Tune-up procedures

1.1 Test Equipment List

–GSM and WCDMA tester: CMU200

–Dummy battery or Power Supply: agilent E66319D

–PC with serial port

–GPIB card

1.2 The GSM850 power adjust procedure

Function:

After the GSM850 transmit POWER calibration the G6-U34 can find the relationship

between the TX-DAC and output power. So it can transmit the specific power according to

the 3GPP protocol.

Procedure:

Step1: The computer sets the UE to the Factory test mode and works at GSM850 band,

sets the CMU200 to GSM850 Analyzer mode.

Step2: Tuning the TX-DAC of UE from 100 to 15600 and measure the output power of the

UE via CMU200,So we can find the relationship between the TX-DAC and output power.

Output power of range：

GSM/GPRS（**GMSK** ）:

1TXslot:32.5 dBm [-1dB~~+1dB]

2TXslot:31.0 dBm [-1dB~~+1dB]

EDGE（**8PSK** ）:

1TXslot: 26dBm [-1dB~~+1dB]

2TXslot: 26dBm [-1dB~~+1dB]

EDGE（**GMSK** ）:

1TXslot:32.5 dBm [-1dB~~+1dB]

2TXslot:31.0 dBm [-1dB~~+1dB]

GPRS（GMSK）:

Number of timeslots in uplink assignment	reduction of maximum output power, (dB)
1	0
2	1.5

1.3 The GSM900 power adjust procedure

Function:

After the GSM900 transmit POWER calibration the G6-U34 can find the relationship

between the TX-DAC and output power. So it can transmit the specific power according to

the 3GPP protocol.

Procedure:

Step1: The computer sets the UE to the Factory test mode and works at GSM900 band,

sets the CMU200 to GSM900 Analyzer mode.

Step2: Tuning the TX-DAC of UE from 100 to 15600 and measure the output power of the

UE via CMU200,So we can find the relationship between the TX-DAC and output power.

Output power of range：

GSM/GPRS（**GMSK** ）:

1TXslot:32.5 dBm [-1dB~~+1dB]

2TXslot:32.5 dBm [-1dB~~+1dB]

EDGE（**8PSK** ）:

1TXslot: 26.5 dBm [-1.5dB~~+1.5dB]

2TXslot: 26.5dBm [-1.5dB~~+1.5dB]

EDGE（**GMSK** ）:

1TXslot:32.5 dBm [-1dB~~+1dB]

2TXslot:32.5 dBm [-1dB~~+1dB]

1.4 The DCS1800 power adjust procedure

Function:

After the DCS1800 transmit POWER calibration the UE can find the relationship between the TX-DAC and output power. So it can transmit the specific power according to the 3GPP protocol.

Procedure:

Step1: The computer sets UE to the Factory test mode and works at DCS1800 band, sets the CMU200 to DCS1800 Analyzer mode.

Step2: Tuning the TX-DAC of UE from 100 to15600 and measure the output power of the UE via CMU200, So we can find the relationship between the TX-DAC and output power. Output power of range：

GSM/GPRS（**GMSK** ）:

1TXslot: 29.5dBm [-1dB~~+1dB]

2TXslot: 29.5dBm [-1dB~~+1dB]

EDGE（**8PSK** ）:

1TXslot: 25.5dBm [-1.5dB~~+1.5dB]

2TXslot: 25.5dBm [-1.5dB~~+1.5dB]

EDGE（**GMSK** ）:

1TXslot: 29.5dBm [-1dB~~+1dB]

2TXslot: 29.5dBm [-1dB~~+1dB]

1.5 The PCS1900 power adjust procedure

Function:

After the PCS1900 transmit POWER calibration the UE can find the relationship between

the TX-DAC and output power. So it can transmit the specific power according to the

3GPP protocol.

Procedure:

Step1: The computer sets UE to the Factory test mode and works at PCS1900 band, sets

the CMU200 to PCS1900 Analyzer mode.

Step2: Tuning the TX-DAC of UE from 100 to15600 and measure the output power of the

UE via CMU200, So we can find the relationship between the TX-DAC and output power.

Output power of range：

GSM/GPRS（**GMSK** ）:

1TXslot: 29.5dBm [-1dB~~+1dB]

2TXslot: 27.5dBm [-1dB~~+1dB]

EDGE（**8PSK** ）:

1TXslot: 25.5dBm [-1dB~~+1dB]

2TXslot: 25.5dBm [-1dB~~+1dB]

EDGE（**GMSK** ）:

1TXslot: 29.5dBm [-1dB~~+1dB]

2TXslot: 27.5dBm [-1dB~~+1dB]

GPRS（GMSK）:

Number of timeslots in uplink assignment	reduction of maximum output power, (dB)
1	0
2	1.5

1.6 The WCDMA Band II power adjust procedure

Function:

After the WCDMA Band II transmit POWER calibration the UE can find the relationship

between the TX-PDM value and output power and can control the maximum conduct

power through HDET value. So it can transmit the specific power according to the 3GPP

protocol.

