.40	21.35	33.00
	1732.60	1413	V	23.57	4.78	-5.42	22.92	33.00
			H	26.34	4.35	-5.42	25.26	33.00
	1752.60	1513	V	23.10	4.31	-5.44	21.97	33.00
			H	22.01	4.77	-5.44	21.34	33.00

$$EIRP = 25.26 \text{ dBm} = 335.737 \text{ mW}$$

$$\begin{aligned} \text{Power Density} &= EIRP * \text{Duty Cycle} / (4 \pi R^2) \\ &= 335.737 * 1 / (4 * \pi * 20^2) = 0.067 \text{ mW/cm}^2 \end{aligned}$$

where Duty Cycle is 1 for WCDMA Band IV operation and R is 20 cm.

The MPE limit for General Population/Uncontrolled Exposure is shown in the FCC OET Bulletin 65 Supplement C and can be calculated as follows:

$$MPE \text{ limit} = 1.0 \text{ mW/cm}^2$$

As we can see the resulted power density is below the MPE limit, therefore 1KU3 in WCDMA Band IV mode is compliant with the FCC rules on RF exposure.

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Operation in HSUPA Band V (826.40 – 846.60 MHz)

The ERP of 1KU3 is 20.28dBm max in HUSPA Band V mode. The resulted power density at a distance of 20 cm can be deducted as follows:

EUT			Measurement					
Operation Band	Fundamental Frequency	CH	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
HSUPA Band V	826.40	4132	V	19.77	3.97	-4.22	19.52	38.45
			H	19.57	3.97	-4.22	19.32	38.45
	836.60	4183	V	15.96	3.99	-4.24	15.72	38.45
			H	19.54	3.99	-4.24	19.30	38.45
	846.60	4233	V	17.42	4.02	-4.24	17.21	38.45
			H	20.50	4.02	-4.24	20.28	38.45

$$ERP = 20.68 \text{ dBm} = 106.659 \text{ mW}$$

$$\text{Power Density} = ERP * \text{Duty Cycle} / (4 \pi R^2)$$

$$= 106.659 * 1 / (4 * \pi * 20^2) = 0.021 \text{ mW/cm}^2$$

where Duty Cycle is 1 for HSUPA Band II operation and R is 20 cm.

The MPE limit for General Population/Uncontrolled Exposure is shown in the FCC OET Bulletin 65 Supplement C and can be calculated as follows:

$$MPE \text{ limit} = 826.4 / 1500 = 0.55 \text{ mW/cm}^2$$

As we can see the resulted power density is below the MPE limit, therefore 1KU3 in HUSPA Band V mode is compliant with the FCC rules on RF exposure.

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Operation in LTE band (1710.7 – 1754.3MHz)

The EIRP of 1KU3 in **LTE band 4 1.4MHz /QPSK /RB 1** is 25.11dBm max at LTE mode. The resulted power density at a distance of 20 cm can be deducted as follows:

EUT Mode	Frequency (MHz)	CH	Antenna Pol.	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
1.4MHz BW LTE-Band 4 (QPSK RB 1 Offset 0)	1710.7	19957	V	26.11	4.40	-5.40	25.11	33.00
			H	18.22	4.79	-5.40	17.61	33.00
	1732.5	20175	V	25.96	4.35	-5.42	24.89	33.00
			H	24.07	4.78	-5.42	23.42	33.00
	1754.3	20393	V	25.38	4.31	-5.44	24.25	33.00
			H	22.07	4.76	-5.44	21.39	33.00

$$EIRP = 25.11dBm = 324.339mW$$

$$Power\ Density = EIRP * Duty\ Cycle / (4 \pi R^2)$$

$$= 324.339 * 1 / (4 * \pi * 20^2) = 0.065\ mW/cm^2$$

where Duty Cycle is 1 for LTE operation and R is 20 cm.

The MPE limit for General Population/Uncontrolled Exposure is shown in the FCC OET Bulletin 65 Supplement C and can be calculated as follows:

$$MPE\ limit = 1.0\ mW/cm^2$$

As we can see the resulted power density is below the MPE limit, therefore 1KU3 in LTE band is compliant with the FCC rules on RF exposure.

