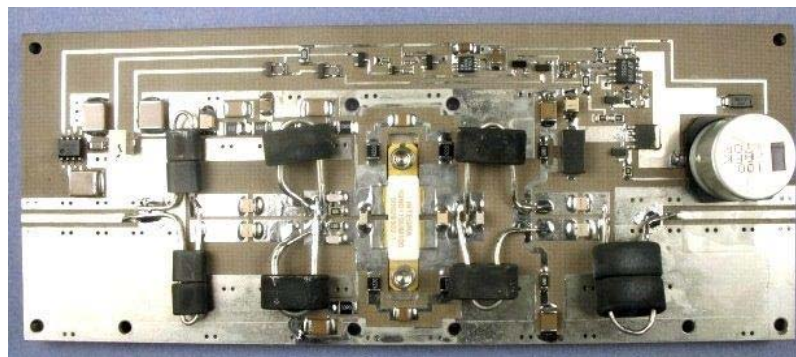
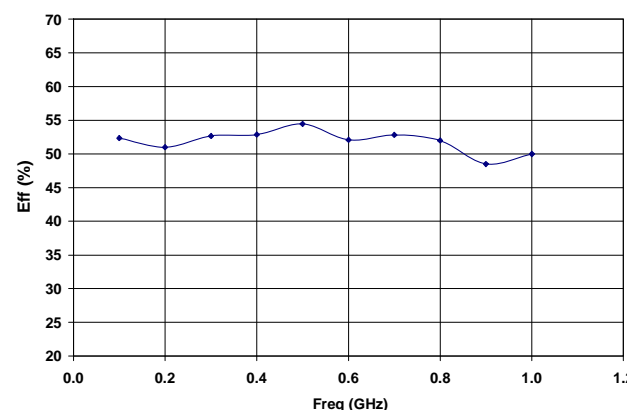
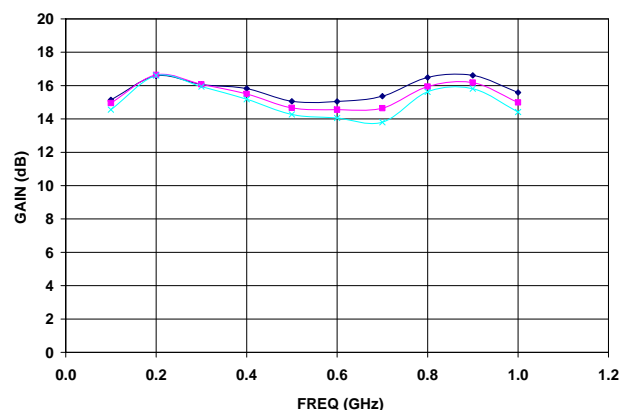


## Broadband Pallet Amplifier

IGNP0110UM100 is a dual Gallium Nitride (GaN) high electron mobility transistor (HEMT) pallet amplifier. It is designed for Broadband applications operating over the 100MHz – 1GHz instantaneous frequency band. Under CW conditions it supplies a minimum of 100 watts of output power with 12dB gain. It is also operable under a wide range of pulse widths and duty factors. All units are 100% screened for large signal RF parameters in a 50-Ohm environment.



