

40dBm 3.3-4.2GHz 5G Solid State Multi-Carrier Power Amplifier

Model No: MCPA-3750-40W50

Main Features

- Supports LTE-TDD and 5G NR signals in the 3.3-4.2 GHz band
- Designed to support applicable 3GPP and ETSI requirements
- Supports TDD operation with uplink and downlink paths
- Solid-state, high-linearity, multi-carrier design
- High efficiency, reliability, and rugged construction
- Built-in control, monitoring, alarm, and protection circuits
- Stable RF performance over a wide temperature range
- Field-proven reliability



Introduction

The EMTS Telecom Services Ltd. MCPA-3750-40W50 is a wideband multi-carrier power amplifier designed for LTE-Advanced and 5G NR TDD radio systems operating across the 3.3 to 4.2 GHz frequency range, covering 3GPP NR band n77 and the n78 frequency range.

The amplifier employs an advanced wideband Doherty architecture and high-linearity RF power devices to provide high gain, efficient operation at output-power back-off, low distortion, and stable amplitude and phase performance across the operating band.

The MCPA is engineered to amplify high-PAPR, multi-carrier OFDM waveforms and is optimized for use with digital predistortion, DPD, to achieve low Error Vector Magnitude, EVM, and Adjacent Channel Leakage Ratio, ACLR, under demanding LTE and 5G NR operating conditions.

Fast transmit enable and disable switching supports TDD operation. The rugged machined enclosure, integrated EMI/RFI filtering, qualified components, advanced thermal management, and protection circuitry provide stable and reliable operation over an ambient wide temperature range. The MCPA-3750-40W50 is suitable for 5G NR and LTE-Advanced base-station transmitters, RF repeaters, distributed antenna systems, DAS, and other high-linearity RF infrastructure application



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

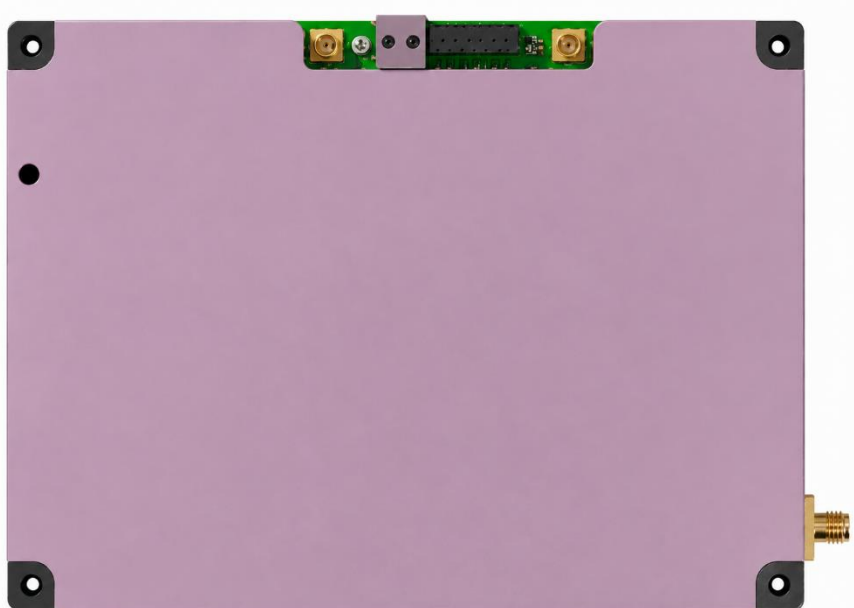
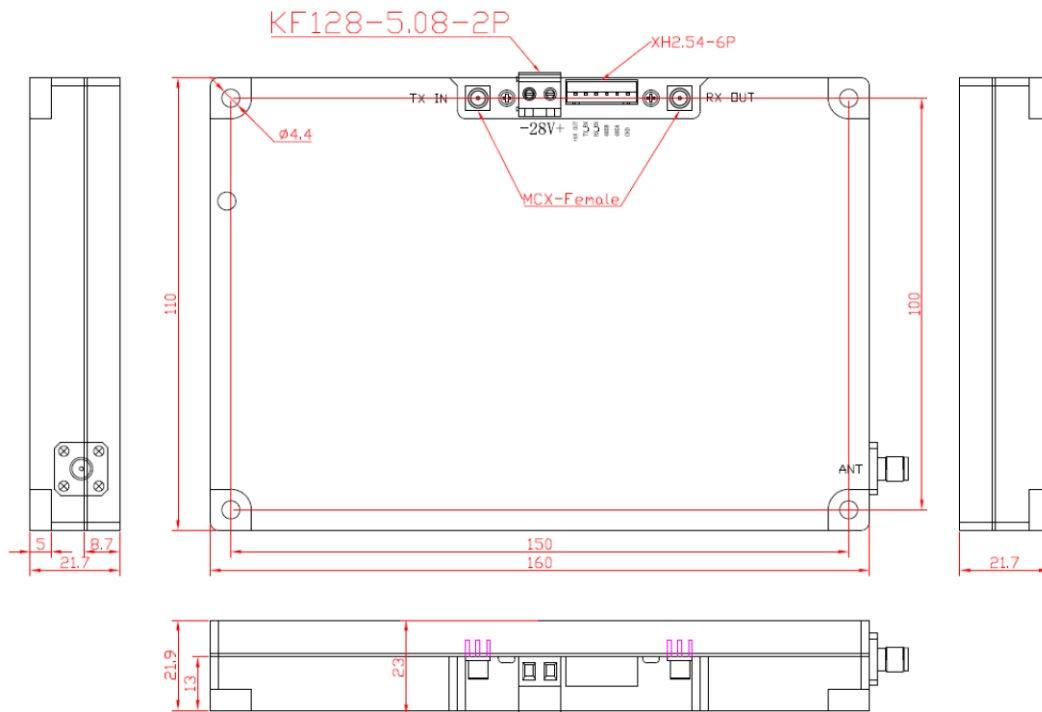
Frequency range(MHz)	3300-4200MHz
Maximum input power(dBm)	UL: ≤-10dBm /DL:≤10dBm
Output power P _{max} (dBm)	UL:-5±2dBm /DL:40±2dBm
Signal mode	LTE / 5G
ACPR@PAR=8 (dBC)/LTE20M	UL:≤-45Dbc/ DL:≤-30Dbc
Gain(dB)	UL:35±3 dB /DL:50±3 dB
EVM@ Po= 40 of PAR=8 /LTE20M	≤5.5%
Passband Ripple(dB)	ΔGP≤5dB
ALC control range(dB)	≥25dB
ATT range(dB)	≥25dB
Port VSWR	≤1.5
Power amplifier switch	Have
Input power detection(dBm)	-20 dBm~10 dBm
Output power detection(dBm)	10dBm~45dBm
Reflected power detection(dBm)	5dBm~40dBm
Fault alarm	Have
VSWR alarm	Have
Temperature detection (°C)	-40 to 85°C
Working voltage (VDC)	28VDC
Static working current (A)	≤2A
Dynamic working current(A)	≤3.0A@ Po=40dBm
Operating temperature range(°C)	-40 to 85°C
Monitoring interface	XH2.54-6P PIN Define
Power Supply Connector	KF128-5.08-2P PIN Define
Size (mm)	160x110x21,7 mm-



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.

Specification may change without notice - All rights reserved



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