Maximum Power Tune-up Tolerance

Tune up procedure shall be over the power range or at specific operating power levels.

1. It must provide an operational voltage (3.45~4.2V DC) to turn on the Mobile Data Terminal and on one certain channel in service mode by means of company proprietary software.

2. Base station simulator (Rohde& Schwarz CMW500) measures the GSM/WCDMA/LTE phone specific RF characteristics.

3. The maximum gain of each individual Mobile Data Terminals are adjusted until the target value met.

RF output power:

Technology/Band	Mode	Target Power and Tolerance (dBm)
GSM 850	GSM	32.0±1 dBm
	GPRS 1Tx slot	32.0±1 dBm
	GPRS 2Tx slot	30.0±1 dBm
	GPRS 3Tx slot	28.0±1 dBm
	GPRS 4Tx slot	26.0±1 dBm
	EDGE 1Tx slot	25.5±1 dBm
	EDGE 2Tx slot	24.5±1 dBm
	EDGE 3Tx slot	21.5±1 dBm
	EDGE 4Tx slot	18.5±1 dBm
GSM 1900	GSM	29.0±1 dBm
	GPRS 1Tx slot	29.0±1 dBm
	GPRS 2Tx slot	27.0±1 dBm
	GPRS 3Tx slot	25.5±1 dBm
	GPRS 4Tx slot	23.5±1 dBm
	EDGE 1Tx slot	25.0±1 dBm
	EDGE 2Tx slot	23.5±1 dBm
	EDGE 3Tx slot	22.0±1 dBm
	EDGE 4Tx slot	20.0±1 dBm
WCDMA II	AMR	21.5±1 dBm
	RMC	21.5±1 dBm
	HSDPA	21.5±1 dBm
	HSUPA	21.0+1.5/-2 dBm

WCDMA IV	AMR	21.5±1 dBm
	RMC	21.5±1 dBm
	HSDPA	21.5±1 dBm
	HSUPA	21.0+1.5/-2 dBm
WCDMA V	AMR	21.5±1 dBm
	RMC	21.5±1 dBm
	HSDPA	21.5±1 dBm
	HSUPA	21.0+1.5/-2 dBm
LTE 2	QPSK	22.0±1 dBm
	16QAM	22.0+1/-2 dBm
	64QAM	21.0±1 dBm
LTE 4	QPSK	22.0±1 dBm
	16QAM	22.0+1/-2 dBm
	64QAM	21.5±1 dBm
LTE 5	QPSK	22.5±1 dBm
	16QAM	22.0+1/-2 dBm
	64QAM	21.5±1 dBm
LTE 12	QPSK	22.0±1 dBm
	16QAM	22.0+1/-2 dBm
	64QAM	21.0±1 dBm
LTE 17	QPSK	22.0±1 dBm
	16QAM	21.5±1 dBm
	64QAM	21.0±1 dBm
2.4G WLAN	802.11b	15.5±1 dBm
	802.11g	13.0±1 dBm
	802.11n-HT20	12.0±1 dBm
BT	1M	5.5±1 dBm
	2M	5.0±1 dBm
	3M	5.0±1 dBm
	LE	-3.0+1/-2.5 dBm

Then this appropriate gain settings are stored in each Mobile Data Terminal individually.
The user has no possibility to change these settings later on, and during manufacturing each phone will be individual calibrated. The measurement is done in fully calibrated setup, which is based on a Rohde& Schwarz CMW500 base station simulator. Furthermore, the highest power level is verified afterwards in a call measurement on three channels (low, middle and high).