

The POAM – PA3436250V6 is an excellent alternative to travelling wave tube amplifiers. This solid-state power amplifier is housed in a 5U rack mount enclosure and operates within the 34-36 GHz frequency range, achieving a minimum of 54 dBm (250 Watts) of instantaneous saturated power. This product features GaN technology and Ka-band MMIC design, along with advanced high-count combining techniques, making it a best-in-class solution for power amplification. With outstanding performance in gain, efficiency, signal flatness, and RF output power, this SSPA serves as an ideal building block for millimeter-wave sub-systems across a wide range of applications.



## Product Features

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- Frequency Range: 34 – 36 GHz
- Saturated Power: 54 dBm (250W)
- Solid State MMIC Reliability
- Multi-Element Redundancy
- Instant On (no warm-up)

## Application:

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- Radar
- Satellite communication
- TWTA Replacement



# SOLID STATE POWER AMPLIFIER 250W KA-BAND

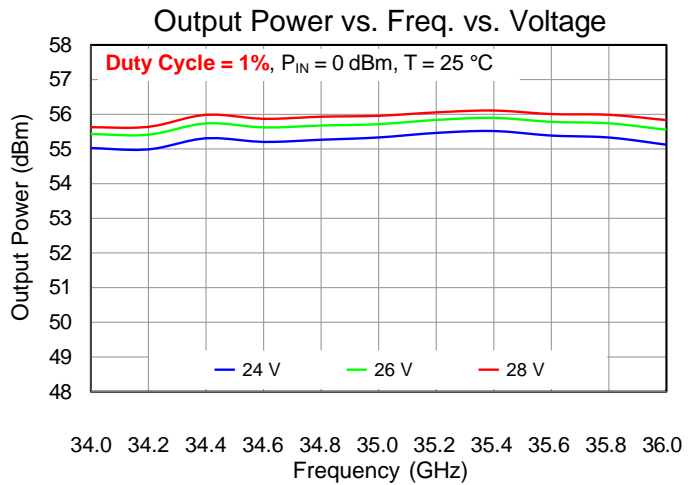
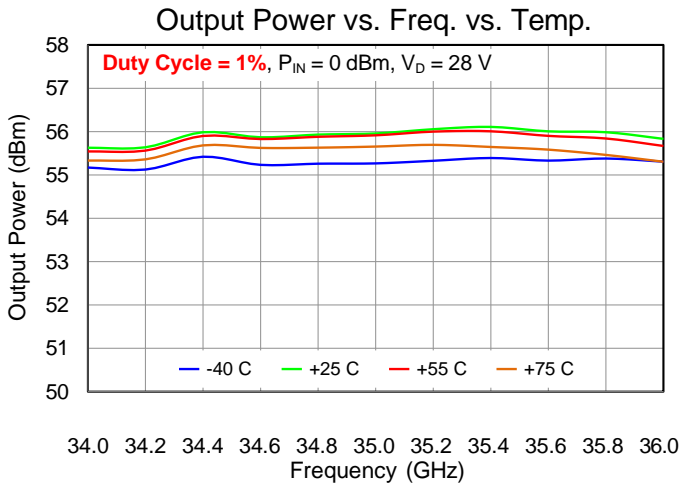
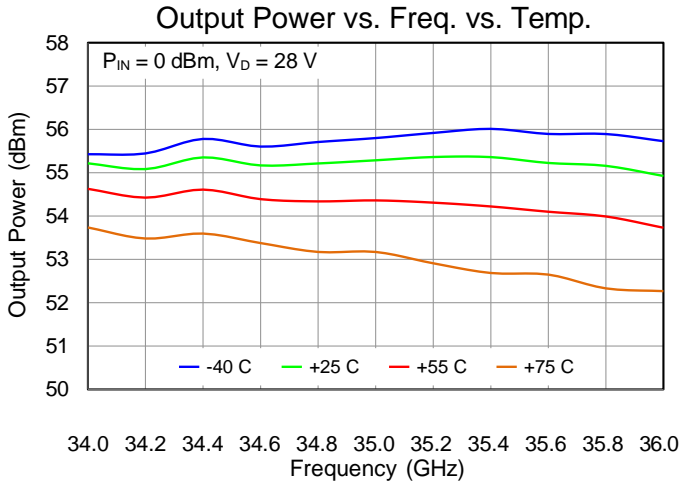
Part No.: PA3436250V6

