

## Tune up procedure

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

It must provide an operational voltage (3.4 ~ 4.2V DC) to turn on the device and on one certain channel in service mode by means of company proprietary software.

Base station simulator (Agilent 8960) measures the 2G/3G device specific RF characteristics.

The maximum gains of each individual device are adjusted until the target value met.

Maximum RF Output Power			
Frequency Bands	Service	PCL/Class	Target Value (Power)
GSM850	GSM/GPRS	5 (Class 4)	32 ± 1dBm
GSM850	EDGE	8 (E2)	26 ± 1dBm
PCS1900	GSM/GPRS	0 (Class 1)	29 ± 1dBm
PCS1900	EDGE	2 (E2)	25.5 ± 1dBm
WCDMA Band II	UMTS/HSUPA/HSDPA	Class 3	22 (+1/-2)dBm
WCDMA Band IV	UMTS/HSUPA/HSDPA	Class 3	22(+1/-2)dBm
WCDMA Band V	UMTS/HSUPA/HSDPA	Class 3	23 (+1/-2)dBm
2.4GHz	802.11b/g/n	/	14.5(+0.5/-3.5)dBm
2.4GHz	Bluetooth	Class 2	-2 ± 3dBm

Then these appropriate gain settings are stored in each device individually.

The user has no possibility to change these settings later on, and during manufacturing each device will be individual calibrated. The measurement is done in fully calibrated setup, which is based on a Agilent 8960 base station simulator. Furthermore, the highest power level is verified afterwards in a call measurement on three channels (low, middle and high).