

WCDMA 450MHz Multi Carrier Solid State 50W Power Amplifier

Model No: MCPA-450-50W50



Main Features

- **High Performance, High Efficiency & High Reliability MCPA**
- **Support WCDMA air protocol, fully comply with 3GPP standard**
- **Designed to meet UMTS/ HSPA / GSM / CDMA requirements**
- **Solid-state linearized design with 50 watts linear output power**
(higher / Lower Power types are also available)
- **Small form factor and lightweight**
- **Ruggedized design with RF Isolator at the output.**
- **Built-in Control & Monitoring Circuits**
- **Built-in Output Isolator**
- **Adapt Doherty technology**

Introduction

The EMTS Telecom Services MCPA-450-50W50 is designed for single and multi-channel 3GPP WCDMA applications in the 450MHz frequency range. Designed for single and multi-channel CDMA & WCDMA applications it is also suitable for GSM. 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, and 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 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

Characteristics	Rating	
Operating Bandwidth	450 -470 MHz	
Power Output (Overall conditions)	50Watts (higher / Lower Power types are also available)	
ALC	15dB dB	
Gain (Overall conditions)	54±1 dB	
Gain Stability vs. Temperature (over operating temperature)	±0.75 dB	
Gain Variation vs. Frequency	±0.75 dB	
ATT(dB)	25 dB	
ACPR 1FA @ 50W Output (30KHz RBW, 100Hz VBW)	fc ±750KHz = -45dBc fc ±1.98MHz = -60dBc	
Inter-modulation Distortions	-50dBc with 2 - tones @ 30W	
Harmonics	2 nd	-45dBc
	3 rd	-60dBc
Input/Output VSWR @ 50 ohm	1.4:1	
Noise Figure	10 dB	
Supply Voltage	28±1.0VDC	
Current Consumption @ Pout = 50Watts CDMA	8.5Amp	
Operating Temperature	-20 ° to +60° C	
Relative Humidity	0 to 90% Non-condensing	
Dimensions	212 by 180 by 26mm	

About EMTS Telecom Services Ltd.

EMTS Telecom Services Ltd. 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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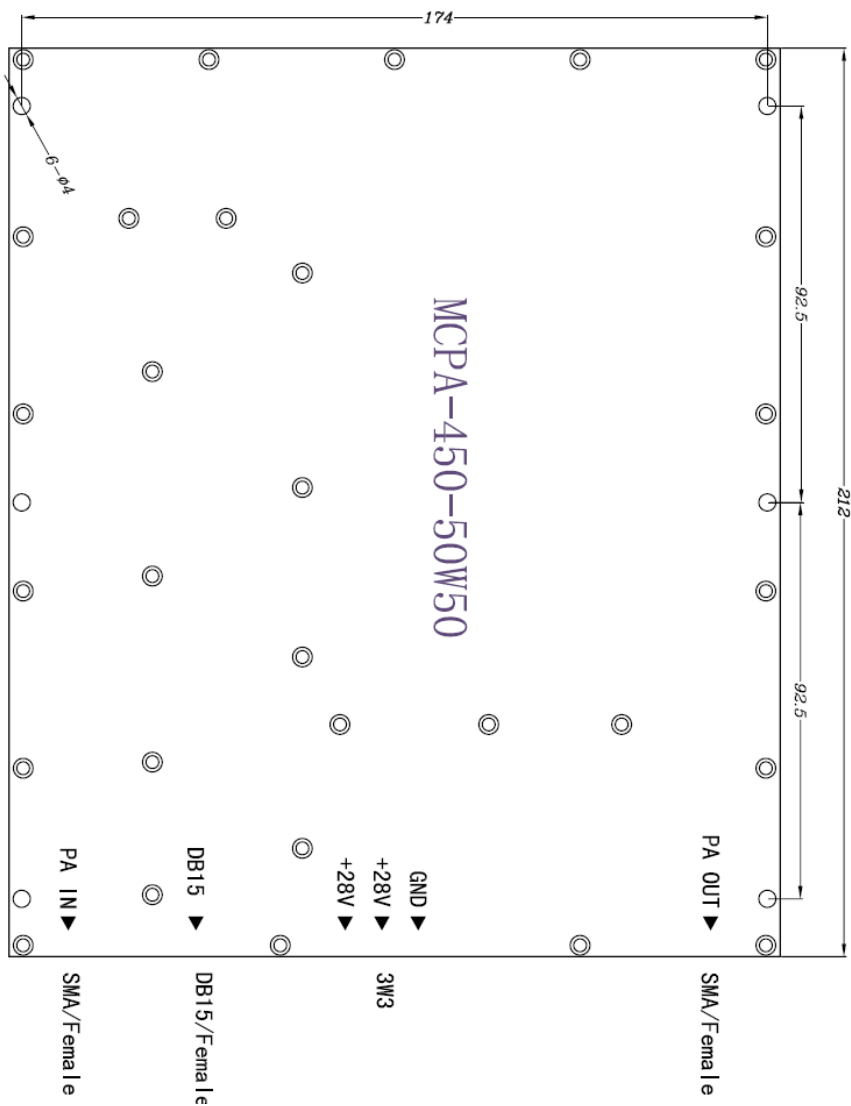
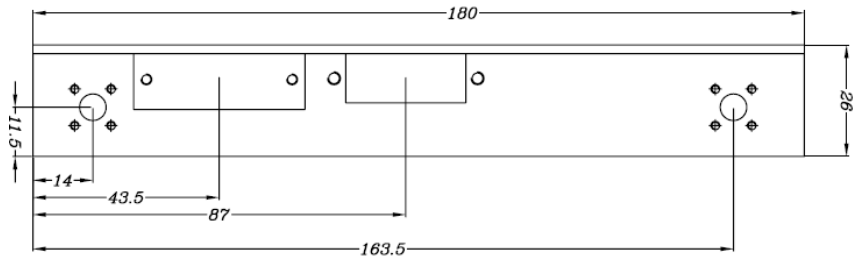


INTERFACE CONNECTORS

PIN	Mask	Parameter	Description	Remarks
DC Input	DC			
RF Input			SMA-KFD-5-3	
RF Output			SMA-KFD-5-3	
Control			DB-15S	
DB15-1	ATT	1dB Attenuation	Ls:0dB	5±0.5V
			Ls:-1dB	U 0.2V
DB15-2	ATT	2dB Attenuation	Ls:0dB	5±0.5V
			Ls:-2dB	U 0.2V
DB15-3	ATT	4dB Attenuation	Ls:0dB	5±0.5V
			Ls:-4dB	U 0.2V
DB15-4	ATT	8dB Attenuation	Ls:0dB	5±0.5V
			Ls:-8dB	U 0.2V
DB15-5	ATT	16dB Attenuation	Ls:0dB	5±0.5V
			Ls:-16dB	U 0.2V
DB15-7	POB	Reflected RF Power	U 4±0.1V	Pout 47dBm
			U 1.7±0.3V	Pout 32dBm
DB15-10	PO	Output RF Power	U 4±0.1V	Pout 47dBm
			U 1.7±0.3V	Pout 32dBm
DB15-11	SW	PA Enable	High Level: OFF Low Level: ON	
DB15-14	TEM	Temperature	0.01V/1 Celsius 0.5V for 0 Celsius	
DB15-15	GND			
NC	DB6 DB8	DB9 DB12	DB13	



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Note: All specifications subject to change without notice.

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