Part Number: ILMP2731M260

Integra
TECHNOLOGIES, INC.

L-Band Radar Pallet

Part number ILMP2731M260 is a 50 Ω matched 2-stage high power pulsed radar pallet amplifier for S-Band radar systems operating over the instantaneous bandwidth of 2.70-3.10GHz. The pallet amplifier supplies a minimum of 260 watts of peak pulse power under the conditions of 300µs pulse width and 10% duty cycle. All units are 100% screened for large signal RF parameters.

Silicon LDMOS
- Ultra-high f_T

Class AB Operation

Common Source Configuration

Gold Metal
- Maximum Reliability

Impedance Matched to 50Ω
- Ease of Use

Pallet Carrier
- Nickel Plated Aluminum Carrier

Maintained
- 100% RF Screening
- No External Tuning Allowed

TYPICAL DATA ***TYPICAL DATA*** ***TYPICAL DATA***

Device	Freq (GHz)	V_{DD} (V)	P_{IN} (W)	IRL (dB)	P_{OUT} (W)	G_P (dB)	I_D (A)	OPF (dB)	Droop (dB)
D5292	2.70	32	1.50	14.0	321	23.31	28.8		-0.39
	2.90	32	1.50	14.0	315	23.22	29.4	0.51	-0.41
	3.10	32	1.50	14.0	285	22.80	26.5		-0.41

Pulse Format = 300µs, 10%. V_{DD}=32V, I_{DQ}=160mA; V_{GG}=8V

Note: $\mathbf{I_d}$= Total current peak

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RF ELECTRICAL CHARACTERISTICS

Screen	Parameter	Symbol	Min	Max	Units	Test Conditions
100%	Power Output	P_{out}	260	--	W	V_{DD}=32V, P_{IN}=1.50±0.25W, V_{GG}= 8V, Pulse = Note 2, T_F=25±5°C, F=F1, F2, F3.
100%	Input Return Loss	IRL	10	--	dB	V_{DD}=32V, P_{IN} =1.50±0.25W, V_{GG}= 8V, Pulse = Note 2, T_F=25±5°C, F=F1, F2, F3.
100%	Power Gain	G_p	21.72	--	dB	V_{DD}=32V, P_{IN} =1.50±0.25W, V_{GG}= 8V, Pulse = Note 2, T_F=25±5°C, F=F1, F2, F3.
100%	Output Power Flatness	OPF	0	1.5	dB	V_{DD}=32V, P_{IN} =1.50±0.25W, V_{GG}= 8V, Pulse = Note 2, T_F=25±5°C, F=F1, F2, F3.
100%	Pulse Amplitude Droop	Droop	--	0.6	dB	V_{DD}=32V, P_{IN} =1.50±0.25W, V_{GG}= 8V, Pulse = Note 2, T_F=25±5°C, F=F1, F2, F3. DELTA BETWEEN 10 AND 90% TIME POSITIONS
100%	Stability into VSWR	VSWR-S	3:1	--	--	V_{DD}=32V, P_{IN} =1.50±0.25W, V_{GG}= 8V, Pulse = Note 2, T_F=25±5°C, F=F1, F2, F3. ROTATE 3:1 OUTPUT VSWR THOUGH 360° F = F1, F2, F3 PHASE. NO OSCILLATORY OR PULSE BREAK-UP CHARACTERISTICS ALLOWED ALL NON-HARMONICILLY RELATED SIGNALS MUST BE AT LEAST -65dBc.
100%	Total Current (Peak)	I_d	--	34	A	V_{DD}=32V, P_{IN} =1.50±0.25W, V_{GG}= 8V, Pulse = Note 2, T_F=25±5°C, F=F1, F2, F3.
100%	Efficiency	N_D	32	--	%	V_{DD}=32V, P_{IN} =1.50±0.25W, V_{GG}= 8V, Pulse = Note 2, T_F=25±5°C, F=F1, F2, F3.
100%	Delta Insertion Phase	DIP	-30	+30	DEG	V_{DD}=32V, P_{IN} =1.50±0.25W, V_{GG}= 8V, Pulse = Note 2, T_F=25±5°C, F=F1, F2, F3.
Note 1	Pulse format = 300µs, 10%					
Note 2	F1 = 2.70 GHz, F2 = 2.90 GHz, F3 = 3.10 GHz					
Note 3	T_F = Device flange temperature.					

