MP3C

HIGH EFFICIENCY GaN POWER AMPLIFIER
2.0GHz-6.0GHz 25W PA

ANTARES
DEFENCE SYSTEMS

MP3C 2.0GHz to 6GHz is a wideband GaN Power Amplifier suitable for use in a variety of ECM applications, particularly where size and broadband high frequency power is important on the application platform.

PRODUCT FEATURES

- 2.0GHz to 6GHz
- Max Power 30W
- 200ns Sargas 2 switching
- 45% Efficiency
- Compact, lightweight, Robust

ELECTRICAL CHARACTERISTICS

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

PARAMETER	MINIMUM	MAXIMUM	TYPICAL	COMMENTS
Frequency	2.0GHz	6GHz		
Power @ 28V	25W	30W	27W	120W Maximum DC consumption @28V
Power @ 32V	27W	30W		Psat or 30W
Large signal Gain			46dB	Psat or 30W
Input Drive	-10dB	+5dB		Psat or 30W (Absolute max +10dBm)
Input return loss			-10dB	
2nd Harmonics	-10dBc	-20dBc	-25dBc	Psat or 30W
Current at Psat or 30W		4.5A	3A	@ 28V
Efficiency at Psat or 30W			35%	@ 28V
Noise Figure	10dB	15dB		
Input Voltage	22V	32V	28V	Predictable power variation with voltage
Sargas2 Mute Rise time		500ns	300ns	<5% to >95% of settled power
Sargas2 Mute Fall time		5us	950ns	>95% to <5% of settled power
Sargas2 Mute isolation		-21dB	-35dB	Pin 5
Shutdown Current		120us	100us	Pin 4 (Shutdown current 50mA)
Intermodulation		-20dBc	-25dBc	Two 5W tones, 1MHz Spacing
Dimensions LxWxH				120mm x 55mm x 30mm
Weight			250g	Integrated without housing 50g
Connectors				SMA & 9 Pin D-type
Operating Temperature	-20°C	+80°C		Temperature Measured on PA case
Storage temperature	-40°C	+85°C		
Thermal Protection				Cut out operates at 85°C ±5°C
Open/short Survivability				10:1 VSWR at all phase angles

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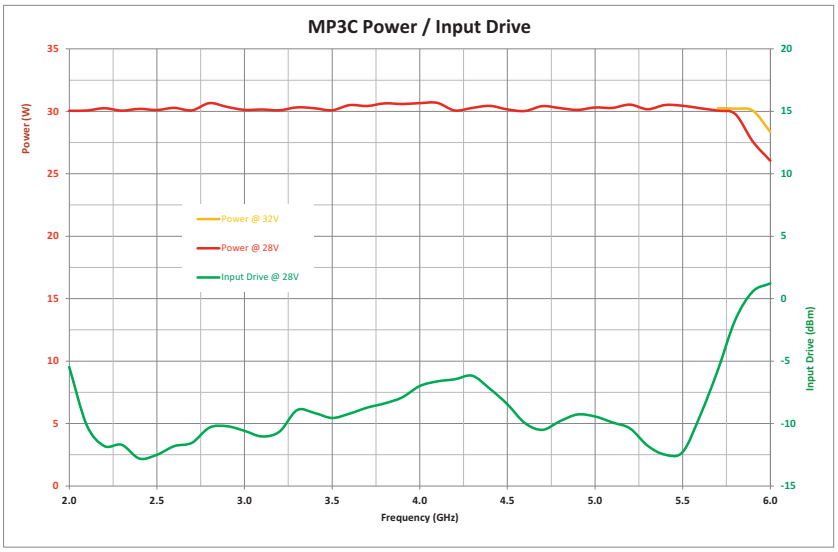

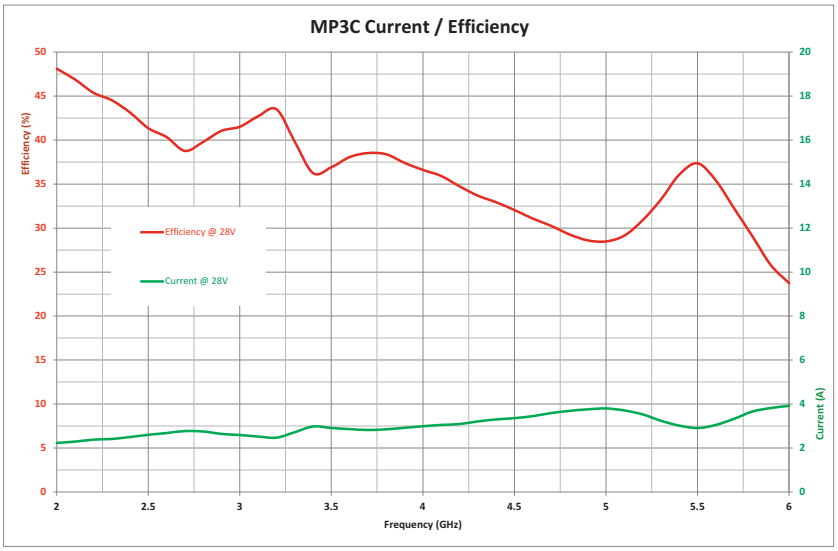

MP3C 9 Pin D-Type Connector

PIN	DESCRIPTION	SPECIFICATION
4	Standard Shutdown	Enable “low” (GND <1V) Disable “High” (2.5 to 3.3V) or Disconnected (floating) Absolute max voltage 5.5V. Absolute maximum switching frequency 50kHz
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 34V
8,9	GND	Ground

This product is designed and manufactured in the United Kingdom in accordance with the ISO 9001:2015 Quality Management System. RoHS compliant parts and processes are used in the manufacture of this product.