

Electrical Specifications⁵:

Freq = 27.5 - 33.4 GHz, $T_A = 25^\circ\text{C}$, $V_{D1,2} = 4.0\text{ V}$, $I_{D1} = 100\text{ mA}$, $I_{D2} = 100\text{ mA}$

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Gain	27.5 - 29.5 GHz	dB	19.0	21.0	—
	29.5 - 33.4 GHz		15.5	17.5	
Input Return Loss	—	dB	—	-10	—
Output Return Loss	—	dB	—	-8	—
Output P1dB	—	dBm	—	20	—
Output IP3	27.5 - 29.5 GHz	dBm	28	32	—
	29.5 - 33.4 GHz		30	32	

5. Apply gate voltages prior to drain voltages. Adjust VG1 and VG2 between -1.0 and -0.1 V to achieve specified current.
Typical current, 200 mA = 100 (I_{D1}) + 100 (I_{D2})

Absolute Maximum Ratings^{6,7}

Parameter	Absolute Maximum
Input Power	+20 dBm
Drain Supply Voltage	+4.3 Volts
Operating Temperature	-40°C to +85°C
Junction Temperature	+150°C
Storage Temperature	-55°C to +150°C

6. Exceeding any one or combination of these limits may cause permanent damage to this device.
7. MACOM does not recommend sustained operation near these survivability limits.

Handling Procedures

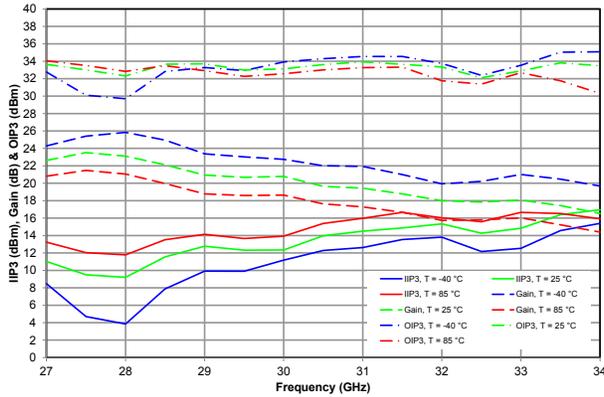
Please observe the following precautions to avoid damage:

Static Sensitivity

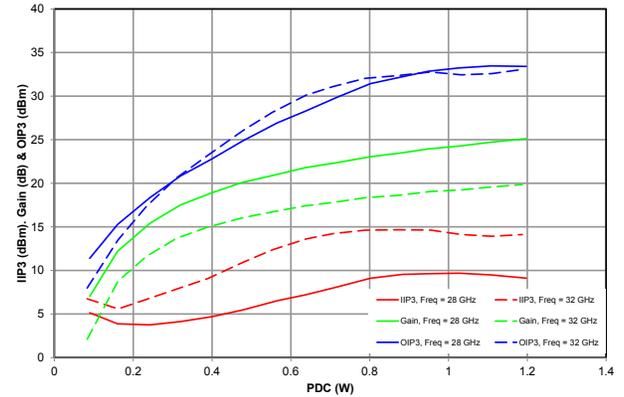
Gallium Arsenide Integrated Circuits are sensitive to electrostatic discharge (ESD) and can be damaged by static electricity. Proper ESD control techniques should be used when handling these Class 1C devices.

Typical Performance Curves

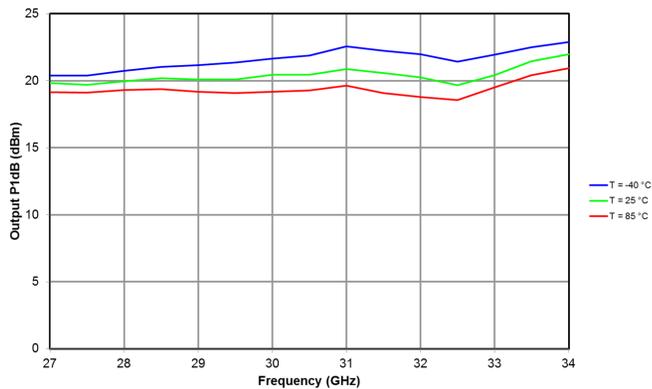
AvgIIP3, Gain, OIP3 vs Freq. Pin=-12 dBm, Id1,2=100mA



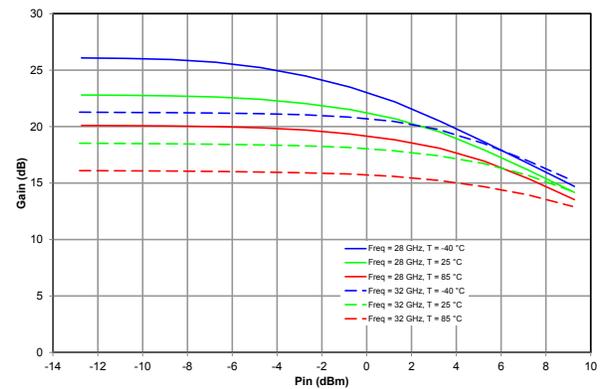
Gain & Linearity vs DC Power at 28 and 32 GHz



