

700MHz Bands-12,13,14 Multi-Carrier Solid State 48dBm Power Amplifier

Model No: MCPA-750-48W50



Main Features

- Support LTE and 5G air protocol at Band-12, Band-13 & Band-14
- Designed to meet ETSI requirements for LTE, and 5G networks
- Solid-state linearized design with a linear output power for FDD
- Small form factor and lightweight
- High reliability and ruggedized design
- Built-in Control & Monitoring Circuits
- High efficiency, supports FDD downlink band
- Stable characteristics in the wide temperature range
- Field proved reliability

Introduction

The EMTS Telecom Services Power Amplifier, model MCPA-750-48W50 is designed for single and multi-channel LTE, and 5G applications in the band-12, 13, 14; This amplifier utilizes linear LDMOS power devices that provide high gain, wide dynamic range, low distortions, and excellent group delay and phase linearity. Exceptional performance, long-term reliability, its high efficiency are achieved by employing APD (Analog Pre-distortion) technology, advanced matching networks, and combining techniques (Doherty Design), EMI/RFI filters, machined housings, and qualified components. EMTS Cellular Power Amplifiers are ideal for customers involved with DAS systems, BTS solutions, and RF repeaters, requiring highly linear products with low distortion and EVM. EMTS's high-quality design makes the MCPA extremely stable within an overall environmental temperature range



EMTS Telecom Services Ltd. offers a comprehensive portfolio of enhanced coverage solutions for the Wireless Networks, based on advanced technologies, EMTS's proven, indoor and outdoor solutions solve a wide range of network issues including 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 the Wireless Networks.

Technical Specification

Electrical Specifications	
Frequency range	729-768 MHz
Signal mode	2G, 3G & LTE & 5G
Output power	48±0.5 dBm
Gain	50 dB ±1 dB
Gain variation versus frequency	≤1 dB
In / Output VSWR	1.3:1 typical / 1.5:1 maximum
Allowable maximum input power	≥ 10 dBm
Gain Adjust Range	≥25dB@1dB Step
ALC	≥20dB
Passband Ripple	ΔGP≤1.5dB
EVM (typ.)	≤3%@PAR=10dB
ACPR	≤-40dBc
Spurious Emission	≤-36dBm/9KHz-1GHz
	≤-30dBm/1GHz-12.75GHz
Input power detection	-30 dBm to 0 dBm
Output power detection	15dBm to 50dBm
Reflected power detection	10dBm to 45dBm
Power amplifier switch	Have (Software control and external)
Fault alarm	Have
VSWR alarm	Have
Temperature detection	-40~100°C
Power voltage	DC28V (28-30 vdc)
Static working current	≤3A
Dynamic working current	≤10A
Environmental Specifications	
Operating Temperature	-40 to 85°C
Temperature detection	-40 to 100°C
Cold Start	-40°C
Operating Humidity	5% to 95% relative humidity, non-condensing
Storage Humidity	5% to 95% relative humidity, non-condensing
Protection	IP65
MTBF	≥ 100,000h

About EMTS telecom Services:

EMTS Telecom Services is a leading supplier of high-quality RF coverage solutions designed to maximize wireless network coverage in difficult RF environments and complex settings. The company 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 standards of wireless Networks.

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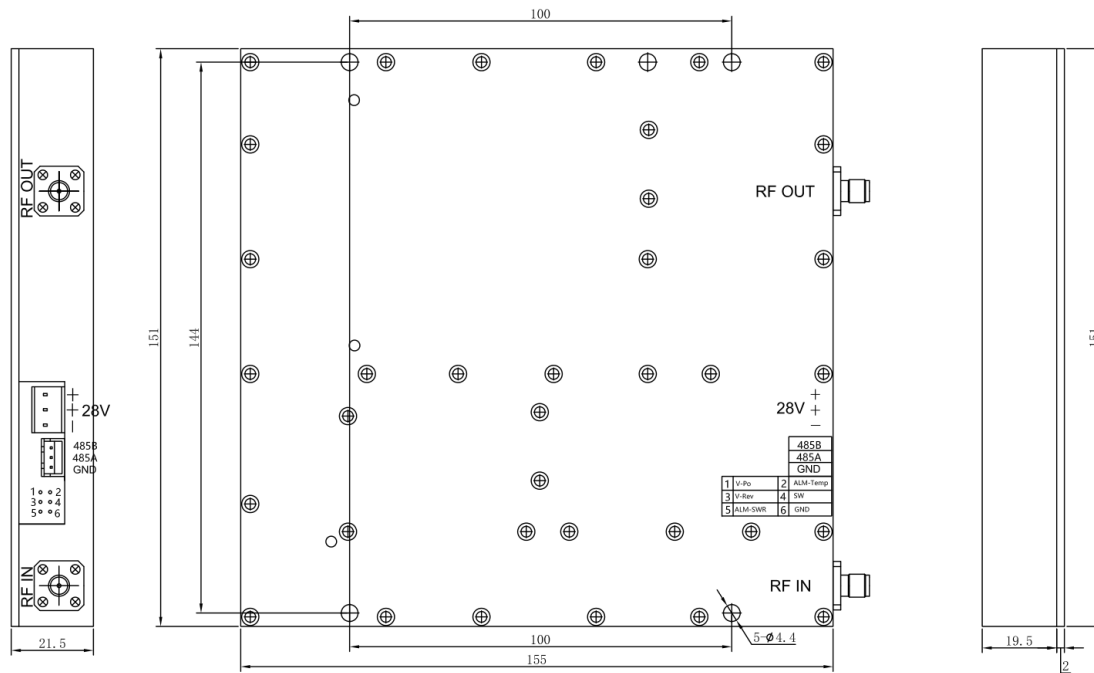


Mechanical Specifications		
RF connectors Input/Output	SMA-F	
Size	155*151*21.5mm	
Wight	2.0 kg	
Monitoring interface	XH2.54-3P x1 (Pin 1: GND Pin 2: RS485-A Pin 3: RS485-B)	(Factory equipped with 30cm long connecting cable)
Analog monitoring port	XH2.54-6P x1 Pin-1: reflected power 36.5mV/dB Pin-2 temperature $V_o = T \times 10\text{mV} + 500\text{mV}$ Pin-3 output power 40mV/dB Pin-4 switch, (high off, low, or suspended on) Pin-5 VSWR Alarm, (high alarm, low Normal) Pin-6 GND	(Factory equipped with 30cm long connecting cable)
Power Interface	VH3.96-3P	Factory equipped with 30cm long connecting cable



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Outline Drawing



Note: All specifications are subject to change without notice.

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