

Turn up Procedure

During manufacturing each device is individually calibrated. Measurement is performed in a fully calibrated setup using an Agilent 8960 base station simulator (system tester).

Measurement procedure is outlined below:

Measurement Procedure:

1. Set the device to operational voltage and on a predefined channel in a special test mode.
2. The actual output power is measured at several power levels.
3. The gain factors of each individual device are adjusted until the target value is met. The appropriate gain control settings for each output power level are stored in each device individually (for each power level). The user has no possibility to change these settings later on.
4. The maximum gains of each individual device are adjusted and measured until the target value is met. The production target power with tolerance compiles with the maximum power in test report.

Rated RF power output

Mode	GSM850		GSM1900	
	PEAK	AVG	PEAK	AVG
GSM/PCS	28±1dBm	27.5±1dBm	29±1dBm	28.5±1dBm
GPRS (1 Slot)	28±1dBm	27.5±1dBm	29±1dBm	28.5±1dBm
GPRS (2 Slot)	27±1dBm	26.5±1dBm	28±1dBm	27.5±1dBm
GPRS (3 Slot)	25±1dBm	24.5±1dBm	26±1dBm	25.5±1dBm
GPRS (4 Slot)	24±1dBm	23.5±1dBm	25±1dBm	24.5±1dBm
EDGE (1 Slot)	28±1dBm	27.5±1dBm	29±1dBm	28.5±1dBm
EDGE (2 Slot)	27±1dBm	26.5±1dBm	28±1dBm	27.5±1dBm
EDGE (3 Slot)	25±1dBm	24.5±1dBm	26±1dBm	25.5±1dBm
EDGE (4 Slot)	24±1dBm	23.5±1dBm	25±1dBm	24.5±1dBm

Mode	WCDMA Band V		WCDMA Band II	
	PEAK	AVG	PEAK	AVG
RMC	25±1dBm	21.5±1dBm	23±1dBm	20±1dBm
HSDPA Subtest-1	25±1dBm	21.0±1dBm	23±1dBm	19±1dBm
HSDPA Subtest-2	24±1dBm	20.0±1dBm	21±1dBm	18±1dBm
HSDPA Subtest-3	23±1dBm	19.5±1dBm	21±1dBm	18±1dBm
HSDPA Subtest-4	22±1dBm	19.0±1dBm	20±1dBm	17±1dBm
HSUPA Subtest-1	25±1dBm	21.0±1dBm	22±1dBm	19±1dBm
HSUPA Subtest-2	24±1dBm	20.0±1dBm	21±1dBm	18±1dBm
HSUPA Subtest-3	23±1dBm	19.5±1dBm	21±1dBm	18±1dBm
HSUPA Subtest-4	22±1dBm	19.0±1dBm	20±1dBm	17±1dBm
HSUPA Subtest-5	22±1dBm	18.0±1dBm	19±1dBm	16±1dBm

802.11b: 8+-1dBm

802.11g: 7+-1dBm

802.11n: 6+-1dBm

BT: 2.7+-1dBm

Then these appropriate rated RF output power 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 the base station simulator. Furthermore, the highest power level is verified afterwards in a call measurement on three channels (low, middle and high).