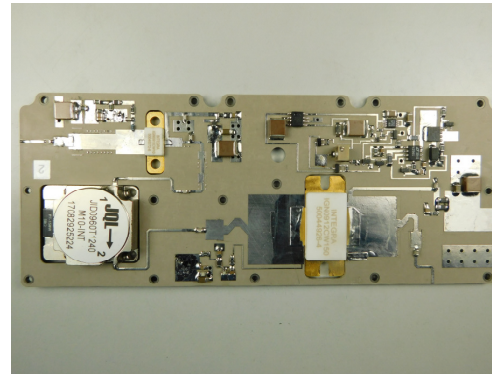


Avionics L-Band Pallet

Part number IGNMP0912CW150 is a two stage 50 Ω matched GaN-based high power pallet amplifier for L-Band avionics systems operating over the instantaneous bandwidth of 0.960-1.240 GHz. The pallet amplifier supplies a minimum of 150 watts of power under CW condition. All pallets are 100% screened for large signal RF parameters.



GaN on Silicon Carbide HEMT
 – High Power Gain
 – Excellent Thermal Stability
 – Gold Metal

CW Operation

Class AB Operation
 – High Efficiency

On-Board Power Management
 – Bias Sequencing
 – Single Supply Operation

Gold Metal System
 – Maximum Reliability

Pallet Carrier
 – Nickel-Plated Aluminum

TYPICAL DATA

TYPICAL DATA

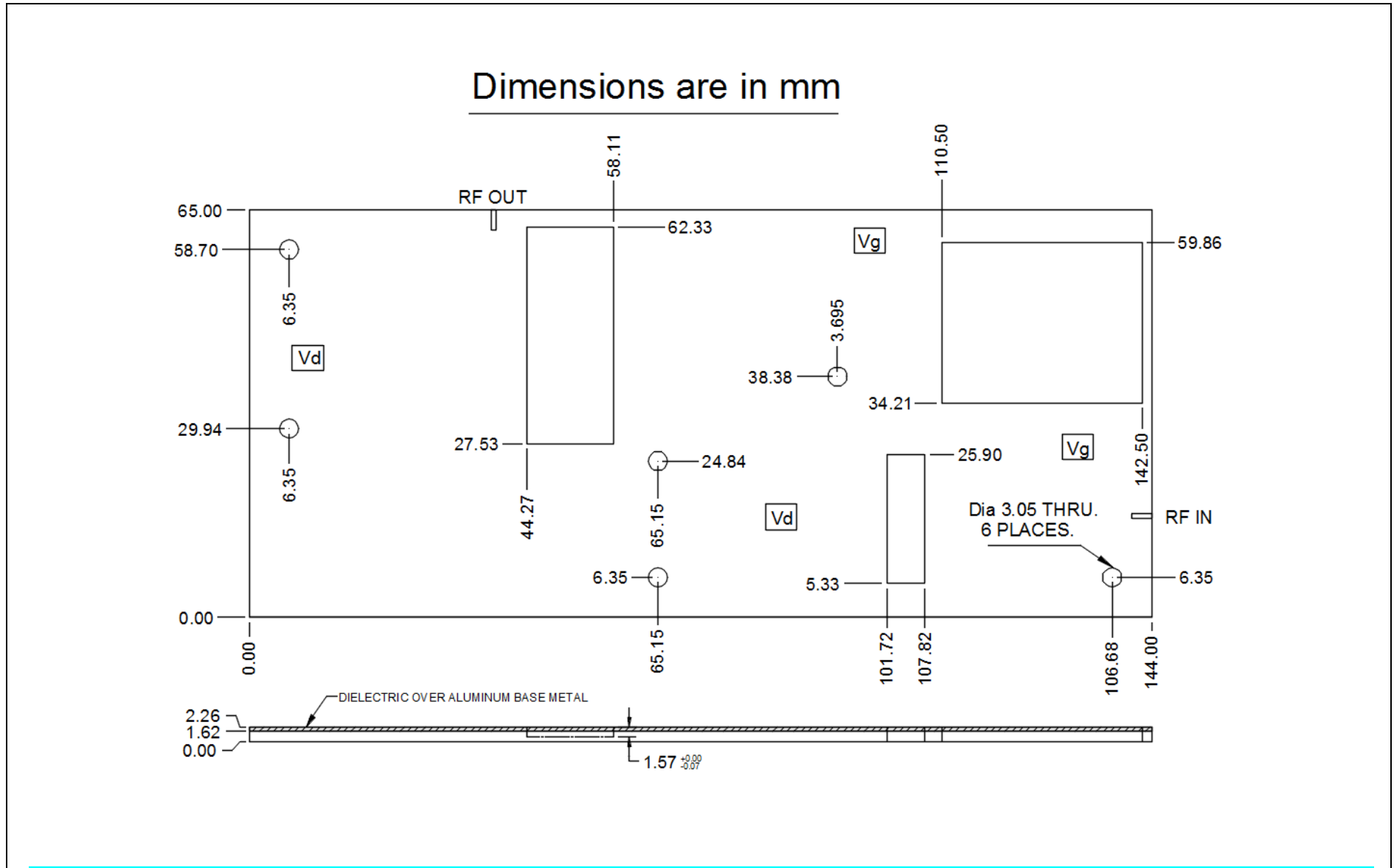
TYPICAL DATA

Freq (MHz)	V _{dd} (V)	P _{in} (W)	RL (dB)	P _{out} (W)	G (dB)	I _d (A)	η_d (%)
960	28	0.15	14.0	188	30.98	11.60	57.9
1090	28	0.15	11.0	185	30.91	11.20	59.0
1240	28	0.15	10.7	170	30.56	10.80	56.4

RF ELECTRICAL CHARACTERISTICS

Screen	Parameter	Symbol	Min	Max	Units	Test Conditions
100%	Input Return Loss	IRL	10	--	dB	$V_{DD}=V1, I_{DQ}=I_{DQ1}, T_F=25\pm5^\circ\text{C}, P_{IN}=P_{IN1}, F=F1, F2, F3.$
100%	Output Power	P_{out}	150	--	W	$V_{DD}=V1, I_{DQ}=I_{DQ1}, T_F=25\pm5^\circ\text{C}, P_{IN}=P_{IN1}, F=F1, F2, F3.$
