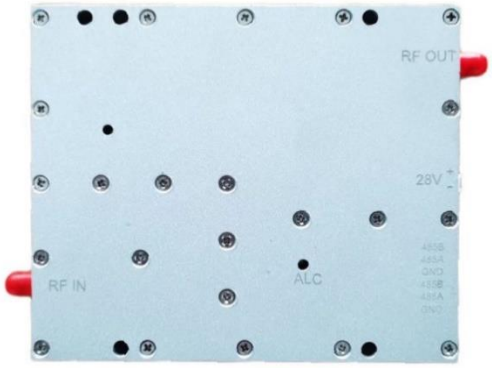
EMTS Telecom Services

TURNING TECHNOLOGY INTO SOLUTIONS

40dBm LTE Band 1 Multi-Carrier Solid State Power Amplifier



Model No: MCPA-B1-40W50

Main Features:

- Support LTE air protocol; multiple types for multiple bands
- Designed to meet ETSI requirements for LTE FDD network requirements
- Solid-state linearized design with a linear output power
- High efficiency, high reliability, and ruggedness design
- Built-in control & monitoring circuits
- Stable characteristics in the wide temperature range
- Field proved reliability

Introduction

The EMTS Telecom Services Power-Amplifier is designed for multi-channel LTE applications. This amplifier utilizes linear LDMOS power devices that provide high gain, wide dynamic range, low distortions, excellent group delay and phase linearity. Exceptional performance, long-term reliability, and high efficiency are achieved using APD (Analog Pre-Distortion) technology, advanced matching networks, and combining techniques (Doherty Design). The MCPA supports TDD modulation, and includes Uplink and Downlink paths. EMI/RFI filters, machined housings, and qualified components. EMTS Cellular Power Amplifiers are ideal for customers with DAS systems, BTS solutions, and RF repeaters. The MCPA utilized the linearization technique to provide excellent efficiency, and linearity characteristics offer low distortion and EVM. EMTS's high-quality design makes our MCPA extremely stable within an overall environmental temperature range. We offer multiple types for all LTE standard bands.

EMTS Telecom Services offers a comprehensive portfolio of enhanced coverage solutions for Wireless Networks, Based on advanced technologies. EMTS-proven indoor and outdoor solutions solve a wide range of network challengesincluding interference and oscillation problems, challenging coverage holes, rapid response deployment, and inadequate in-building coverage. Regardless of the technology or frequency, EMTS can provide customized coverage solutions that address any combination of unique and complex network needs for Wireless Networks.

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Technical Specifications

Item	Indicator	Remark
Frequency range	2110-2170 MHz	B1
Maximum input power	≤10dBm	
Output power P_{max}	40±0.5 dBm	
Signal mode	LTE	
ACPR	≤-35dBC	PAR 8
Gain	45±1 dB	Customizable
Passband Ripple	$\triangle G_P \leq 1.5$dB	
ALC control range	≥20dB	
ATT range	≥25dB	
Port VSWR	≤1.3	
Power amplifier switch	Have	Software control and external control can also be customized
Input power detection	-30 dBm~0 dBm	Software detection also can customize external analog detection
Output powerdetection	10dBm~45dBm	
Reflected power detection	5dBm~40dBm	
Fault alarm	Have	Software detection
VSWR alarm	Have	Software detection also can customize external analog detection
Temperature detection	-40~100℃	
Working voltage	28DCV	28~30DCV
Static working current	≤1.5A	
Dynamic working current	≤3A	@10W output
Operating temperature range	-40~85℃	
RF interface	SMA-K	Customizable

About EMTS Telecom Services Ltd.:

EMTS is a leading supplier of high-quality RF coverage solutions designed to maximize wireless network coverage in difficult RF environments and complex settings. Thecompany specializes in extending RF radio coverage to rural areas, office buildings, subways, tunnels, and shadowed areas. The EMTS coverage solution supports all major mobile technologies and wireless networks' standards.

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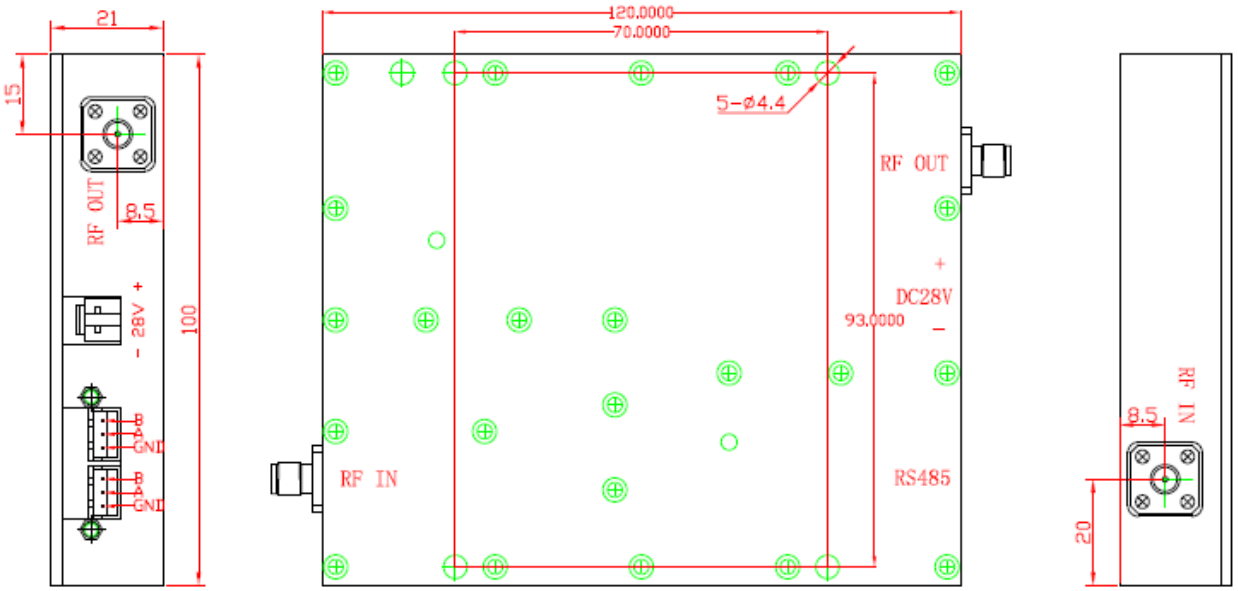
Monitoring interface	XH2.54-3P x1 (Pin 1: GND Pin 2: RS485-A Pin 3: RS485-B)	Factory equipped with 30cm long connecting cable)
Analog monitoring port（API）	XH2.54-6P x1 1 PIN GND 2pin reflected power 3pin output power 4PIN NC 5pin high-temperature alarm (high alarm, low alarm) 6pin switch (high off, low,or suspended on)	Factory equipped with 30cm long connecting cable)
Power Interface	VH3.96-2P	Factory equipped with 30cm long connecting cable
Size	120*100*21mm	SMA-K output port



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