

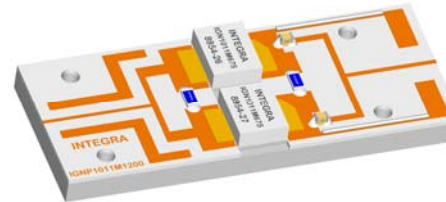
Part Number: **IGNP1011M1200 (Preliminary)**

Integra

TECHNOLOGIES, INC.

L-Band Pulsed Power Pallet Amplifier

Part number IGNP1011M1200 is a 50 Ω matched L-Band high power pulsed pallet power amplifier operating over the instantaneous bandwidth of 1020 -1040 MHz. It supplies a minimum of 1200 watts of peak pulse power under Short pulse/Low duty cycle (40x (0.6us ON, 1.9us OFF), 1.6%) and Long pulse/High duty cycle (48x (32us ON, 18 us OFF), 6.6%). All units are 100% screened for large signal RF parameters.



GaN on Silicon Carbide FET

- High Power Gain
- Excellent thermal stability
- Gold Metal

Pulsed Operation

Class AB Operation

- High Efficiency

Bias Sequencing Required

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

Gold Metal System

- Maximum Reliability

Pallet Carrier

PRELIMINARY DATA

PRELIMINARY DATA

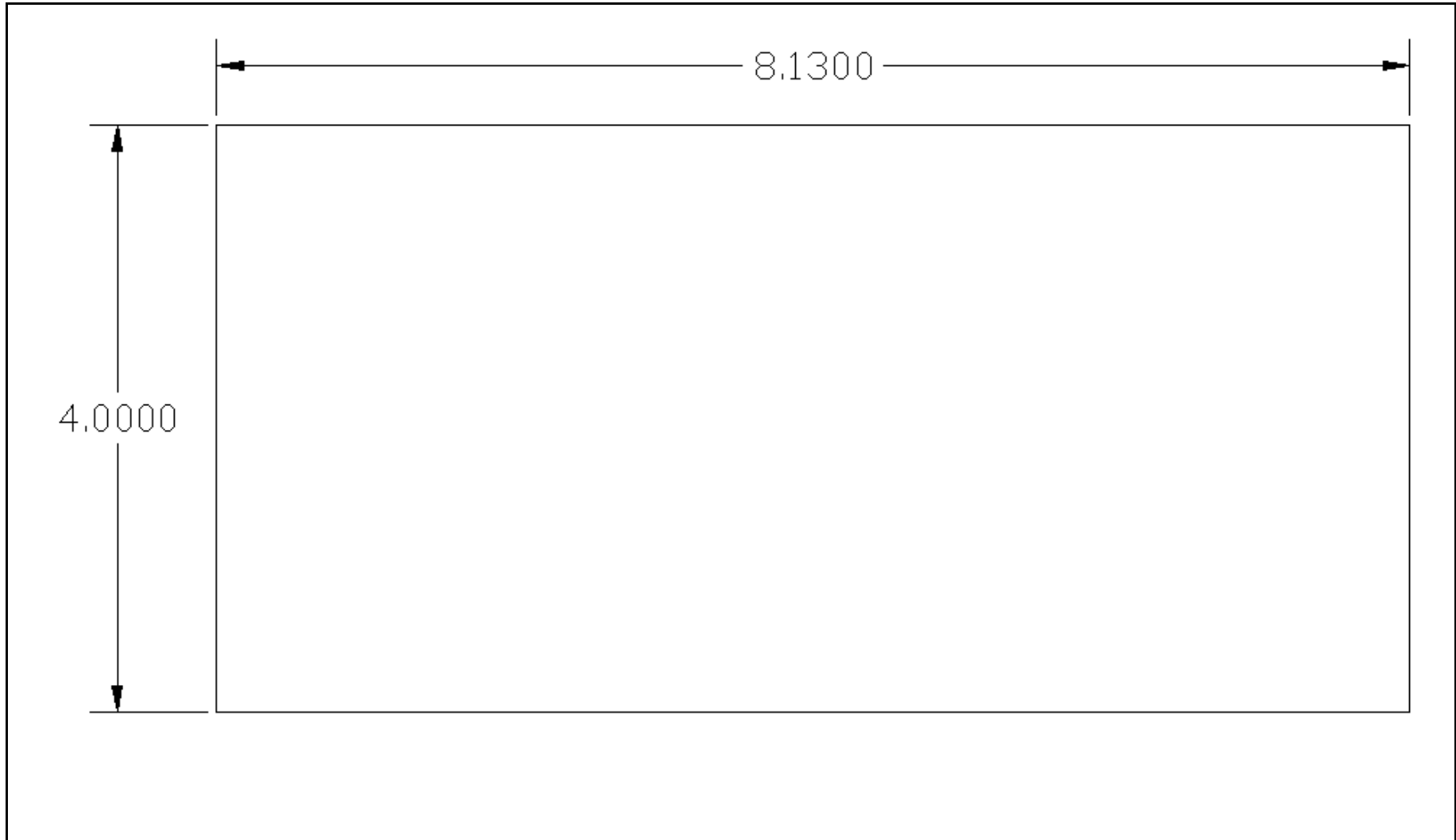
PRELIMINARY DATA

TBD

RF ELECTRICAL CHARACTERISTICS

Screen	Parameter	Symbol	Min	Max	Units	Test Conditions
100%	Input Return Loss	IRL	10	--	dB	$V_{DD}=50V$, $P_{IN}=15$ W, Pulse = Note 2 and Note 3, $T_F=25\pm 5^\circ C$, $F=F1$, $F2$.
100%	Output Power	P_{OUT}	1200	--	W	$V_{DD}=50V$, $P_{IN}=15$ W, Pulse = Note 2 and Note 3, $T_F=25\pm 5^\circ C$, $F=F1$, $F2$.
100%	Power Gain	G_P	19	--	dB	$V_{DD}=50V$, $P_{IN}=15$ W, Pulse = Note 2 and Note 3, $T_F=25\pm 5^\circ C$, $F=F1$, $F2$.
100%	Efficiency	N_c	60	--	%	$V_{DD}=50V$, $P_{IN}=15$ W, Pulse = Note 2 and Note 3, $T_F=25\pm 5^\circ C$, $F=F1$, $F2$.
100%	Pulse Amplitude Droop	Droop	--	-0.6	dB	$V_{DD}=50V$, $P_{IN}=15$ W, Pulse = Note 2 and Note 3, $T_F=25\pm 5^\circ C$, $F=F1$, $F2$.
