EMTS Telecom Services

TURNING TECHNOLOGY INTO SOLUTIONS

40dBm 3.7-4.1GHz 5G Solid State Multi-Carrier Power Amplifier

Model No: MCPA-3900-40W50

Main Features

- Support LTE and 5G air protocol at the band 3.7-4.1GHz
- Designed to meet ETSI requirements for LTE and 5G networks
- Support TDD applications with both uplink and downlink path
- 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 Service Ltd. Multi Carrier Power-Amplifier model MCPA-3900-40W50 is designed for multi-channel LTE and 5G applications in the band of 3.7-4.1GHz. 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 using APD (Analog Pre-distortion) technology, advanced matching networks, and combining techniques (Doherty Design). The MCPA supports TDD modulation, and d 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 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 advancedtechnologies, 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.

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Technical Specification

Item		Specifications	Remark
Working frequency range		3700 to 4100MHz	
RF Output Power (P_{max})		40±0.5 dBm	
Gain		UL:35±1dB ; DL:50±1dB	
Flatness		△G_P≤3dB	
ACPR		≤-32dBc @±20MHz	PAR≤10dB
ALC		≥20dB	
ATT		≥25dB	
ATT Error		≤1.0dB	
EVM		4.5%typ.	
VSWR		≤1.3	
Switch		≤1us	
Noise Figure of UL		≤1.5dB	
PA RF ENA		Yes	
RF Input Power Detect		-30dBm ～ 0dBm	
RF Output Power Detect		15dBm～43dBm	
RF Output Reflect Power detect		10dBm～43dBm	
SWR ALM Threshold		2.5	
Temperature Detect		-40～100℃	
Working Voltage		28DCV	
Working Current	Quiescent Current	≤0.7A	
	Dynamic Current	≤5A@Po=40dBm	
Working temperature Range		-40～85℃	
XH2.54-5P PIN Define		Pin 1: GND Pin 2: RS485-A Pin 3: RS485-B Pin 4: Rx_EN（1 on，0 off） Pin 5: Tx_EN（1 on，0 off）	
Power Supply Connector VH3.95-3P PIN Define		Pin 1、2: 28VDC Pin 3: GND	

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. 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 standards of wireless Networks.

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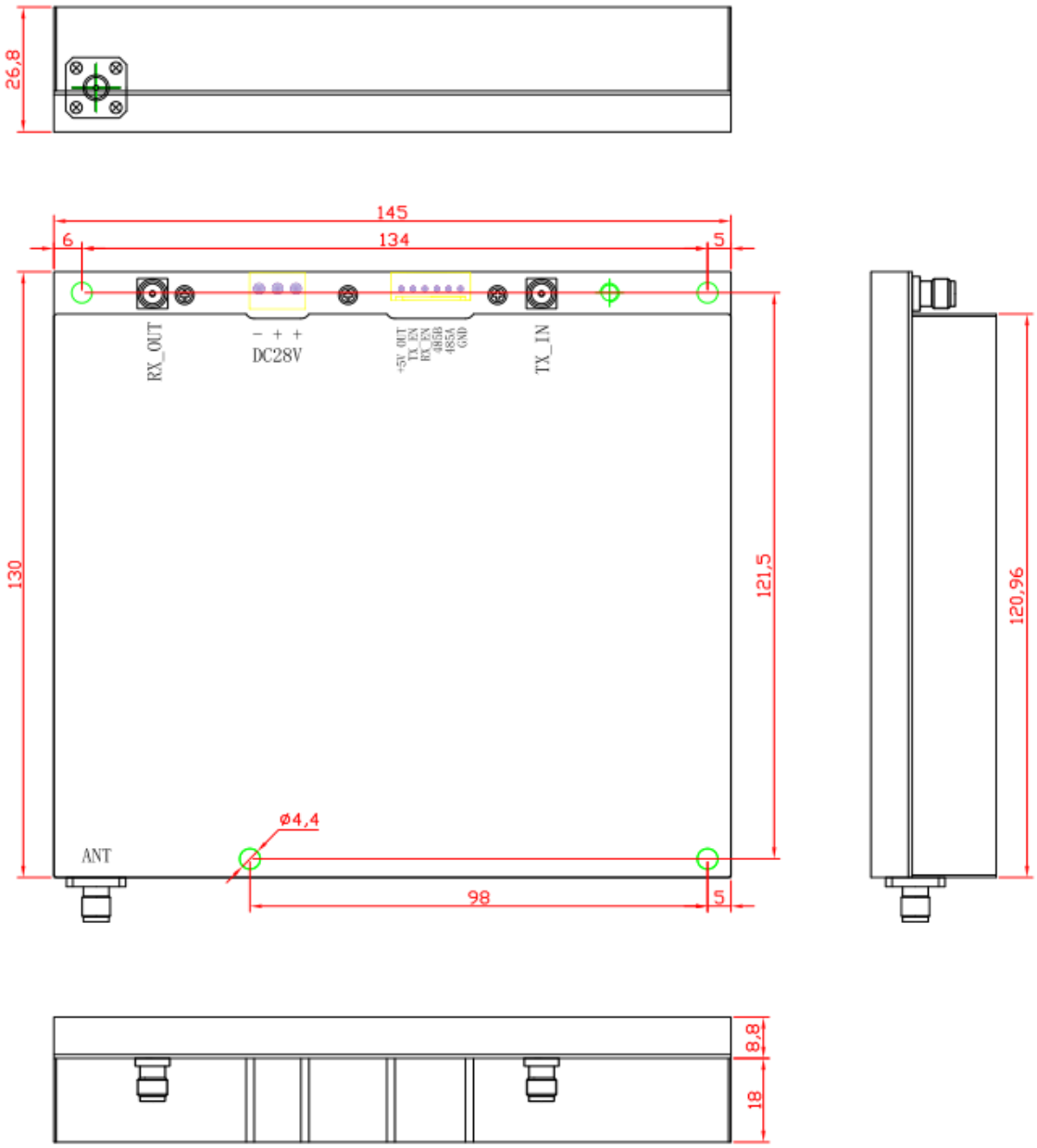

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