

Prepared (also subject responsible if other)		No.		
EAB/RWG/RB Larry Lindström		B5KAKRB1011112-2		
Approved	Checked	Date	Rev	Reference
KI/EAB/RWG/RB (L Lindström)		2003-12-19	A	

## Exhibit 12 – Cover Sheet

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**1 2.1033(c) Circuit Description**

**1.1 (2) FCC Identifier: B5KAKRB1011112-2**

This MCPA (Multi Carrier Power Amplifier) consist of one power amplifier operating in the frequency band of 1930 to 1990 MHz. The amplifier is capable of operation in a WCDMA system.

**1.2 (4) Type of Emission: N/A**

The MCPA is a plain power amplifier:

**1.3 (5) Frequency range: 1930 to 1970 MHz**

The output signal from the MCPA passes a cavity band pass filter in the antenna interface system (AIU) which pass band is 1930 to 1970 MHz.

**1.4 (6) Range of Operating Power:**

This transmitter is designed to supply a nominal power level of 43 dBm at the antenna connector at the AIU.

**1.5 (7) Maximum Power Rating:**

The maximum power rating with one TRX under environmental and supply voltage variations is equal to 43 dBm plus a power level tolerance of + 1.0 dB. Therefore the maximum output power is 44 dBm equal to 25 W at the antenna connector (AIU) of the radio base station.

This output is linked to the input signal to the AIU which shall be maximized to 8.5 dBm.

**1.6 (8) Final Amplifier Voltage and Current in normal operation**

	Average Output Power 43 dBm Values for V2001, V2002
Collector Voltage	28.0 Volt DC
Collector Current	7.5 Amps DC

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### 1.7 (10) Frequency Stabilizing Circuit Description

The MCPA is a plain power amplifier:

### 1.8 (10) Spurious and Harmonic Suppression

The output signal from MCPA passes a cavity band pass filter in the antenna interface system (AIU).

### 1.9 (10) Limiting Power

The MCPA measures the output power at its output connector via a RF-detector and the detected value is used by the power loop control block to steer the three amplifiers between the input and the output of the amplifier.

### 1.10 (10) Digital Modulation QPSK

The power amplifier is intended for amplification of QPSK-modulated signals in a WCDMA system.