

# 850MHz Multi Carrier Solid State 50W Power Amplifier

Model No: MCPA-850-47W54

---



## Main Features

- **Support CDMA air protocol**
- **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**
- **High reliability and ruggedness**
- **Built-in Control & Monitoring Circuits**
- **Built-in Output Isolator**
- **High efficiency**
- **Adapt Doherty technology**

## Introduction

The EMTS Telecom Services Power Amplifier, model PA-850-47W54 is designed for single and multi-channel CDMA, GSM & WCDMA applications in the 850 MHz 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

Electrical Specifications			
Frequency range	869 -894 MHz		
Output power	+47dBm (higher / Lower Power types are also available)		
Output power versus temperature	±1 dB @ -40°C to +55°C		
Gain	54 dB ±1 dB		
Gain variation versus frequency	≤1 dB		
Gain variation versus temperature	±2 dB @ -40°C to +55°C		
In / Output VSWR	1.25 :1 typical / 1.5:1 maximum		
Allowable maximum input power	≥ 10 dBm		
Gain Adjust Range	0-31dB @ 1 dB step		
IMD3 (intermodulation))	55 dBc typical / 52 dBc minimum		
CDMA EVM @Pout=47dBm	< 2% @ above source own EVM		
ALC range	≥ 15		
Power voltage	+28±1VDC		
Current	Working current: ≤ 8.5A ( +47dBm		
Environmental Specifications			
Operating Temperature	-25° C to +80° C at location		
Storage temperature	-40° C to ~+85 ° C ambient		
Cold Start	-40°C		
Operating Humidity	5% to 95% relative humidity, non-condensing		
Storage Humidity	5% to 95% relative humidity, non-condensing		
MTBF	≥ 100,000h		
Mechanical Specifications			
Size	200x150x23 mm (Mounting 6 M4 screws)		
Wight	2 kg		
Interface name	Signal type	Interface structure	quantity
Power	DC	connector 3W3(male)	1
RF IN	RF signal	SMA-KFD-5-3 ROHS	1
RF OUT	RF signal	SMA-KFD-5-3 ROHS	1
Data control	TTL	DB9(male)	1

### About EMTS telecom Services:


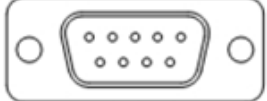
EMTS Telecom Services is a leading supplier of high-quality RF coverage solutions designed to maximize wireless network coverage in difficult RF environments and complex settings. The company specializes in extending RF radio coverage to rural areas, office buildings, subways, tunnels and shadowed areas.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

All rights reserved

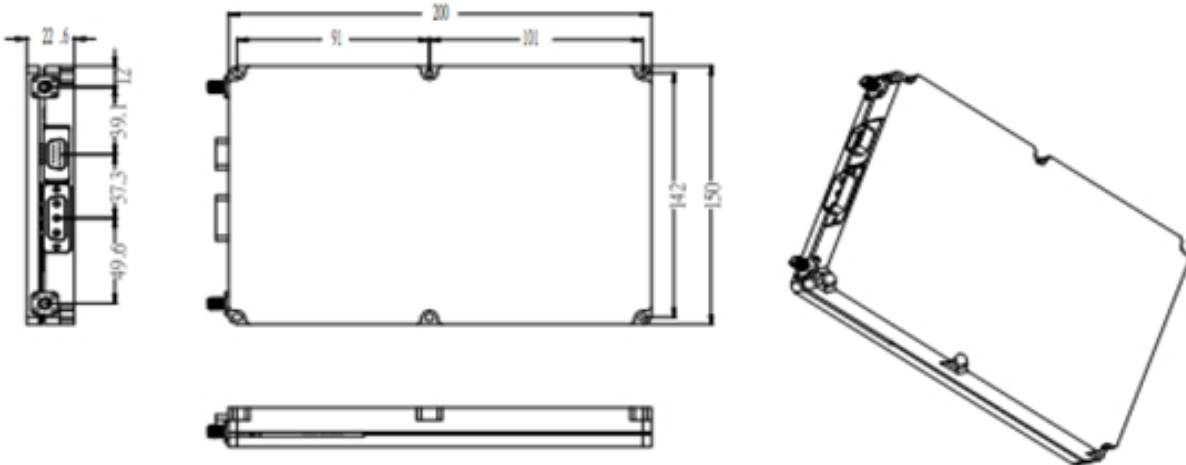


Monitoring function (DB9(male))	
Serial bus RS485	Serial bus RS485
Reading parameters	Input power, output power, reverse power, VSWR, temperature, ALC level, digital attenuation
Setting parameters	Digital attenuation, ALC level,
Alarm	High temperature, output power overload, VSWR, PA fault

### Pin Description

Power supply connector (3w3)	1 2 3	Pin1: Ground		
		Pin2: 28V		
		Pin3: NC		
Control (DB9)	12345	Pin1:RS485A	Pin2:RS485A	Pin3:RS485B
		Pin4:RS485B	Pin5:Ground	Pin6:NC
	6 7 8 9	Pin7:NC	Pin8:NC	Pin9:NC

### Outline Drawing



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.



TURNING TECHNOLOGY INTO SOLUTIONS

Note: All specifications subject to change without notice.

---

**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.

All rights reserved

