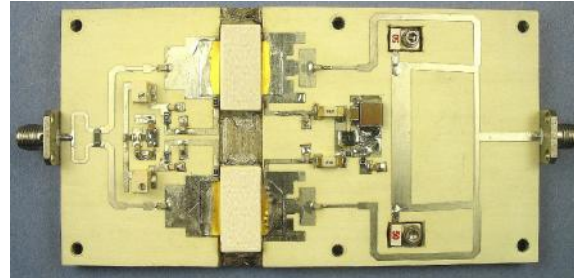


L-Band Radar Pallet

Part number IGNP1214M1200 is a 50 Ω matched L-Band high power pulsed pallet power amplifier operating over the instantaneous bandwidth of 1215 -1400 MHz. The pallet amplifier supplies a minimum of 1200 watts of peak pulse power under 100us pulse width and 10% duty cycle. All units are 100% screened for large signal RF parameters.



GaN on Silicon Carbide FET

- High Power Gain
- Excellent thermal stability
- Gold Metal

Depletion Mode Device

- Negative Gate Voltage to Bias
- Bias Sequencing Required
- See App Note to Prevent Damage

Class AB Operation

- Specified with AB bias

Impedance Matched to 50

- Ease of Use

Pallet Carrier

- Nickel Plated Carrier

PRELIMINARY DATA

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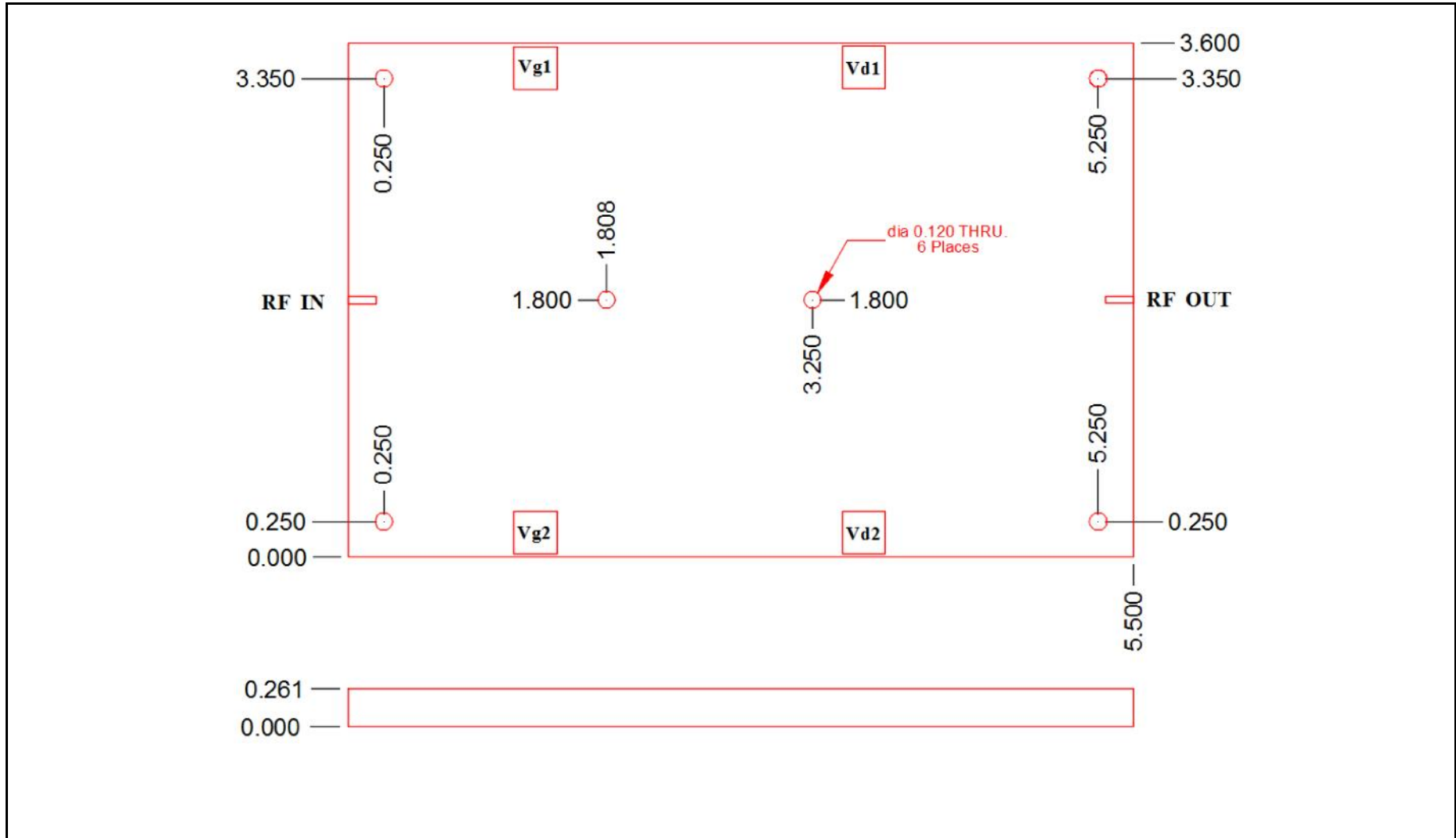
Pallet	Freq (MHz)	V _{CC} (V)	P _{IN} (W)	IRL (dB)	P _{OUT} (W)	G _P (dB)	I _c (A)	c (%)	Droop (dB)
50044502	1215	50	15	12.0	1230	19.13	39.00	63.07	-0.28
	1300	50	15	14.0	1280	19.31	39.54	64.74	-0.34
	1400	50	15	18.0	1285	19.32	40.00	64.25	-0.32

