

Powered by **Polarity**<sup>®</sup>

**POL2000C**

**A Global Leader in Power Solutions**



AS 9100:2009 REV C



## **Split Package 2000 Watt C Band HPA**

### **High Band Width Communication HPA**

**Ideally suited for demanding performance in next generation high bandwidth satellite uplinks. Meeting international standards for safety and EMI/EMC.**

#### **RF Performance**

- **Frequency: 5.850GHz - 6.725GHz**
- **RF Output Power: 2000W, 63dBm**
- **Gain: 70dBm**
- **Temperature range: -40C to +60C**

#### **Built-in protection**

- **3us electronic crowbar**
- **Output RF arc detector**
- **Input isolator**
- **Reverse power detection**

#### **Additional Options**

- **Cathode Modulator**
- **Linearizer**
- **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.**

The POL2000C split package amplifier is specifically designed to meet multicarrier operation in demanding outdoor ground mobile communication applications. Polarity offers models suited for all major communication bands.

Outstanding thermal design ensures reliable operation to ambient temperatures of +60deg C. The POL2000C offers a design with industry leading reliability and its power supply design ensures rugged performance that is unmatched.

High efficiency modern user multi-collector designs meets the demands of today's complex systems and offers the ability to effectively power manage the overall network as well as the increasingly challenging requirements for mobile systems.

A rich control protocol provides serial RS2323/422/485, ethernet, and advanced user friendly communication to provide data logging for cost effective maintenance.

**POL2000C — Industry Leading Performance — Affordable — Proven Reliability**

## Performance Specifications :

### Electrical

Frequency	Band 1 5.850-6.725 GHz <b>Designed for VTC-6369D5</b>
Output Power	
HPA	2000W (63.0 dBm)
Flange	1800W (62.5 dBm) min
Gain	70dB (min)
Gain variation	2.5 dB p-p across band 0.8 dB per 60MHz
Gain Slope	+/- 0.04dB/MHz max
Gain Stability 24hr	+/- 0.25dB
Input VSWR	1.3:1 max
Output VSWR	1.3:1 max
Harmonic Output	-60 dBc max
Group Delay (max) in 60MHz band	
Ripple	0.5 nsec p-p
Linear	0.01 nsec/MHz
Parabolic	0.001 nsec/MHz <sup>2</sup>
Noise Power	
Transmit Band	-75 dBW/4 kHz max
Receive Band	-150 dBW /4 kHz max
Residual AM Noise (max)	-50 dBc below 10kHz -20(1.5+log(f)) dBc 10 kHz to 500kHz -85 dBc above 500kHz
Spurious (max)	-60 dBc at linear power (in band)
Phase Noise (max) 12dB below IESS	-50 dBc max AC fundamental -47 dBc max sum of all spurs
Line Input	200-240VAC, 3 phase +/- 10% 47-63Hz
Input Power	6500W max
Power Factor	0.95 (min) 1dB max

### Environmental

Operating Temperature	-40 deg C to +60deg C -40 deg C o +50 deg C, direct sunlight
Non-Operating	50 deg C to +75 deg C
Relative Humidity	100% condensing
Altitude	
Operating	10,000 ft with 2 deg C/ 1000ft derating above sea level
Non-Operating	50,000 ft
Shock	20 g peak , 11 msec , ½ sine
Vibration	2.1 grms , 5Hz to 500Hz
Acoustic Noise	65 dBA , 3 ft from amplifier
Thermal	Forced Air cooling

### Mechanical

RF Input	SMA
RF Output	WR-137 and CPR-137
RF Output Monitor	SMA 50dB coupling (nom)
Dimensions (W x H x L)	19" x 12" x 28"
Weight	65 lb, not including TWT
Mounting	19" Rack mount

### Interface

Remote	RS-232 /422/485 Ethernet USB
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