

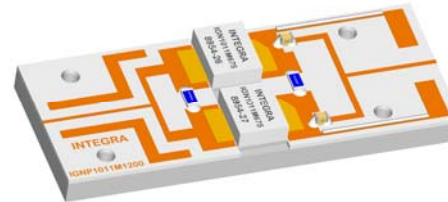
# Part Number: **IGNP1011M1200 (Preliminary)**

# Integra

TECHNOLOGIES, INC.

## L-Band Pulsed Power Pallet Amplifier

Part number IGNP1011M1200 is a 50  $\Omega$  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*

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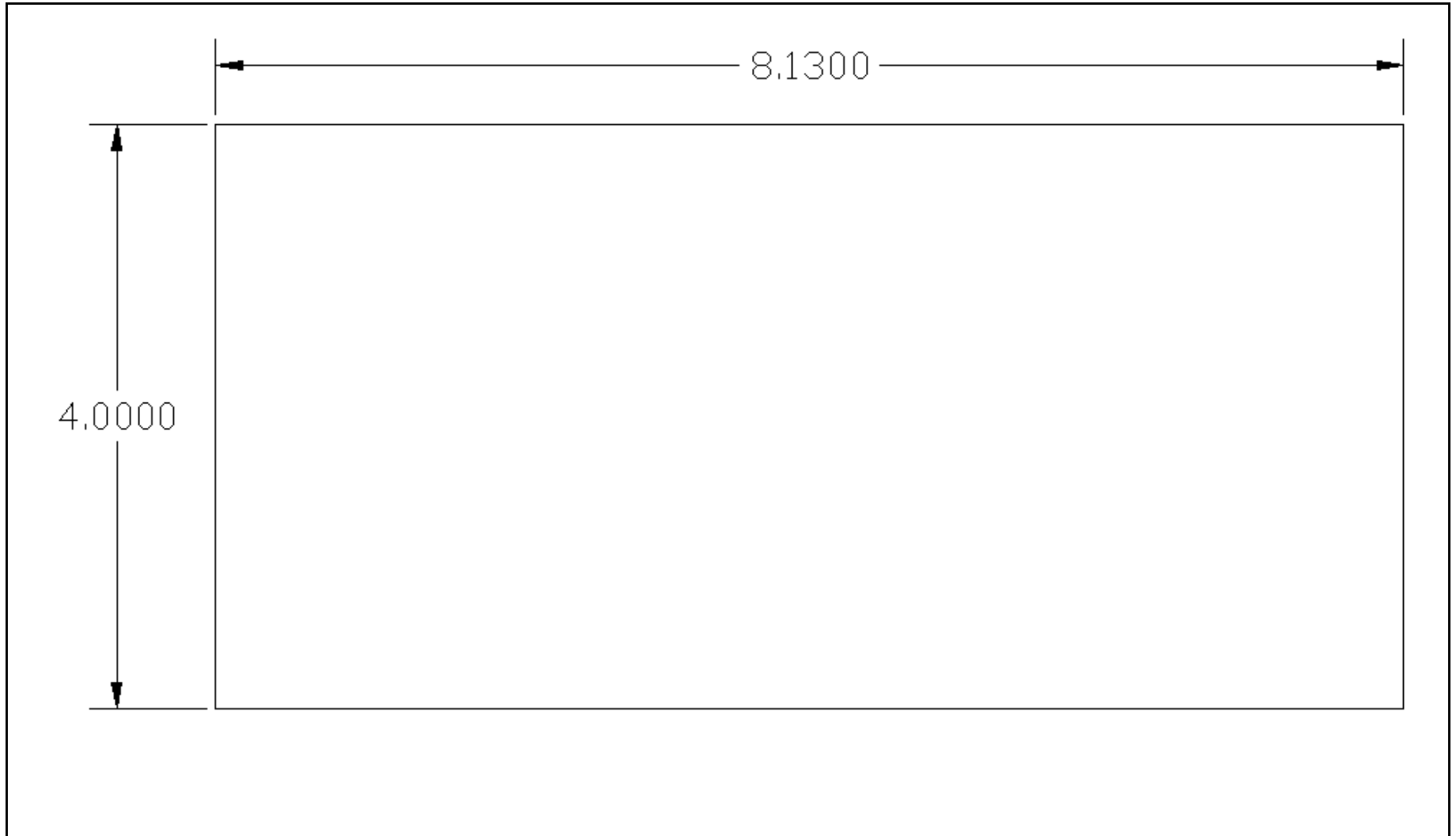
*PRELIMINARY DATA*

**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**

<b>Data Sheet Status</b>	
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.
<b>Maximum Ratings</b>	
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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