

Powered by **Polarity**[®]

POL450KaP

A Global Leader in Power Solutions



AS 9100:2009 REV C

450 Watt Peak Ka Band

Pulsed Microwave Power Amplifier (PMPA)

Ideally suited for demanding performance in next generation Ka band radar systems. This high efficiency, conduction cooled PMPA is densely packaged for light weight airborne applications.

RF Performance

- Frequency: 32.0GHz to 36.0GHz
- RF Output Power: 450W Peak, 33%
- Gain: 50 dB min.
- Temperature range: -40C to +85C

Built-in protection

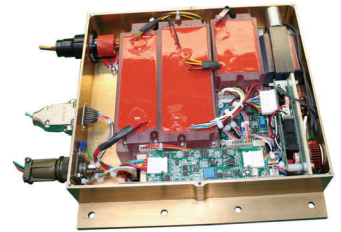
- Output arc detector
- Input isolator
- Reverse power detection
- High speed fault detection

Additional Options

- Airborne packaging
- High speed modulator >1MHz
- Liquid/Conduction cooled
- Ethernet interface

Guaranteed Reliability

- Military proven high viscosity coatings and encapsulates for harsh environments
- Critical component designs have accumulated more than 1 million hours of operation.
- Data logging and analysis for cost effective maintenance



Outstanding thermal design ensures reliable operation to ambient temperatures of +85deg C. The POL450KaP offers a design with industry leading reliability and its power supply design ensures rugged performance that is unmatched. High efficiency multi-collector designs meet the demands of today's complex ground mobile and airborne pulsed 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.

POL450KaP — Industry Leading Performance — Affordable — Proven Reliability

Performance Specifications : POL450KaP

Electrical

Frequency	32.0 - 36.0 GHz
Output Power TWT Flange	450W peak (56.5 dBm)
Duty	33% max.
Input RF	0dbm minimum
Gain	50 dB (min)
Gain variation	1.5 dB p-p (any 1.0 GHz BW)
Modulation Frequency	Single shot to 1MHz
Modulation Pulse Width	100ns to 50us
Maximum Duty	30%
Sync Capability	400KHz
Fast Warm Up Capability	3 to 5 seconds
Input VSWR	1.3:1 max
Output VSWR	1.3:1 max
Input Voltage	100VDC, 270VDC +/- 10%
Interface	RS-232 /422/485 Ethernet

Environmental

Operating Temperature	-40 deg C to +85deg C
Non- Operating	-54 deg C to +100deg C
Relative Humidity	100% condensing
Altitude	
Operating	50000 ft
Non-Operating	70,000 ft
Shock	30 g peak , 11 msec , ½ sine
Vibration	2.1 grms , 5Hz to 500Hz
Thermal	Conduction cooled Liquid cooled option

Mechanical

RF Input	K-Type, 2.92mm
RF Output	WR-28
RF Output Monitor	2.92 mm , female 50dB coupling (nom)
Dimensions (W x H x L)	14 x 9.5 x 3.25 in (355 x 241 x 82.55) mm
Weight	19lb
Mounting Brackets	Side mount fasteners

Optional: TWT Power Supply with External TWT.

Mechanical Outline

