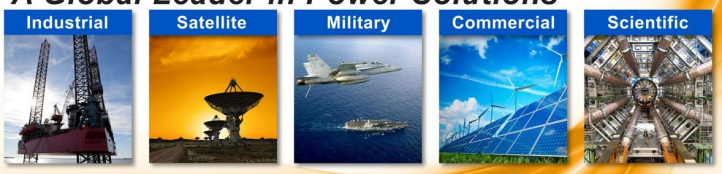
Powered by **Polarity**®

A Global Leader in Power Solutions



AS 9100:2009 REV C

POL1000Ka - P

1000 Watt Ka Band Transmitter

Ka band Radar

Ideally suited for demanding performance in next generation Ka band radar system. Meeting international standards for safety and EMI/EMC.

RF Performance

- *Frequency: 34-36GHZ*
- *RF Output Power: 1000W, 60dBm*
- *Gain 70 dB*
- *Temperature range: -40C to +70*

Built-in protection

- *3us electronic crowbar*
- *Output arc detector*
- *Input/output isolator*
- *Reverse power detection/c'bar*

Additional Options

- *1MHz PRF*
- *Airborne certified*
- *Internal Sync*
- *Liquid/Conduction cooled*

Guaranteed Reliability

- ***Military proven high viscosity coatings for dust and humidity control.***
- ***Critical component designs have accumulated more than 1 million hours of operation.***
- ***Data logging and analysis for cost effective maintenance***

Polarity's 1000W peak Ka band pulsed amplifier is ideally suited for demanding performance in next generation Ka band radar systems. This high efficiency, conduction cooled transmitter is densely packaged for light weight airborne applications and has RF modulation rates up to 1MHz.

Outstanding thermal design ensures reliable operation from ambient temperatures of -40C to +70deg C. The POL1000Ka-P offers a design with industry leading reliability and its power supply design ensures rugged performance that is unmatched. High efficiency designs meet the demands of today's complex airborne pulsed, shipboard, and ground mobile microwave power systems.

Optional features: A proven control protocol provides serial RS232/422/485, ethernet, and advanced user friendly communication to provide data logging for cost effective maintenance and trouble shooting.

POL1000Ka-P — Industry Leading Performance — Affordable — Proven Reliability

11294 Sunrise Park Drive Rancho Cordova, CA 95742 Tel: 916-635-3050 Fax: 916-635-7866 ***sales@polarity.net***

Performance Specifications : POL1000Ka-P

Electrical

Frequency	34 - 36GHz - TWT
Output Power	
TWT	1000W (60 dBm)
HPA Flange	> 1100W
Gain	50dB to 70dB(min), adjustable
Output Power Variation	1 dB p-p 34GHz to 35GHz Optional equalizer
Modulation Frequency	Single shot to 1MHz
Pulse width	50ns to 30us
Duty	> 10%
RF rise and fall times	< 10ns
Input VSWR	1.3:1 max
Output VSWR	1.8:1 max
Spurious (max)	-67dBc
Phase Noise	100Hz: < -95dBc/Hz
	500Hz: < -100dBc/Hz
	1000Hz: < -100dBc/Hz
Phase Droop	<2.5 degrees/us
Beam on Noise Power Density	< -30dBm/MHz

Prime Power

Line Input	115/200VAC 400Hz
	80 to 120VDC and 270VDC options
Input Power	700VA
Power Factor	0.95 (min)

Environmental

Operating Temperature	-40 deg C to +70deg C
Non-Operating	-40 deg C to +85 deg C
Relative Humidity	100% non-condensing
Altitude	
Operating	50,000 ft
Non-Operating	70,000 ft
Shock	MIL-STD-810G Method 516.6
Vibration	MIL-STD-810G 514.6
Acoustic Noise	na
Thermal	Conduction /Air cooled

Mechanical

RF Input	2.92mm, K type
RF Output	WR-28
RF Output Monitor	2.92 mm , female 50dB coupling (nom)
Dimensions (W x H x L)	15.0"L x 9.75"W x 7.5"H in (381 x 247 x 190) mm
Weight	27 lbs
Mounting Brackets	Side mount fasteners

Interface

	RS-232 /422/485 Ethernet
Remote/Local Control	Status, Transmit, RF Inhibit, Fault Status Internal data logging Discrete Status Summary fault

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