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Operation in LTE band (1710.7 – 1754.3MHz)

The EIRP of 1KU3 in LTE band 4 1.4MHz /16QAM/RB 1 is 25.34dBm max at LTE mode. The resulted power density at a distance of 20 cm can be deducted as follows:

EUT Mode	Frequency (MHz)	CH	Antenna Pol.	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
1.4MHz BW LTE-Band 4 (16QAM RB 1 Offset 0)	1710.7	19957	V	26.34	4.40	-5.40	25.34	33.00
			H	20.11	4.79	-5.40	19.50	33.00
	1732.5	20175	V	25.40	4.35	-5.42	24.33	33.00
			H	21.16	4.78	-5.42	20.51	33.00
	1754.3	20393	V	25.84	4.31	-5.44	24.71	33.00
			H	18.69	4.76	-5.44	18.01	33.00

$$EIRP = 25.34dBm = 341.979mW$$

$$Power\ Density = EIRP * Duty\ Cycle / (4 \pi R^2)$$

$$= 341.979 * 1 / (4 * \pi * 20^2) = 0.068\ mW/cm^2$$

where Duty Cycle is 1 for LTE operation and R is 20 cm.

The MPE limit for General Population/Uncontrolled Exposure is shown in the FCC OET Bulletin 65 Supplement C and can be calculated as follows:

$$MPE\ limit = 1.0\ mW/cm^2$$

As we can see the resulted power density is below the MPE limit, therefore 1KU3 in LTE band is compliant with the FCC rules on RF exposure.

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Operation in LTE band (1711.5 – 1753.5MHz)

The EIRP of 1KU3 in **LTE band 4 3MHz /QPSK /RB 1** is 24.43dBm max at LTE mode. The resulted power density at a distance of 20 cm can be deducted as follows:

EUT Mode	Frequency (MHz)	CH	Antenna Pol.	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
3MHz BW LTE-Band 4 (QPSK RB 1 Offset 0)	1711.5	19965	V	25.43	4.40	-5.40	24.43	33.00
			H	19.02	4.79	-5.40	18.41	33.00
	1732.5	20175	V	25.47	4.36	-5.42	24.41	33.00
			H	21.82	4.78	-5.42	21.18	33.00
	1753.5	20385	V	24.76	4.31	-5.44	23.63	33.00
			H	18.91	4.77	-5.44	18.24	33.00

$$EIRP = 24.43dBm = 277.332mW$$

$$Power\ Density = EIRP * Duty\ Cycle / (4 \pi R^2)$$

$$= 277.332 * 1 / (4 * \pi * 20^2) = 0.055\ mW/cm^2$$

where Duty Cycle is 1 for LTE operation and R is 20 cm.

The MPE limit for General Population/Uncontrolled Exposure is shown in the FCC OET Bulletin 65 Supplement C and can be calculated as follows:

$$MPE\ limit = 1.0\ mW/cm^2$$

As we can see the resulted power density is below the MPE limit, therefore 1KU3 in LTE band is compliant with the FCC rules on RF exposure.

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Operation in LTE band (1711.5 – 1753.5MHz)

The EIRP of 1KU3 in **LTE band 4 3MHz /16QAM/RB 1** is 25.30dBm max at LTE mode. The resulted power density at a distance of 20 cm can be deducted as follows:

EUT Mode	Frequency (MHz)	CH	Antenna Pol.	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
3MHz BW LTE-Band 4 (16QAM RB 1 Offset 0)	1711.5	19965	V	25.42	4.31	-5.44	24.29	33.00
			H	24.57	4.77	-5.44	23.91	33.00
	1732.5	20175	V	25.83	4.36	-5.42	24.77	33.00
			H	22.05	4.78	-5.42	21.41	33.00
	1753.5	20385	V	26.30	4.40	-5.40	25.30	33.00
			H	19.50	4.79	-5.40	18.89	33.00

$$EIRP = 25.30dBm = 338.844mW$$

$$Power\ Density = EIRP * Duty\ Cycle / (4 \pi R^2)$$

$$= 338.844 * 1 / (4 * \pi * 20^2) = 0.067\ mW/cm^2$$

where Duty Cycle is 1 for LTE operation and R is 20 cm.

