

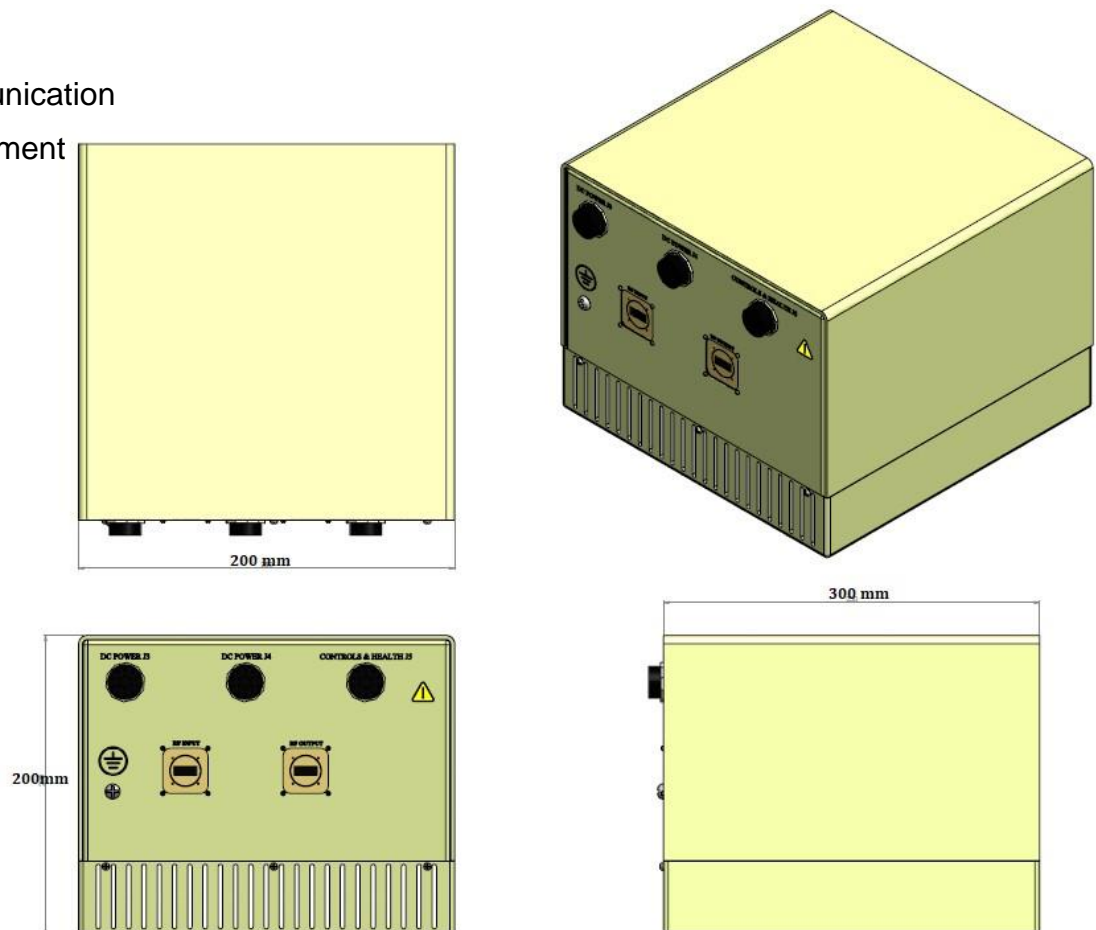
An excellent alternative to travelling wave tube amplifiers, POAM – PA3436250V5 is a solid-state Power Amplifier with an operating range of 34-36 GHz while achieving a minimum of 54 dBm (250 Watts) of instantaneous saturated power. With its maximum performance in gain, efficiency, signal flatness, and RF output power, this SSPA is the ideal building block for millimeter-wave sub-systems with wide-ranging applications.