Procedure:

Step1: The computer sets UE to the Factory test mode and works at WCDMA PCS band,

sets the CMU200 to WCDMA Band II Analyzer mode.

Step2: Tuning the TX-PDM of UE from 0 to 127 and measure the output power of the UE

via CMU200, at the same time measure the HDET value ,so we can find the relationship

between the TX-PDM、the HDET value and output power.

Output power of range：

WCDMA BAND II:

22.5dBm [-1dB~~+1dB]

HSDPA:

Subtest1: 22dBm [-1dB~~+1dB]

Subtest2: 22dBm [-1dB~~+1dB]

Subtest3: 21dBm [-1dB~~+1dB]

Subtest4: 21dBm [-1dB~~+1dB]

HSUPA:

Subtest1: 20.5dBm [-1dB~~+1dB]

Subtest2: 20.5dBm [-1dB~~+1dB]

Subtest3: 20.5dBm [-1dB~~+1dB]

Subtest4: 20.5dBm [-1dB~~+1dB]

Subtest5: 20.5dBm [-1dB~~+1dB]

1.7 The WCDMA Band IV power adjust procedure

Function:

After the WCDMA Band IV transmit POWER calibration the UE can find the relationship

between the TX-PDM value and output power and can control the maximum conduct

power through HDET value. So it can transmit the specific power according to the 3GPP

protocol.

Procedure:

Step1: The computer sets UE to the Factory test mode and works at WCDMA AWS band,

sets the CMU200 to WCDMA Band IV Analyzer mode.

Step2: Tuning the TX-PDM of UE from 0 to 127 and measure the output power of the UE

via CMU200, at the same time measure the HDET value ,so we can find the relationship

between the TX-PDM、the HDET value and output power.

Output power of range：

WCDMA BAND IV:

22.5dBm [-1dB~~+1dB]

HSDPA:

Subtest1: 22dBm [-1dB~~+1dB]

Subtest2: 22dBm [-1dB~~+1dB]

Subtest3: 22dBm [-1dB~~+1dB]

Subtest4: 22dBm [-1dB~~+1dB]

HSUPA:

Subtest1: 22dBm [-1dB~~+1dB]

Subtest2: 21dBm [-1dB~~+1dB]

Subtest3: 21dBm [-1dB~~+1dB]

Subtest4: 21.5dBm [-1dB~~+1dB]

Subtest5: 22dBm [-1dB~~+1dB]

1.8 The WCDMA Band V power adjust procedure

Function:

After the WCDMA Band V transmit POWER calibration the UE can find the relationship between the TX-PDM value and output power and can control the maximum conduct power through HDET value. So it can transmit the specific power according to the 3GPP protocol.

Procedure:

Step1: The computer sets UE to the Factory test mode and works at WCDMA CELL band, sets the CMU200 to WCDMA Band V Analyzer mode.

Step2: Tuning the TX-PDM of UE from 0 to 127 and measure the output power of the UE via CMU200, at the same time measure the HDET value ,so we can find the relationship between the TX-PDM、the HDET value and output power.

Output power of range：

WCDMA BAND V:

23 dBm [-1dB~~+1dB]

HSDPA:

Subtest1: 22dBm [-1dB~~+1dB]

Subtest2: 22dBm [-1dB~~+1dB]

Subtest3: 22 dBm [-1dB~~+1dB]

Subtest4: 22dBm [-1dB~~+1dB]

HSUPA:

Subtest1: 21.5dBm [-1dB~~+1dB]

Subtest2: 21.5dBm [-1dB~~+1dB]

Subtest3: 21.5dBm [-1dB~~+1dB]

Subtest4: 21.5dBm [-1dB~~+1dB]

Subtest5: 21.5dBm [-1dB~~+1dB]

BT：

Average Power：

GFSK(2.0)：10dBm[-2dB~~+2dB]

GFSK(4.0)：-1dBm[-2dB~~+2dB]

Peak Power：<20dBm

Wi-Fi：

Average Power：
11b：15.5dBm[-2dB~~+2dB]
11g：11.0dBm[-3dB~~+3dB]
11n：9.5dBm[-3dB~~+3dB]

Peak Power：

<26dBm

Note：The user has no possibility to change these settings later on.