## Electrical Specifications:

Parameter	Min	Typ.	Max	Units
Frequency	34		36	GHz
Output Power (Pulsed, PIN = 0 dBm)		54		dBm
Input Power (Pulsed)	-2	0	+6	dBm
Gain Flatness vs Freq. (Pulsed, PIN = 0 dBm)		0.6		dB
Pulse Droop (PW=50 us, F=35 GHz, PIN=0 dBm)				
-40 C		0.7		dB
+25 C		0.8		dB
+55 C		1.0		dB
+75 C		1.6		dB
Rise/Fall Time (PW=20 ns, F=35 GHz, PIN=0 dBm)				
-40 C		5.0 / 2.9		ns
+25 C		5.8 / 3.1		ns
+55 C		6.4 / 3.1		ns
+75 C		9.3 / 3.4		ns
Input Return Loss (CW)		13		dB
DC Power (average)		1100		W
Voltage requirement		28		VDC
Current		40		Amp
Operating Temperature	-40		+75	°C
Storage Temperature	-40		+85	°C
Input RF Interface J1	WR-28 Waveguide or K-Type connector			
Output RF Interface J2	WR-28 Waveguide			
Auxiliary health and monitoring Interface J5	D38999/20WD35SN MPHENOL or D-connector			
Power Interface J3 & J4	D38999/20WD18PN AMPHENOL			
Total Weight	12			kg
Total Dimensions (L) x (W) x (H)	482.6 x 221.5 x 425 (Standard 5U enclosure)			millimeters
IP Rating	IP4X			
Cooling method	Forced Air			

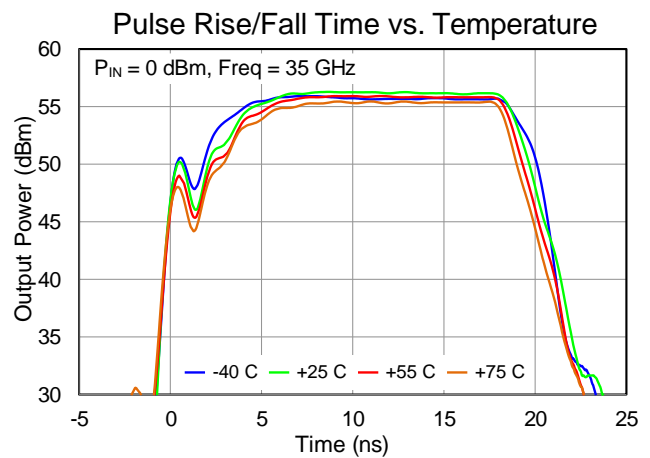
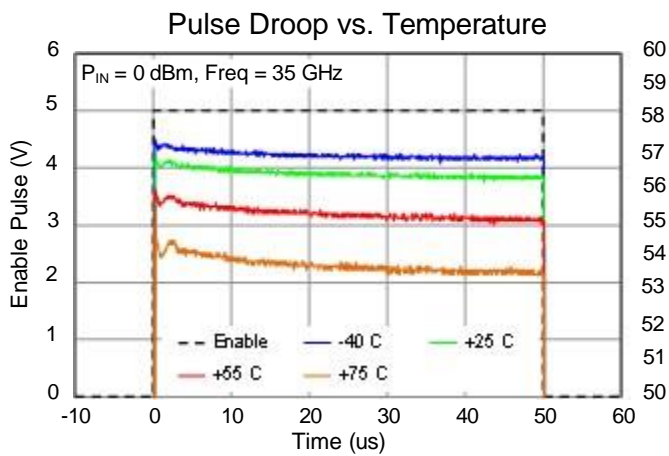
## Typical Performance:

Conditions unless otherwise specified:  $V_D = +28\text{ V}$ ,  $I_{DQ} = 6\text{ A}$ ,  $P_{IN} = 0\text{ dBm}$ , Pulse Width = 5 us, Duty Cycle = 50%



## Typical Performance:

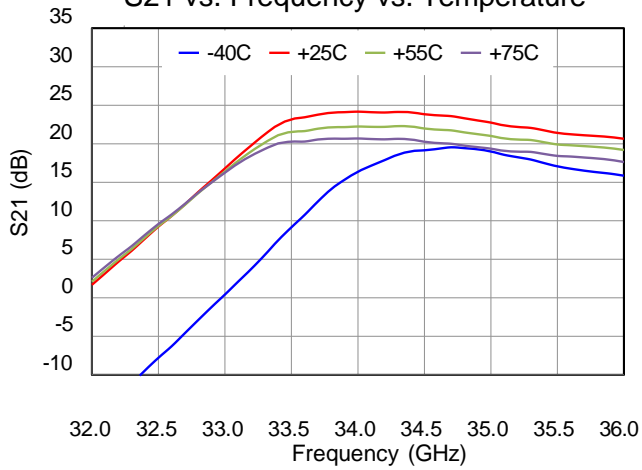
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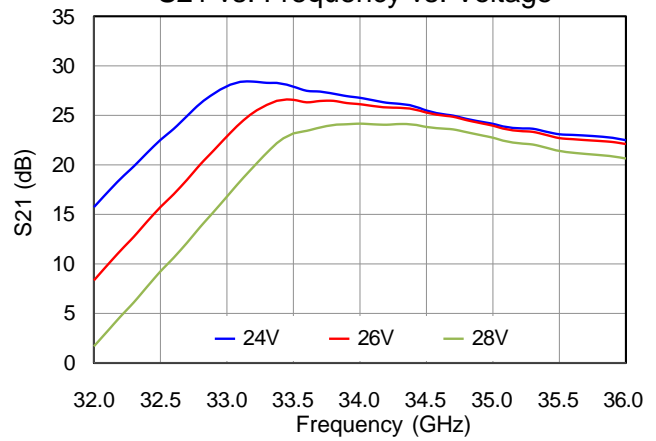
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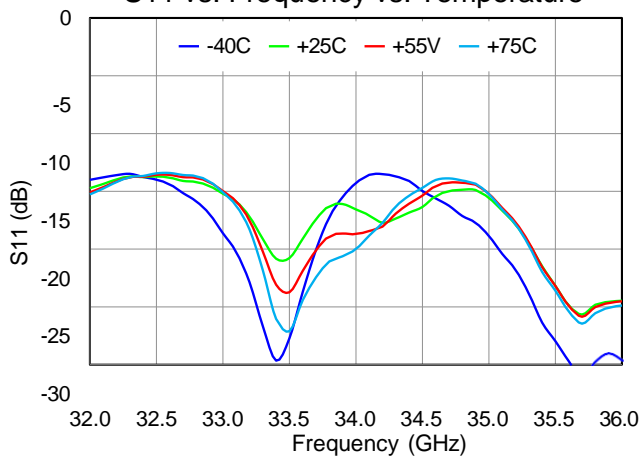
S21 vs. Frequency vs. Temperature



