MP1BN

HIGH EFFICIENCY GaN POWER AMPLIFIER 20MHz-520MHz 25W PA

ANTARES DEFENCE SYSTEMS

MP1BN 20MHz to 520MHz is a wideband, High efficiency GaN Power amplifier suitable for use in a manpack/portable ECM application.

PRODUCT FEATURES

- Broadband Power
- Power 25W
- 200ns Sargas 2 switching
- 50% Efficiency
- Compact, lightweight, Robust

ELECTRICAL CHARACTERISTICS TC = +25 °C, 28 VDC, 50 System (unless otherwise noted)

PARAMETER	MINIMUM	MAXIMUM	TYPICAL	COMMENTS
Frequency	20 MHz	520 MHz		
Psat Power @ 28V	20W	30W	27W	70W Maximum DC Power consumption @ 28V
Large Signal Gain			44dB	@ 28V
Input Drive	-3dBm	+3dBm		For Psat or 30W
Input Return Loss			-10dB	
2nd Harmonics		-10dBc	-15dBc	
Current at Psat		2.5A	1.8A	@ 28V
Efficiency at Psat		55%	50%	@ 28V
Noise figure	6dB	10dB		
Input voltage	22V	30V	28V	Predictable power variation with voltage
Sargas2 Mute rise time		950ns	400ns	<5% to >95% of settled power
Sargas2 Mute fall time		300ns	200ns	>95% to <5% of settled power
Sargas2 Mute isolation		-22dBc	-30dBc	Pin 5
Intermodulation @28V		-15dBc	-25dBc	Two 5W tones, 1MHz Spacing
Dimensions WxLxH				120mm x 55mm x 30mm
Weight			260g	Integrated without housing @ approx 50g
Connectors				SMA & 9 Pin D-type
Operating Temperature	-20°C	+80°C		Temperature measured at PA Case
Storage Temperature	-40°C	+85°C		
Thermal Protection				Not Fitted
Open/short Survivability				10:1 VSWR at all phase angles (for 1 minute)

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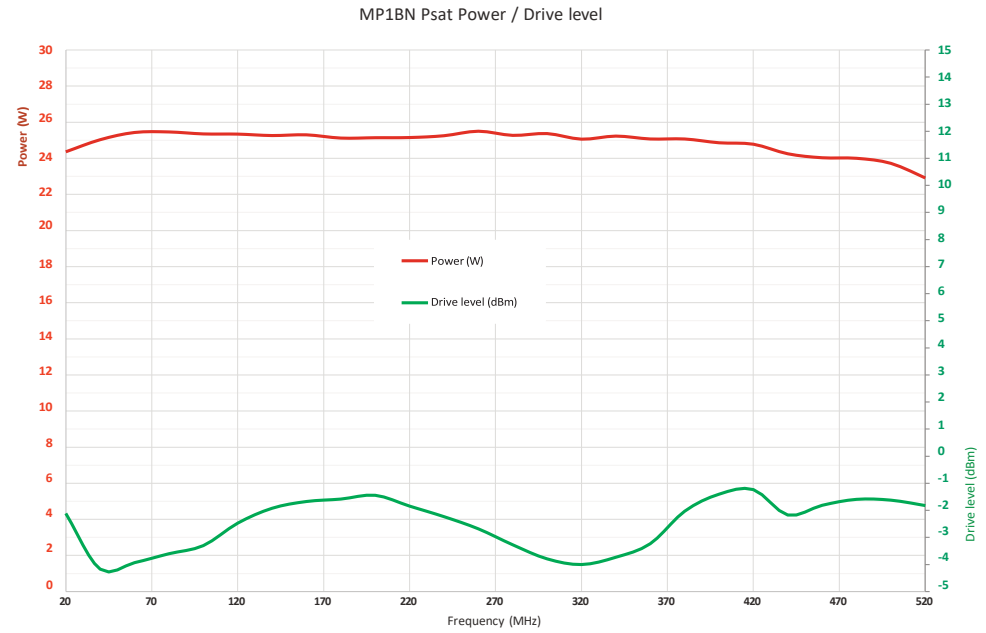
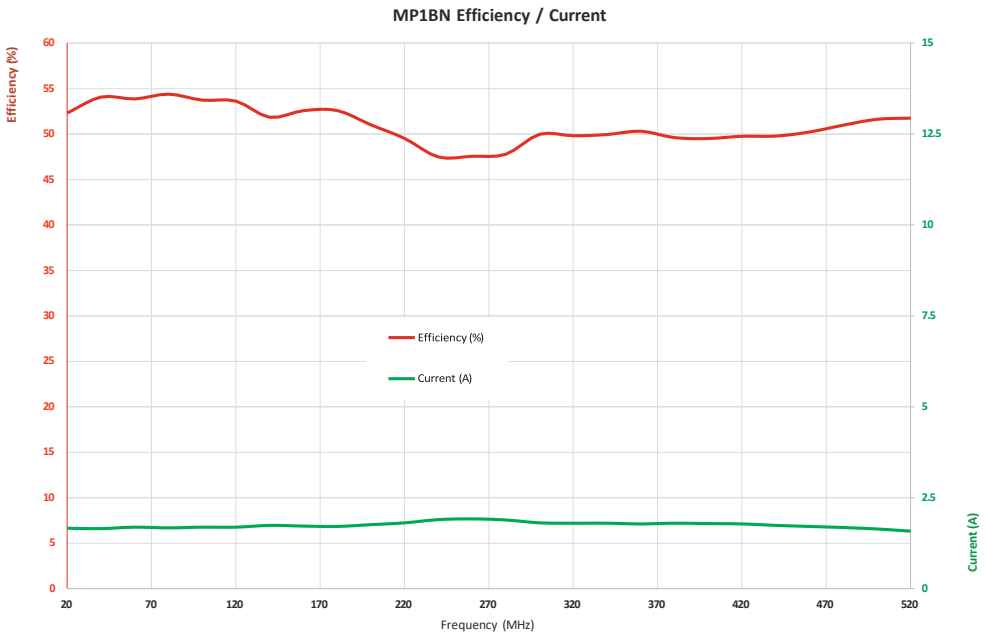
Date: 05/2024
Revision: V8





MP1BC 9 Pin D-Type Connector

PIN	DESCRIPTION	SPECIFICATION
5	Enhanced Mute (Sargas 2)	Disable “low” (GND <1V) Enable “High” (2.5 to 3.3V) or Disconnected (floating). Absolute max voltage 5.5V, Absolute maximum switching frequency 50kHz.
6,7	VDD	+28V DC. Absolute maximum voltage 32V
8,9	GND	Ground