The MPE limit for General Population/Uncontrolled Exposure is shown in the FCC OET Bulletin 65 Supplement C and can be calculated as follows:

$$MPE\ limit = 1.0\ mW/cm^2$$

As we can see the resulted power density is below the MPE limit, therefore 1KU3 in LTE band is compliant with the FCC rules on RF exposure.

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Operation in LTE band (1712.5– 1752.5MHz)

The EIRP of 1KU3 in **LTE band 4 5MHz /QPSK /RB 1** is 24.80dBm max at LTE mode. The resulted power density at a distance of 20 cm can be deducted as follows:

EUT Mode	Frequency (MHz)	CH	Antenna Pol.	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
5MHz BW LTE-Band 4 (QPSK RB 1 Offset 0)	1712.5	19957	V	24.68	4.40	-5.40	23.69	33.00
			H	19.88	4.79	-5.40	19.27	33.00
	1732.5	20175	V	20.59	4.36	-5.42	19.52	33.00
			H	18.98	4.78	-5.42	18.34	33.00
	1752.5	20375	V	25.92	4.32	-5.44	24.80	33.00
			H	18.85	4.77	-5.44	18.18	33.00

$$EIRP = 24.80dBm = 301.995mW$$

$$Power\ Density = EIRP * Duty\ Cycle / (4 \pi R^2)$$

$$= 301.995 * 1 / (4 * \pi * 20^2) = 0.060\ mW/cm^2$$

where Duty Cycle is 1 for LTE operation and R is 20 cm.

The MPE limit for General Population/Uncontrolled Exposure is shown in the FCC OET Bulletin 65 Supplement C and can be calculated as follows:

$$MPE\ limit = 1.0\ mW/cm^2$$

As we can see the resulted power density is below the MPE limit, therefore 1KU3 in LTE band is compliant with the FCC rules on RF exposure.

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Operation in LTE band (1712.5– 1752.5MHz)

The EIRP of 1KU3 in **LTE band 4 5MHz /16QAM/RB 1** is 24.58dBm max at LTE mode. The resulted power density at a distance of 20 cm can be deducted as follows:

EUT Mode	Frequency (MHz)	CH	Antenna Pol.	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
5MHz BW LTE-Band 4 (16QAM RB 1 Offset 0)	1712.5	19957	V	23.32	4.40	-5.40	22.32	33.00
			H	20.83	4.79	-5.40	20.22	33.00
	1732.5	20175	V	23.08	4.36	-5.42	22.02	33.00
			H	20.68	4.78	-5.42	20.04	33.00
	1752.5	20375	V	25.70	4.31	-5.44	24.58	33.00
			H	20.49	4.77	-5.44	19.82	33.00

$$EIRP = 24.58dBm = 287.078mW$$

$$Power\ Density = EIRP * Duty\ Cycle / (4 \pi R^2)$$

$$= 287.078 * 1 / (4 * \pi * 20^2) = 0.057\ mW/cm^2$$

where Duty Cycle is 1 for LTE operation and R is 20 cm.

The MPE limit for General Population/Uncontrolled Exposure is shown in the FCC OET Bulletin 65 Supplement C and can be calculated as follows:

$$MPE\ limit = 1.0\ mW/cm^2$$

As we can see the resulted power density is below the MPE limit, therefore 1KU3 in LTE band is compliant with the FCC rules on RF exposure.

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Operation in LTE band (1715 – 1750MHz)

The EIRP of 1KU3 in **LTE band 4 10MHz /QPSK /RB 1** is 23.28dBm max at LTE mode. The resulted power density at a distance of 20 cm can be deducted as follows:

EUT Mode	Frequency (MHz)	CH	Antenna Pol.	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
10MHz BW LTE-Band 4 (QPSK RB 1 Offset 0)	1715	20000	V	23.54	4.40	-5.40	22.54	33.00
			H	19.22	4.79	-5.40	18.61	33.00
	1732.5	20175	V	22.05	4.36	-5.40	21.01	33.00
			H	18.79	4.78	-5.40	18.17	33.00
	1750	20350	V	24.38	4.32	-5.42	23.28	33.00
			H	19.34	4.77	-5.42	18.69	33.00

$$EIRP = 23.28dBm = 212.813mW$$

$$Power\ Density = EIRP * Duty\ Cycle / (4 \pi R^2)$$

$$= 212.813 * 1 / (4 * \pi * 20^2) = 0.042\ mW/cm^2$$

where Duty Cycle is 1 for LTE operation and R is 20 cm.