100%	Power Gain	G_P	29.3	--	dB	$V_{DD}=V1, I_{DQ}=I_{DQ1}, T_F=25\pm5^\circ\text{C}, P_{IN}=P_{IN1}, F=F1, F2, F3.$
100%	Efficiency ($P_O/I_D/V_{DD}$)	N_D	45	--	%	$V_{DD}=V1, I_{DQ}=I_{DQ1}, T_F=25\pm5^\circ\text{C}, P_{IN}=P_{IN1}, F=F1, F2, F3.$
100%	Load Mismatch Stability	VSWR-S	--	2:1	--	$V_{DD}=V1, I_{DQ}=I_{DQ1}, T_F=25\pm5^\circ\text{C}, P_{IN}=P_{IN1}, F=F1, F2, F3.$ Rotate 2:1 output VSWR through 360° phase. No oscillatory or pulse break-up characteristics allowed on detected output pulse. All non-harmonically related signals must be at least -65 dBc.
100%	Load Mismatch Tolerance	LMT	--	3:1	--	$V_{DD}=V1, I_{DQ}=I_{DQ1}, PW=PW1, DF=DF1, T_F=25\pm5^\circ\text{C}, P_{IN}=P_{IN1}, F=F1, F2, F3.$ Rotate 3:1 output VSWR through 360° phase. Post test $P_O = \text{Pre test } P_O \pm 5W$
Note 1	$V1 = 28V; I_{DQ1} = 120mA; P_{IN1} = 0.15\pm0.025.$					
Note 2	Test Frequencies: $F1 = 0.960 \text{ GHz}, F2 = 1.090 \text{ GHz}, F3 = 1.240 \text{ GHz}.$					
Note 3	$T_{F1} = 25\pm5^\circ\text{C} = \text{Device flange temperature}.$					
Note 4	Screen 'BD' = parameter qualified By Design.					

PALLET DIMENSIONAL OUTLINE DRAWING



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. 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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