

AWS 120W High Efficiency MCPA Module for UMTS and HSPA+

General Information



CCI's new **High Efficiency Multi-Carrier Power Amplifier (MCPA)** is the most efficient (greater than 25%) MCPA available. OPEX is reduced significantly in comparison to traditional Feed-Forward MCPAs. This MCPA Module employs a new Digital Pre-Distortion amplifier design with high power density for a very compact unit. The MCPA Module is optimized for UMTS and HSPA, allowing multiple channels to be combined on high capacity sites to reduce the required number of feeders while improving coverage.

Model MCPA-2100-125

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Features:

- ◆ **Ultra High Efficiency Module > 25%**
- ◆ **Low IMD Products**
- ◆ **Optimized for UMTS / HSPA+**
- ◆ **Hot Swappable Fans**

Technical Description

CCI's Cell Extender employs a highly efficient Digital Pre-Distortion (DPD) MCPA design that delivers upward of 25% module efficiency. The DPD architecture reduces the number of components and increases amplifier reliability. An internal microprocessor circuit controls all functions, maintains long term (thermal) and short term (distortion) functions, and generates status and alarms. An auto-reboot feature will automatically restart the MCPA module in case of power interruptions. Fans are alarmed and hot swappable, requiring only common tools for replacement. CCI's proprietary DPD circuit also reduces current consumption during low traffic periods. Dry contact alarms are provided for simple interface to existing base station alarm reporting circuits.

The Cell Extender coherent combining architecture increases the total system power and efficiency by enabling both the base station power and the Cell Extender power to be transmitted concurrently thus eliminating any unnecessary attenuation of input power. The Cell Extender also provides complete pass thru of DC and AISG signals from the BTS or can optionally be configured with the CCI AISG compliant Dual Tower Mount Amplifier (DTMA) and Site Control Unit (SCU).

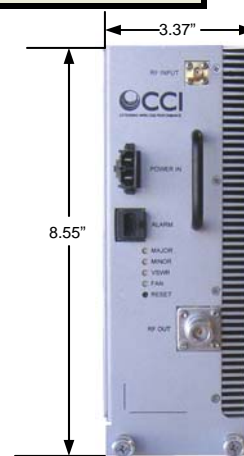
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AWS 120 Watt MCPA Module for UMTS/HSPA+ Typical Specifications

Description	Typical Specifications
Electrical Specifications	
Frequency range of operation	2110 - 2155 MHz
Operating Bandwidth	45 MHz
Output Power	120 Watts
Gain	45 dB
Gain variation over temperature	± 0.75 dB
Passband flatness	± 1.0 dB
Module Efficiency	25%
Module Current Draw @ Maximum Output	15 Amps
Operating Voltage	30 - 34 VDC, 32 VDC Nominal
Out of Band Spurious	Meets FCC
Input return loss (VSWR)	> 15 dB (1.4:1)
Output Return Loss (VSWR)	> 15 dB (1.4:1)
Mechanical Specifications	
Dimensions	8.55" H x 3.37" W x 15.5" D
Weight	13.5 Pounds
Environmental Specifications	
Operating Temperature Range	-35° C to +65° C (Cold start at -35° C, meets all specs at -25° C)
Operating Relative Humidity	0% to 99%
Operating Altitude	Up to 13,000 FT

Ordering Information

- ◆ 120W AWS MCPA Module
CCI Model MCPA-2100-125



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All specifications are subject to change. The latest specifications are available at www.cciprducts.com

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