BD	Pulse Rise Time	T_r		90	nS	$V_{DD}=50V$, $P_{IN}=15$ W, Pulse = Note 2 and Note 3, $T_F=25\pm 5^\circ C$, $F=F1$, $F2$.
BD	Pulse Fall Time	T_f		190	nS	$V_{DD}=50V$, $P_{IN}=15$ W, Pulse = Note 2 and Note 3, $T_F=25\pm 5^\circ C$, $F=F1$, $F2$.
100%	2:1 Load Mismatch Stability	VSWR-S	2:1	--	--	$V_{DD}=50V$, $P_{IN}=15$ W, Pulse = Note 2 and Note 3, $T_F=25\pm 5^\circ C$, $F=F1$, $F2$. 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	--	--	$V_{DD}=50V$, $P_{IN}=15$ W, Pulse = Note 2 and Note 3, $T_F=25\pm 5^\circ C$, $F=F1$, $F2$. Rotate 3:1 output VSWR through 360° phase. Post test P_O = Pre test $P_O \pm 5W$.
Note 1	F1 = 1020MHz, F2 = 1040MHz					
Note 2	Short Pulse/Low Duty Cycle = 40x(0.6us ON, 1.9us OFF), 1.2%					
Note 3	Long Pulse/High Duty Cycle = 48x(32us ON, 18uz OFF), 6.6%					
Note 4	T_F = Device flange temperature.					
Note 5	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.	

DISCLAIMER

Integra Technologies Inc. reserves the right to make changes without further notice to any products herein. Integra Technologies Inc. makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Integra Technologies Inc. assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Integra Technologies Inc. products are not designed for use in life support appliances, devices, or systems where malfunction of these products can reasonably be expected to result in personal injury. Integra Technologies Inc. customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Integra Technologies Inc. for any damages resulting from such improper use or sale.