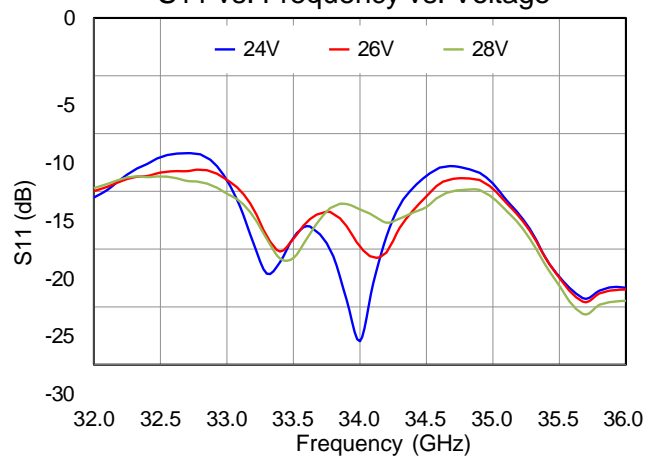
S21 vs. Frequency vs. Voltage



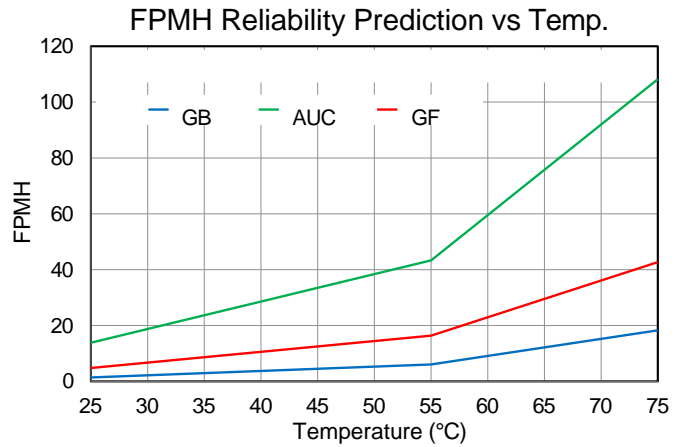
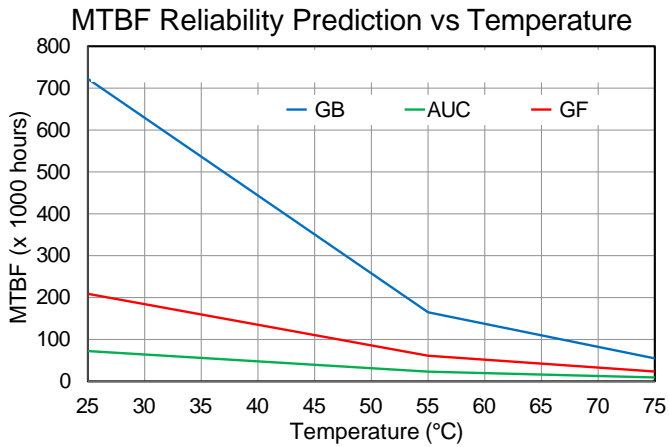
S11 vs. Frequency vs. Temperature



S11 vs. Frequency vs. Voltage



## Reliability Information



Calculations derived from MIL-HDBK-217F

Operational environments are:

GB – Ground Benign

GF – Ground Fixed

AUC – Airborne Uninhabited Cargo

## Handling Precautions

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Caution!  
ESD-Sensitive Device

**RF VOLTAGE HAZARD:** Contact with RF fields at the output connector can cause burns or electric shock. High levels of RF/Microwave energy may be present when the unit is operating.

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**HIGH DC CURRENT HAZARD:** High levels of DC current are present when the unit is operating.

## Contact Information

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For the latest specifications, additional product information, worldwide sales and distribution locations:

Web: [www.poamelectronics.com](http://www.poamelectronics.com)

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