Pulse: 100 μ s/10%. I_{DQ}=200mA

RF ELECTRICAL CHARACTERISTICS

Screen	Parameter	Symbol	Min	Max	Units	Test Conditions
100%	Input Return Loss	IRL	10	--	dB	$V_{DD}=50V$, $P_{IN}=15W$, Pulse = Note 2 and Note 3, $T_F=25\pm5^\circ C$, $F=F1, F2, F3$.
100%	Output Power	P_{OUT}	1200	--	W	$V_{DD}=50V$, $P_{IN}=15W$, Pulse = Note 2 and Note 3, $T_F=25\pm5^\circ C$, $F=F1, F2, F3$.
100%	Power Gain	G_P	19	--	dB	$V_{DD}=50V$, $P_{IN}=15W$, Pulse = Note 2 and Note 3, $T_F=25\pm5^\circ C$, $F=F1, F2, F3$.
100%	Efficiency	η_c	60	--	%	$V_{DD}=50V$, $P_{IN}=15W$, Pulse = Note 2 and Note 3, $T_F=25\pm5^\circ C$, $F=F1, F2, F3$.
100%	Pulse Amplitude Droop	Droop	--	-0.6	dB	$V_{DD}=50V$, $P_{IN}=15W$, Pulse = Note 2 and Note 3, $T_F=25\pm5^\circ C$, $F=F1, F2, F3$.
100%	2:1 Load Mismatch Stability	VSWR-S	2:1	--	--	$V_{DD}=50V$, $P_{IN}=15W$, Pulse = Note 2 and Note 3, $T_F=25\pm5^\circ C$, $F=F1, F2, F3$. Rotate 2:1 output VSWR through 360° phase. No oscillatory or pulse break-up characteristics allowed on detected output pulse.
100%	3:1 Load Mismatch Tolerance	LMT	3:1	--	--	$V_{DD}=50V$, $P_{IN}=15W$, Pulse = Note 2 and Note 3, $T_F=25\pm5^\circ C$, $F=F1, F2, F3$. Rotate 3:1 output VSWR through 360° phase. Post test $P_O = \text{Pre test } P_O \pm 5W$.
Note 1	F1 = 1215 MHz, F2=1300 MHz, F2 = 1400 MHz					
Note 2	Pulse = 100us, 10%					
Note 3	T_F = Device flange temperature.					
Note 4	Screen 'BD' = parameter qualified By Design.					

PALLET DIMENSIONAL OUTLINE DRAWING



DEFINITIONS

Data Sheet Status	
Proposed Specification	This data sheet contains proposed specifications.
Preliminary Specification	This data sheet contains specifications based on preliminary measurements and data.
Product Specification	This data sheet contains final product specifications.
Maximum Ratings	
Stress above one or more of the maximum ratings may cause permanent damage to the device. These are maximum ratings only and operation of the device at these or at any other conditions above those given in the characteristics sections of the specification is not implied. Exposure to maximum values for extended periods of time may affect device reliability.	

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