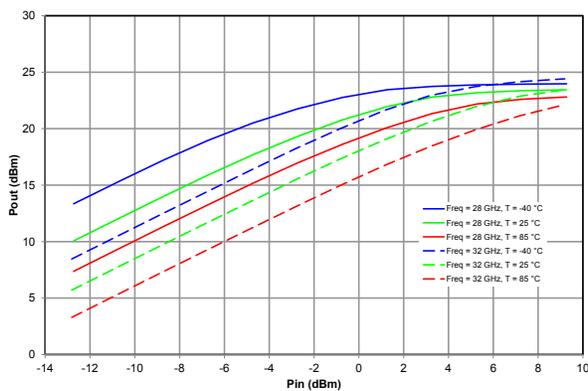
P1dB vs. Frequency VD1,2=4V, Id1,2=100 mA



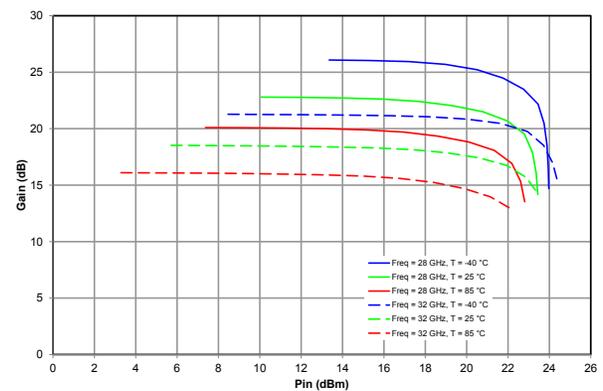
Gain vs. Pin VD1,2=4V, Id1,2=100 mA



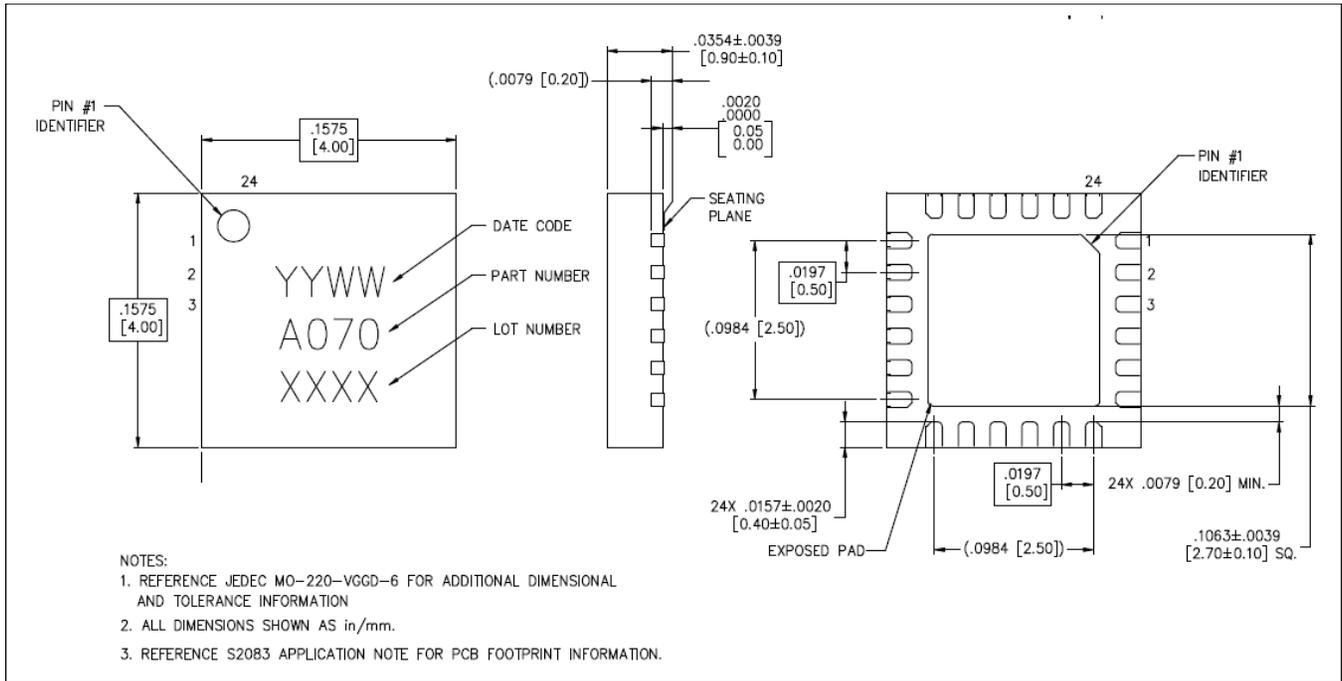
Pout vs. Pin VD1,2=4V, Id1,2=100 mA



Gain vs. Pout VD1,2=4V, Id1,2=100 mA



Lead-Free 4 mm 24-Lead PQFN[†]



[†] Reference Application Note S2083 for lead-free solder reflow recommendations.
 Meets JEDEC moisture sensitivity level 1 requirements.
 Plating is 100% matte tin over copper.

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