The MPE limit for General Population/Uncontrolled Exposure is shown in the FCC OET Bulletin 65 Supplement C and can be calculated as follows:

$$MPE\ limit = 1.0\ mW/cm^2$$

As we can see the resulted power density is below the MPE limit, therefore 1KU3 in LTE band is compliant with the FCC rules on RF exposure.

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Operation in LTE band (1715 – 1750MHz)

The EIRP of 1KU3 in **LTE band 4 10MHz /16QAM/RB 1** is 24.48dBm max at LTE mode. The resulted power density at a distance of 20 cm can be deducted as follows:

EUT Mode	Frequency (MHz)	CH	Antenna Pol.	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
10MHz BW LTE-Band 4 (16QAM RB 1 Offset 0)	1715	20000	V	25.44	4.40	-5.40	24.44	33.00
			H	20.68	4.79	-5.40	20.08	33.00
	1732.5	20175	V	22.81	4.36	-5.40	21.77	33.00
			H	19.92	4.78	-5.40	19.30	33.00
	1750	20350	V	25.58	4.32	-5.42	24.48	33.00
			H	20.51	4.77	-5.42	19.86	33.00

$$EIRP = 24.48dBm = 280.543mW$$

$$Power\ Density = EIRP * Duty\ Cycle / (4 \pi R^2)$$

$$= 280.543 * 1 / (4 * \pi * 20^2) = 0.056\ mW/cm^2$$

where Duty Cycle is 1 for LTE operation and R is 20 cm.

The MPE limit for General Population/Uncontrolled Exposure is shown in the FCC OET Bulletin 65 Supplement C and can be calculated as follows:

$$MPE\ limit = 1.0\ mW/cm^2$$

As we can see the resulted power density is below the MPE limit, therefore 1KU3 in LTE band is compliant with the FCC rules on RF exposure.

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Operation in LTE band (706.5 – 713.5MHz)

The EIRP of 1KU3 in **LTE band 17 5MHz /QPSK/RB 1** is 18.81dBm max at LTE mode. The resulted power density at a distance of 20 cm can be deducted as follows:

EUT Mode	Frequency (MHz)	CH	Antenna Pol.	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
5MHz BW LTE-Band 17 (QPSK RB 1 Offset 0)	706.5	23755	V	14.53	4.10	-4.07	14.56	38.45
			H	15.12	4.10	-4.07	15.16	38.45
	710	23790	V	14.44	4.06	-3.98	14.52	38.45
			H	15.68	4.06	-3.98	15.76	38.45
	713.5	23825	V	15.36	4.02	-3.98	15.39	38.45
			H	18.78	4.02	-3.98	18.81	38.45

$$EIRP = 18.81dBm = 76.032mW$$

$$Power\ Density = ERP * Duty\ Cycle / (4 \pi R^2)$$

$$= 76.032 * 1 / (4 * \pi * 20^2) = 0.015\ mW/cm^2$$

where Duty Cycle is 1 for LTE operation and R is 20 cm.

The MPE limit for General Population/Uncontrolled Exposure is shown in the FCC OET Bulletin 65 Supplement C and can be calculated as follows:

$$MPE\ limit = 706.5 / 1500 = 0.47\ mW/cm^2$$

As we can see the resulted power density is below the MPE limit, therefore 1KU3 in LTE band is compliant with the FCC rules on RF exposure.