Product Features

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

Application:

- Radar
- Satellite communication
- TWTA Replacement





SOLID STATE POWER AMPLIFIER 250W KA-BAND

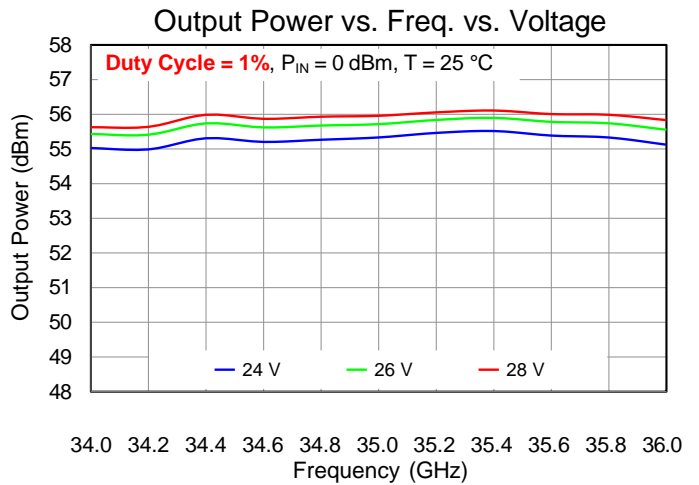
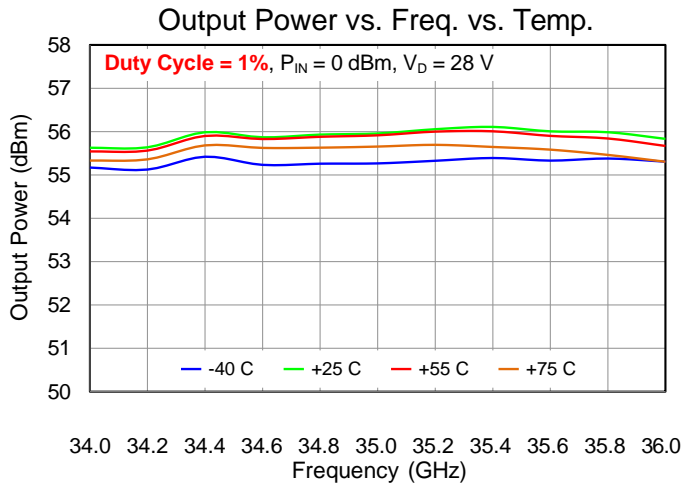
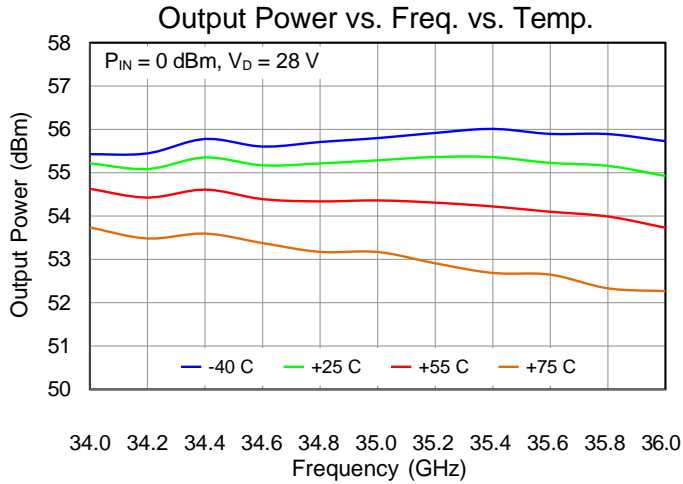
PART NO.: PA3436250V5

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
Input RF Interface J1	WR-28 Waveguide			
Output RF Interface J2	WR-28 Waveguide			
Auxiliary Interface J5	D38999/20WD35SN MPHENOL			
Power Interface J3 & J4	D38999/20WD18PN AMPHENOL			
Total Weight	8			kg
Total Dimensions (L) x (W) x (H)	200 x 200 x 300			millimeters
IP Rating	IP68			
Cooling	Heatsink & Forced Air fan (IP68)			

