



TURNING TECHNOLOGY INTO SOLUTIONS

3500 MHz Multi Carrier Solid State 40 Watts Power Amplifier (MCPA) Model No: MCPA-3500-46W50

Main Features

- Support LTE air protocol, fully comply with 3GPP standard.
- Designed to meet LTE requirements.
- Solid-state linearized design with 40 watts linear output power.
(higher / Lower Power types are also available)
- Average Power Ratio(PAPR) value 13 guarantee excellent LTE performance
- High efficiency with a small form factor and lightweight
- Suitable for single & multi FA LTE for both FDD or TDD systems
- High reliability and ruggedness.
- Built-in Control & Monitoring Circuits
- Built-in Output Isolator
- Adapt Doherty technology
- Current 28V/5.7 A at 46 dBm

Introduction

The EMTS Telecom Services Ltd. MCPA unit model PA-3500-46W50 is designed for single and multi-channel 3GPP LTE (FDD or TDD) applications in the 3500 MHz frequency range. 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 offers a comprehensive portfolio of enhanced coverage solutions for the Wireless Networks, Based on advanced technologies. EMTS proven, indoor and outdoor solutions solve a wide range of network challenges 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

ITEMS	TECHNICAL SPECIFICATION		
Frequency range	3410 - 3490 MHz		
Power Output WCDMA per 3GPP standard	Two HSPA FA's at the power of 43 dBm per carrier Composite power +46 dBm (higher / Lower Power types are also available)		
Gain	54±1dB @25 ° C		
High-mid-low temperature Working status	≤ ±1.8dB @-25 ° C to +70 ° C		
In band ripple	≤ 2 dB		
Output VSWR	≤ 1.4		
Output power detect	Detect wave level range 0.2~3.0V, accuracy: 37.5±5mV/dB, Errors≤ 1dB。 2.50V±0.1V @ Pout=+47dBm		
Backward power detect	Detect wave level range 0.2~3.0V, accuracy:37.5±5mV/dB, Errors≤ 1dB。 2.45V±0.1V @ Pout=+47dBm		
EVM	≤6%		
PCDE	≤ -38dBc		
ACPR	≤ -49dBc@5Mhz, ≤ -53dBc@10Mhz		
TEMP indicate	0~1.5V(10mV/°C, 0.75V@25°C error≤ ±30mV)		
Enable switch	TTL low level: open, high level: close		
Working temperature	-25° C to +7 ° C		
Power voltage	+28±1VDC(at 21~30VDC power amplifier without failure); +12±1VDC		
Current	Working current: ≤ 5.7A (+46dBm) ; quiescent current: ≤ 2.5A		
Storage temperature	-40° C to ~+85 ° C		
MTBF	≥ 100,000h		
Size	200 *240 *25 mm		
Interface name	Signal type	Interface structure	quantity
Power	DC	J18EI2T1HN8S1HN12P	1
RF IN	RF signal	SMA-KFD-5-3 ROHS	1
RF OUT	RF signal	SMA-KFD-5-3 ROHS	1
Data control	TTL	DB-15S	1

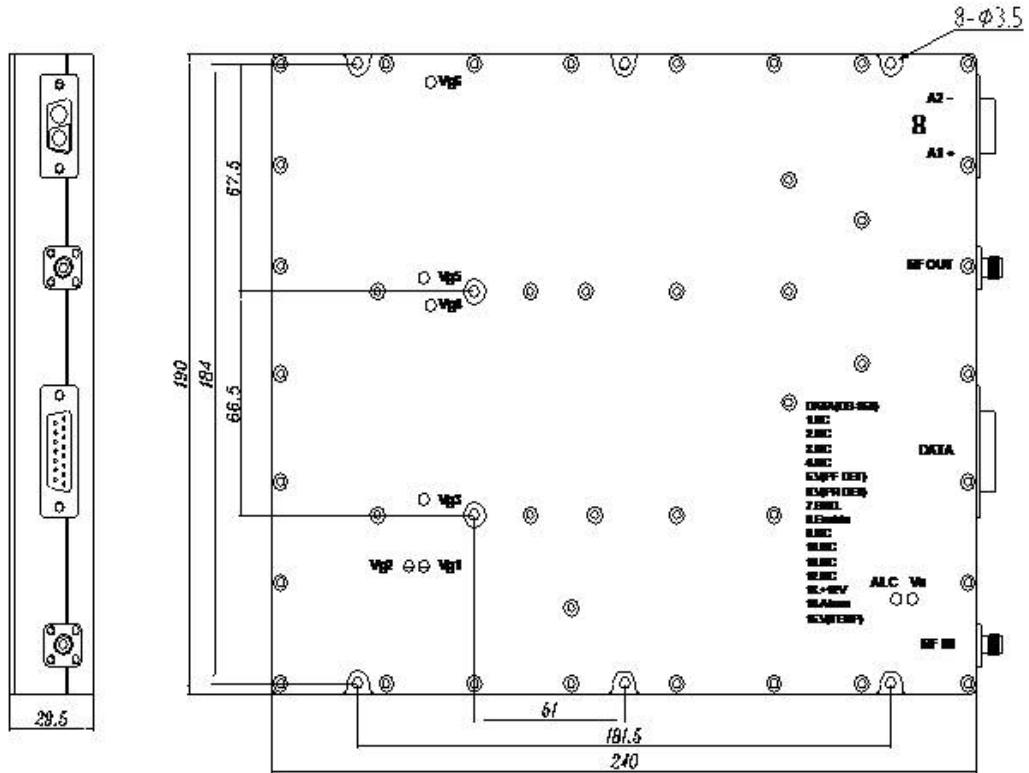
About EMTS telecom Services Ltd.:

EMTS is a leading supplier of high-quality RF coverage solutions designed to maximize wireless network coverage in difficult RF environments and complex settings. 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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Outline Drawing



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Interface

Power interface (J18EI2T1HN8S1HN12P)

pin	Signal name	Signal Definition	remark
A1	+28V	power	input, +28V
A2	GND	GND	grounding

Data interface (DB-15S)

Pin	Signal definition	meaning	remark
1	NC		
2	NC		
3	NC		
4	NC		
5	PF DET	Output power Detect voltage (0-3V)	37.5±5mV/dB,2.50±0.1V@Pout=47dBm
6	PR DET	Backward Output power Detect voltage (0-3V)	37.5±5mV/dB,2.45±0.1V@Pout=47dBm
7	GND	grounding	
8	ON/OFF	Enable switch, level open/close	Low level open, high level closed
9	NC		
10	NC		
11	NC		
12	NC		

Note: All specifications subject to change notice

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