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Operation in LTE band (706.5 – 713.5MHz)

The EIRP of 1KU3 in **LTE band 17 5MHz /16QAM/RB 1** is 18.61dBm max at LTE mode. The resulted power density at a distance of 20 cm can be deducted as follows:

EUT Mode	Frequency (MHz)	CH	Antenna Pol.	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
5MHz BW LTE-Band 17 (16QAM RB 1 Offset 0)	706.5	23755	V	17.22	4.10	-4.07	17.26	38.45
			H	18.48	4.11	-4.07	18.52	38.45
	710	23790	V	16.90	4.06	-3.98	16.98	38.45
			H	17.80	4.06	-3.98	17.88	38.45
	713.5	23825	V	17.33	4.02	-3.98	17.37	38.45
			H	18.57	4.02	-3.98	18.61	38.45

$$EIRP = 18.61dBm = 72.610mW$$

$$Power\ Density = ERP * Duty\ Cycle / (4 \pi R^2)$$

$$= 72.610 * 1 / (4 * \pi * 20^2) = 0.014\ mW/cm^2$$

where Duty Cycle is 1 for LTE operation and R is 20 cm.

The MPE limit for General Population/Uncontrolled Exposure is shown in the FCC OET Bulletin 65 Supplement C and can be calculated as follows:

$$MPE\ limit = 706.5 / 1500 = 0.47\ mW/cm^2$$

As we can see the resulted power density is below the MPE limit, therefore 1KU3 in LTE band is compliant with the FCC rules on RF exposure.

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Operation in LTE band (709 – 711 MHz)

The EIRP of 1KU3 in **LTE band 17 10MHz /QPSK /RB 1** is 17.27dBm max at LTE mode. The resulted power density at a distance of 20 cm can be deducted as follows:

EUT Mode	Frequency (MHz)	CH	Antenna Pol.	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
10MHz BW LTE-Band 17 (QPSK RB 1 Offset 0)	709	23780	V	16.35	4.10	-3.98	16.46	38.45
			H	17.13	4.10	-3.98	17.24	38.45
	710	23790	V	15.87	4.09	-3.98	15.97	38.45
			H	17.06	4.09	-3.98	17.17	38.45
	711	23800	V	15.92	4.07	-3.98	16.01	38.45
			H	17.18	4.07	-3.98	17.27	38.45

$$EIRP = 17.27dBm = 53.333mW$$

$$Power\ Density = ERP * Duty\ Cycle / (4 \pi R^2)$$

$$= 53.333 * 1 / (4 * \pi * 20^2) = 0.011\ mW/cm^2$$

where Duty Cycle is 1 for LTE operation and R is 20 cm.

The MPE limit for General Population/Uncontrolled Exposure is shown in the FCC OET Bulletin 65 Supplement C and can be calculated as follows:

$$MPE\ limit = 709/1500 = 0.47\ mW/cm^2$$

As we can see the resulted power density is below the MPE limit, therefore 1KU3 in LTE band is compliant with the FCC rules on RF exposure.

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Operation in LTE band ((709 – 711 MHz)

The EIRP of 1KU3 in **LTE band 17 10MHz /16QAM/RB 1** is 18.13dBm max at LTE mode. The resulted power density at a distance of 20 cm can be deducted as follows:

EUT Mode	Frequency (MHz)	CH	Antenna Pol.	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
10MHz BW LTE-Band 17 (16QAM RB 1 Offset 0)	709	23780	V	16.79	4.10	-4.07	16.83	38.45
			H	17.84	4.10	-4.07	17.88	38.45
	710	23790	V	17.61	4.09	-3.98	17.71	38.45
			H	17.57	4.08	-3.98	17.67	38.45
	711	23800	V	16.95	4.07	-3.98	17.04	38.45
			H	18.04	4.08	-3.98	18.13	38.45

$$EIRP = 18.13dBm = 65.013mW$$

$$Power\ Density = ERP * Duty\ Cycle / (4 \pi R^2)$$

$$= 65.013 * 1 / (4 * \pi * 20^2) = 0.013\ mW/cm^2$$

where Duty Cycle is 1 for LTE operation and R is 20 cm.

The MPE limit for General Population/Uncontrolled Exposure is shown in the FCC OET Bulletin 65 Supplement C and can be calculated as follows:

$$MPE\ limit = 709/1500 = 0.47\ mW/cm^2$$

As we can see the resulted power density is below the MPE limit, therefore 1KU3 in LTE band is compliant with the FCC rules on RF exposure.

- End of Report -

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