## BROADBAND RF DATA



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

- Broadband Performance**
  - 100 MHz to 1 GHz

- Push-Pull Amplifier Configuration**

- CW or Pulsed Operation**

- Class AB Bias**

- On-Board Power Management**
  - Bias Sequencing
  - Single Power Supply

- Gold Metal System**
  - Maximum Reliability

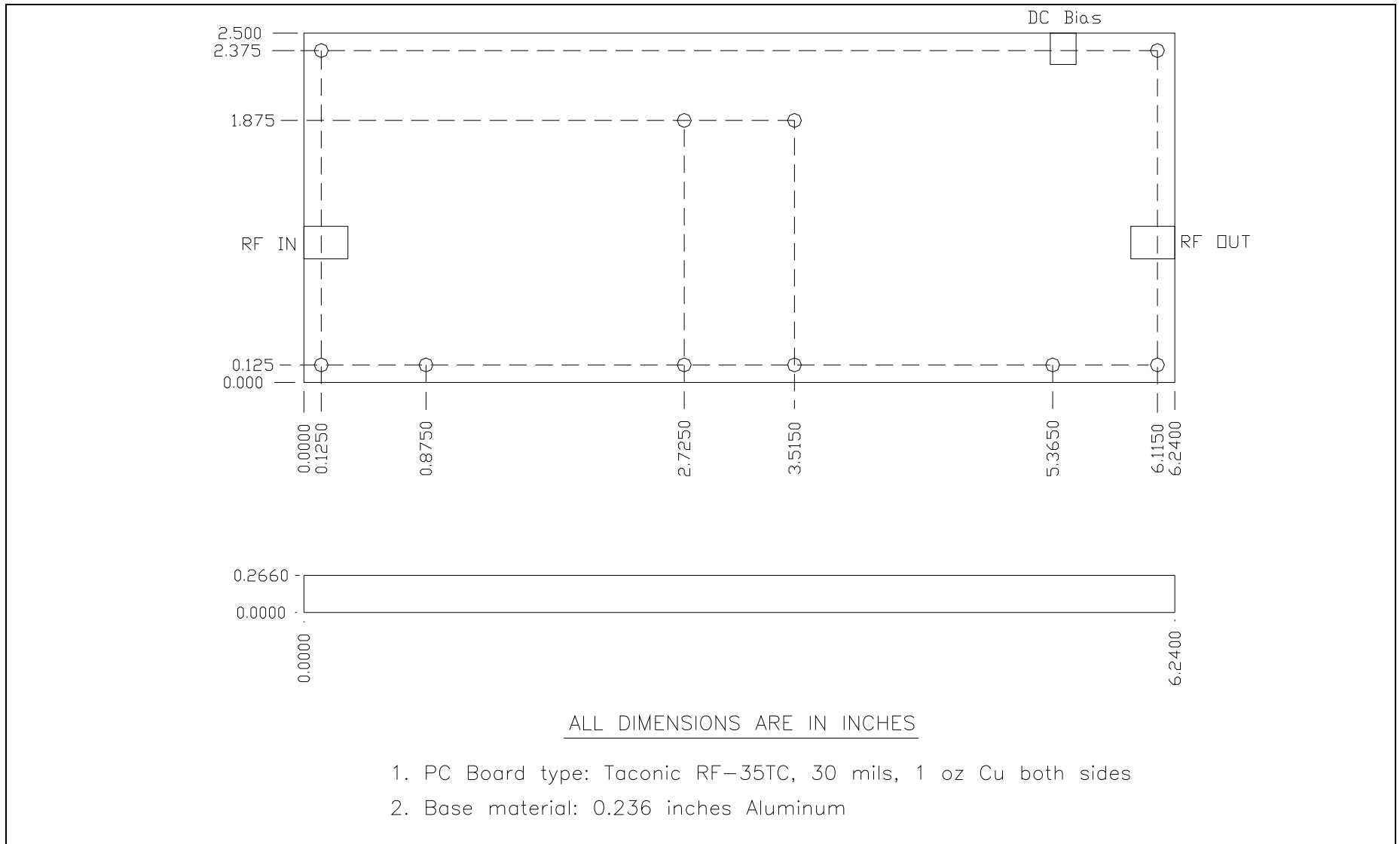
- Pallet Carrier**
  - Nickel-Plated Aluminum

- RF Test Fixture**
  - Broadband
  - 100% RF Screening
  - No External Tuning Allowed

**RF ELECTRICAL CHARACTERISTICS**

Screen	Parameter	Symbol	Min	Max	Units	Test Conditions
100%	Input Return Loss	RL	-18	-5	dB	$V_{DD}=V1, I_{DQ}=I_{DQ1}, PW=PW1, DF=DF1, T_F=T_{F1}, P_{OUT}=P_{OUT1}, F=F1, F2, F3.$
100%	Output Power	$P_{IN}$	6.3	--	W	$V_{DD}=V1, I_{DQ}=I_{DQ1}, PW=PW1, DF=DF1, T_F=T_{F1}, P_{OUT}=P_{OUT1}, F=F1, F2, F3.$
100%	Drain Efficiency	$N_D$	50	75	%	$V_{DD}=V1, I_{DQ}=I_{DQ1}, PW=PW1, DF=DF1, T_F=T_{F1}, P_{OUT}=P_{OUT1}, F=F1, F2, F3.$
100%	Power Gain	Gp	12	16	dB	$V_{DD}=V1, I_{DQ}=I_{DQ1}, PW=PW1, DF=DF1, T_F=T_{F1}, P_{OUT}=P_{OUT1}, F=F1, F2, F3.$
100%	3:1 Load Mismatch Stability	VSWR-S	S	--	--	$V_{DD}=V1, I_{DQ}=I_{DQ1}, PW=PW1, DF=DF1, T_F=T_{F1}, P_{OUT}=P_{OUT1}, F=F1, F2, F3.$ Rotate 3:1 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.
Note 1	$V1 = 28V; I_{DQ1} = 480mA; PW1 = CW; DF1 = CW$					
Note 2	Output Power Test Levels: $P_{OUT1} = 100W$					
Note 3	Test Frequencies: $F1 = 0.1 GHz, F2 = 0.6 GHz, F3 = 1.0 GHz.$					
Note 4	$T_{F1} = 25\pm5^\circ C =$ 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 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. 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.