

Declaration of MPR

We, BandRich Inc.,

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Declare that the device:

Model: C505

Product description: C505 LTE data modem

Complies with the MPR requirements of the 3GPP. The applied Standards: 3GPP TS 36.101

C505 has NV item holds backoff values in units of dB for different sets of LTE waveforms, based on the constellation and RB allocation. The backoff is hard-coded in the software.

We set the MPR as following table. The device will follow the table to reduce maximum power. I.e the maximum power will be reduced 1 dB if the modulation=16QAM, BW=5MHz and RBs>8. And the maximum power will be reduced 0.5 dB if the modulation=16QAM, BW=5MHz and RBs≤ 8. C505 will follow the table to have MPR function. And all the setting is fixed by software.

The target power for the maximum output power without MPR is 22.5dBm. However, it will have some design and measurement tolerance by different channels and RBs allocation. So we set the MPR backoff values smaller than the requirements of the 3GPP. The maximum output power of C505 will be also controlled smaller than 23.46 dBm. And the power fluctuations will not affect overall SAR compliance due to the relatively low measured SAR values in the SAR report.

Maximum Power Reduction (MPR) for C505

Modulation	Bandwidth	RBs	NV_LTE_TX_MPR_BACKOFF_I[i]
QPSK	5.0 MHz	>8	0.5
16QAM	5.0 MHz	≤ 8	0.5
16QAM	5.0 MHz	> 8	1
QPSK	10.0 MHz	>12	0.5
16QAM	10.0 MHz	≤12	0.5
16QAM	10.0 MHz	>12	1