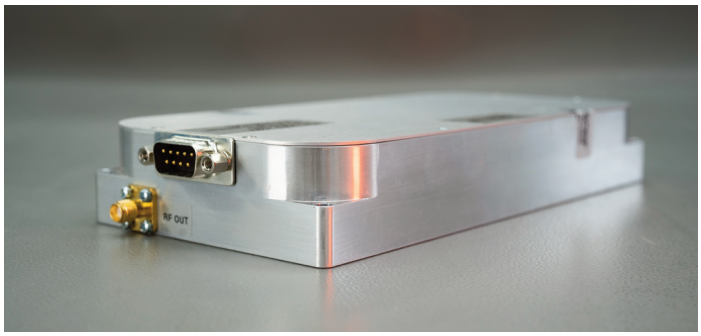
VM2K

HIGH POWER DENSITY GaN POWER AMPLIFIER 500MHz-2.7GHz 150W

ANTARES DEFENCE SYSTEMS

VM2K is a very high power density, wideband, GaN Power Amplifier suitable for use in a variety of EW applications. VM2K is particularly suitable where high power and efficiency is important on the application platform.



PRODUCT FEATURES

- Up to 150W, across 0.5 to 2.7GHz
- 4G Coverage
- 200ns Sargas2 Switching
- -50dBc mute isolation
- 45% Efficiency

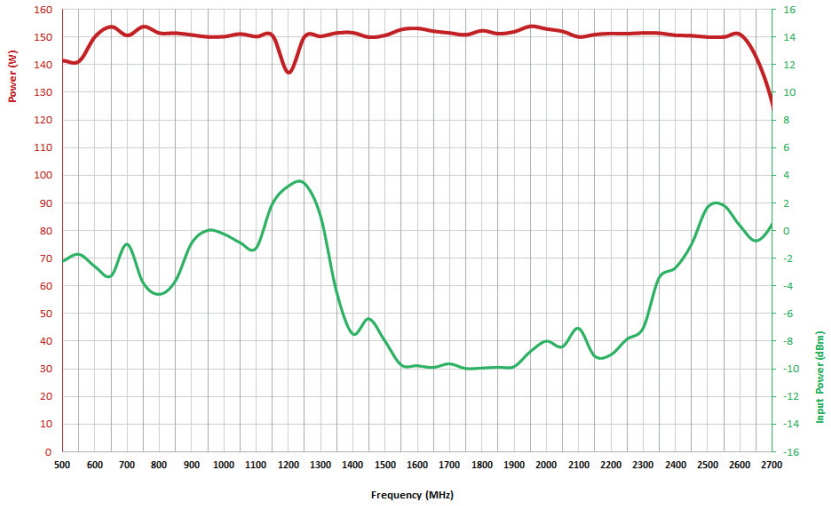
PARAMETER	MINIMUM	MAXIMUM	TYPICAL	COMMENTS
Frequency	500MHz	2.7GHz		
Power at Psat or 150W	120W	150W	140W	Power protection (fold back power if overdriven)
Gain at Psat or 150W			55dB	
Small Signal Gain			60dB	
Harmonics at Psat or 150W		-10dBc	-25dBc	2nd Harmonic
Current Consumption @ Psat or 150w	10A	16A	13A	Supply Voltage 28V
DC Power Consumption @ Psat or 150w	300W	450W	370W	Power protection (limits power if overdriven)
Operating Voltage	22V	32V	28V	
Efficiency @ Psat or 150W	30%	45%	35%	Supply Voltage 28V
Sargas2 Mute Rise time			200ns	0% to 100% from clock edge
Sargas2 Mute Fall time			200ns	100% to 0% from clock edge
Sargas2 Mute isolation			-35dB	@ 100W Power out
Shutdown Current			450mA	Pin 4 on D-type
Intermodulation			-30dBc	Two 20W Tones, 1MHz Spacing
Dimensions LxWxH				187mm x 91.5mm x 30mm
Weight			700g	
Connectors				SMA & 9 Pin D-type
D-type pin options				Various Linearity/Efficiency/Power configurations
Operating Temperature	-20°C	+80°C		Temperature measured at PA case
Thermal Protection				Shutdown at +80°C case temperature
Open/Short Survivability				10:1 VSWR at all phase angles

Antares Defence Systems Ltd
Unit 5, Alton Road Industrial Estate, Alton Road
Ross-on-Wye, Herefordshire, HR9 5NB

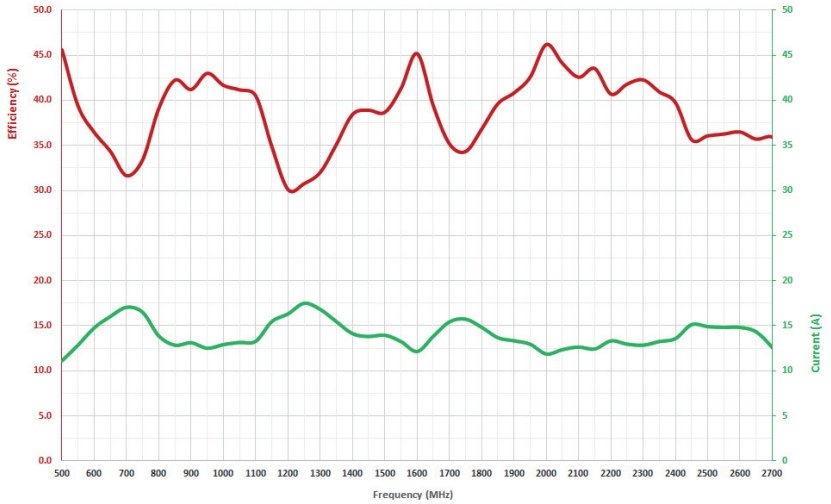
+44 (0)1989 760 590
sales@antaresdefencesystems.com
www.antaresdefencesystems.com

Date: 08/2025
Revision: v5

VM2K Input & Power



VM2K Current & Efficiency



VM2K 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)
5	Enhanced Mute (Sargas 2)	Disable “low” (GND <1V) Enable “High” (2.5 to 3.3V) or Disconnected (floating)
1, 2, 6, 7	VDD	+28V DC Absolute maximum voltage 32V
3, 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.