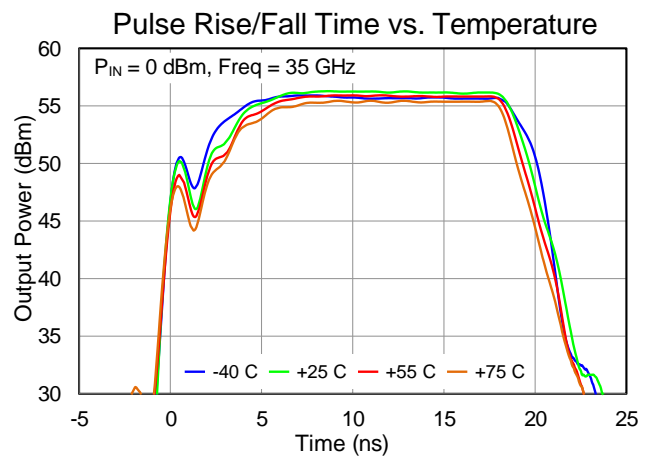
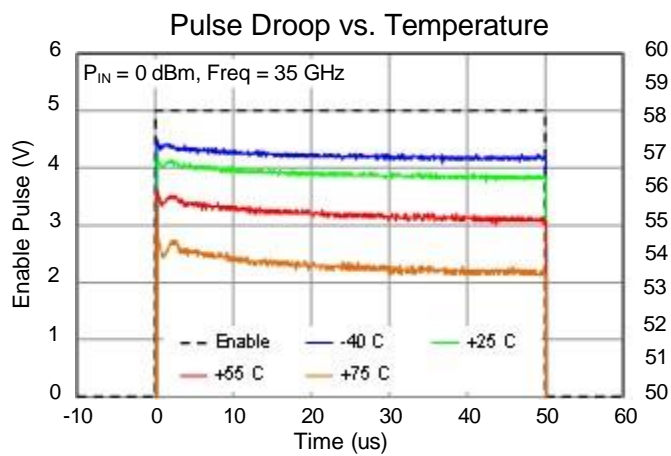
Typical Performance

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

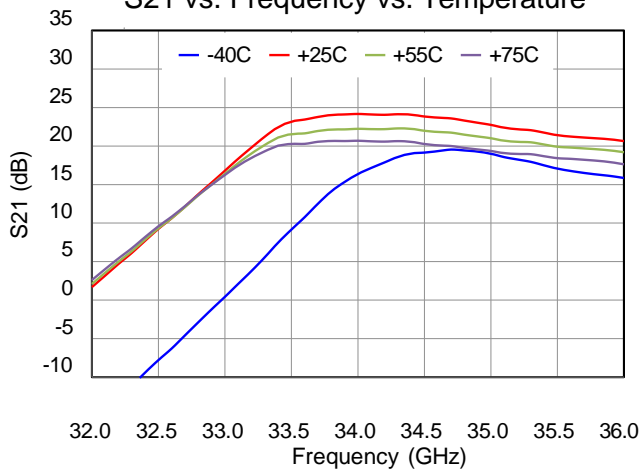
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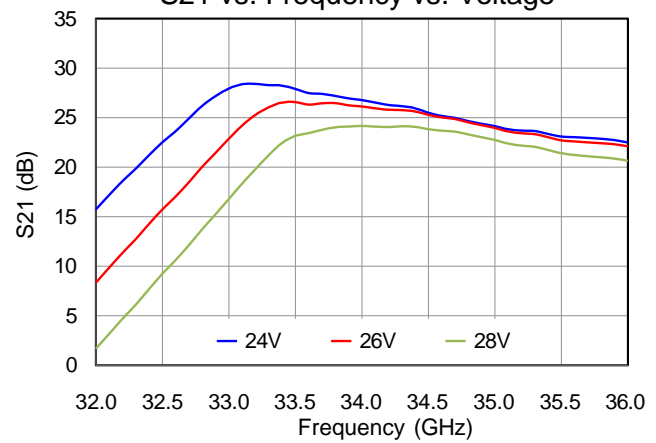
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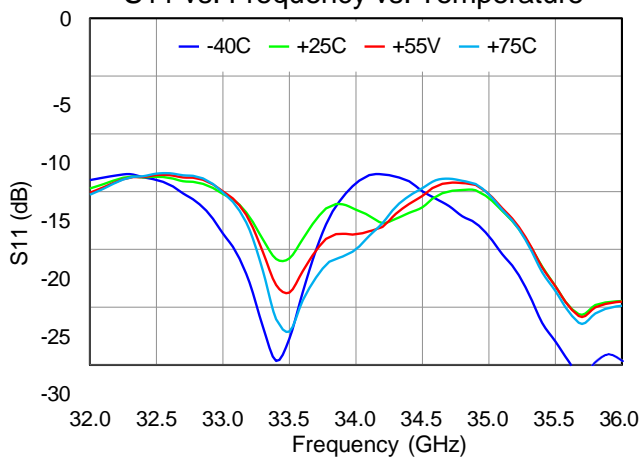
S21 vs. Frequency vs. Temperature