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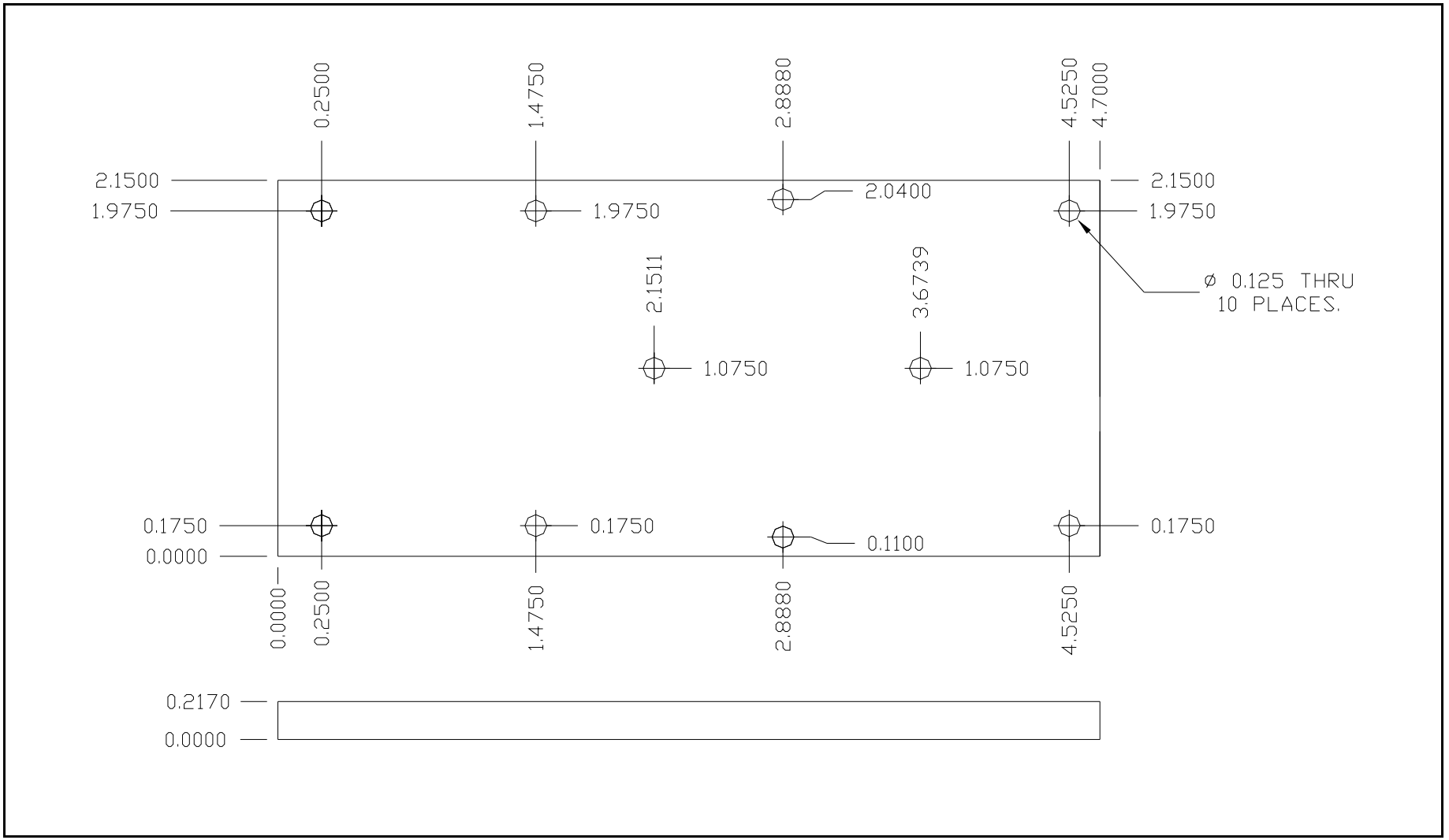
PALLET DIMENSIONAL OUTLINE DRAWING



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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.

WARNING

Product and environmental safety - toxic materials
This product contains beryllium oxide. The product is entirely safe provided that the BeO base is not damaged. All persons who handle, use or dispose of this product should be aware of its nature and of the necessary safety precautions. After use, dispose of as chemical or special waste according to the regulations applying at the location of the user. It must never be thrown out with general or domestic waste.

DISCLAIMER

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