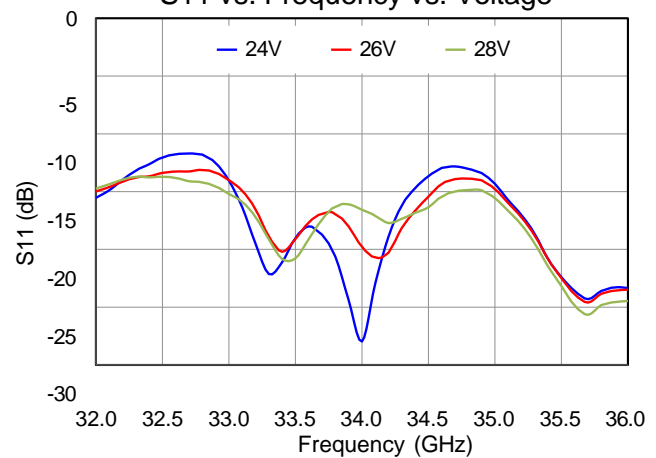
S21 vs. Frequency vs. Voltage



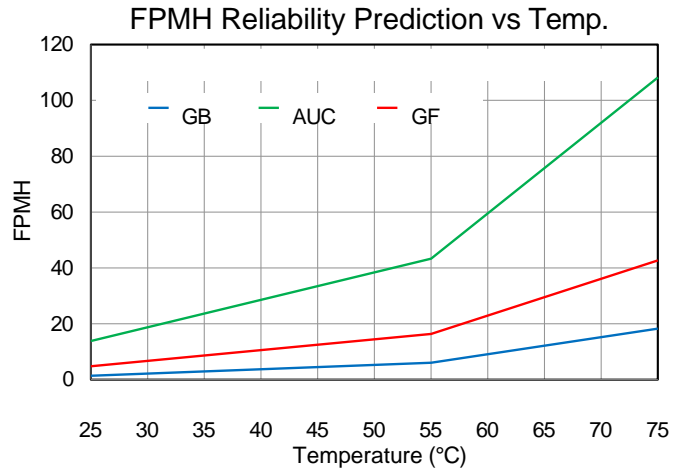
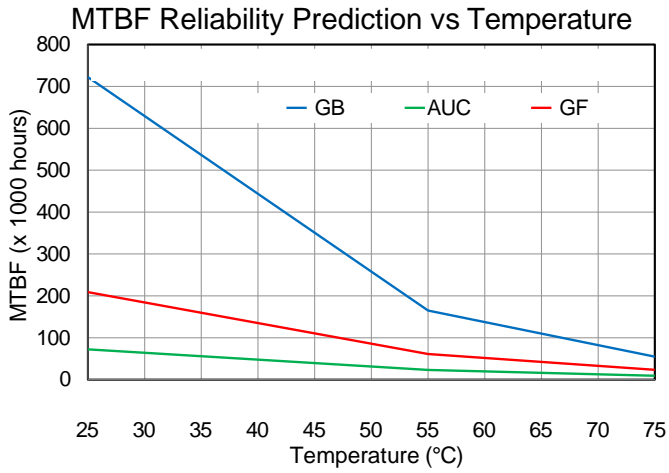
S11 vs. Frequency vs. Temperature



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



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.

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

Contact Information

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

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Email: sales@poamelectronics.com

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