Power Amplifiers

TL1009 |2300-2500 MHz
25W LinearPA

DESCRIPTION

This class A GaAs module is designed for both military and commercial applications. It is capable of supporting any signal type and modulation format, including but not limited to 3-4G telecom, WLAN, OFDM, DVB, and CW/AM/FM. The latest device technologies and design methods are employed to offer high power density, efficiency, and linearity in a small, lightweight package.

FEATURES

- Over / Under / Reverse Voltage Protection
- Reflected Power Measurement
- Temperature Output
- Forward Power Measurement
- High Speed On/Off Control
- Optional Heatsink

Specifications subject to change without notice. Typical performance at +12VDC at +25°C in a 50Ω system

RF / ELECTRICAL				
PARAMETER	**MIN**	**TYP**	**MAX**	**UNIT**
Operating Frequency	2300		2500	MHz
P1dB Power Output	+43.0	+44.0		dBm
Gain	44.0	45.0		dB
Gain Flatness		1.0	1.5	dB
Linear Power		+37.0		dBm
Linear Power Test Conditions	W-CDMA @ -55 dBc ACPR			--
Input Return Loss	-16	-18		dB
Operating Voltage	+11		+13	VDC
Current Draw		7.0	8.0	A
Quiescent Current Draw		7.0		A
Switching Time		1.0	2.0	uS

TRIAD RF SYSTEMS

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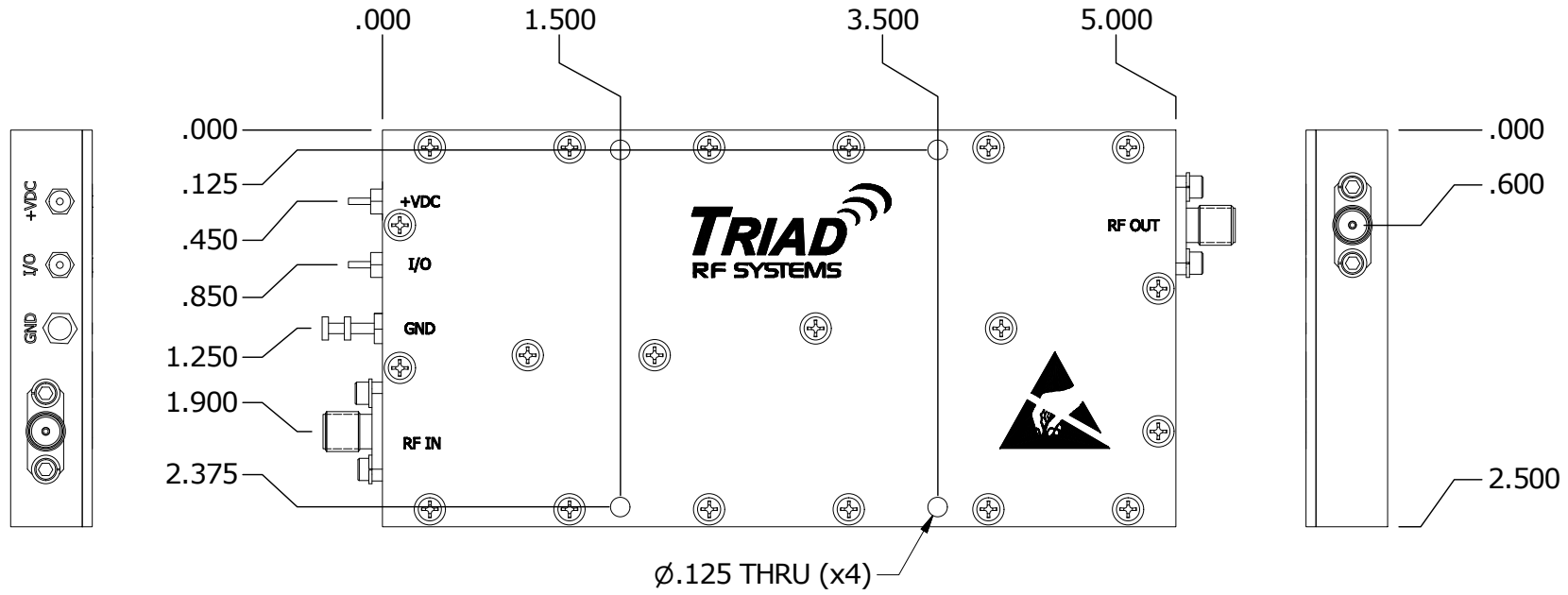
MECHANICAL		
PARAMETER	VALUE	UNIT
Dimensions (L x W x H)	5 x 2.5 x 0.553	in
RF Connectors (Input / Output)	SMA-F / SMA-F	--
DC / Control Connector	Circular Locking	--
Cooling	Baseplate Conduction - Optional Heatsink Available	--
Mounting	4-40 Thru Holes	--
Weight	7	oz
Weight with heatsink	17	oz

ENVIRONMENTAL / PROTECTIONS			
PARAMETER	MIN	MAX	UNIT
Operating Temp. (Housing Temp.)	-40	+85	°C
Storage Temp Range	-60	+100	°C
Humidity Range	0-100		%
Altitude	0-30,000		ft.
Shock / Vibration	MIL-STD-810 and equivalents		--
Max RF Input	+2.0		dBm
Load VSWR @ P1dB	Open / Short Output Protection		--
PA Baseplate Shutoff Temperature	+90		°C

DC / CONTROL PINS		
PIN LABEL	NAME	DESCRIPTION
1	GND	Ground
2	TEMP	Temp Monitor: Temp in DegC = (Vout - 0.5V) / 10
3	Amp Enable	TTL On/Off Low=Enable, High=Disable
4	FWD	Forward Power Detection
5	REV	Reverse Power Detection
6	+VDC	Supply Voltage - Range Specified in Datasheet

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
0	INITIAL RELEASE	07/25/2014	AHA



DRAWN	AHA	7/19/2014
DESIGNED	DMC	5/11/2012
CHECKED	BG	6/17/2014
ENG APPROVED		
MFG APPROVED		

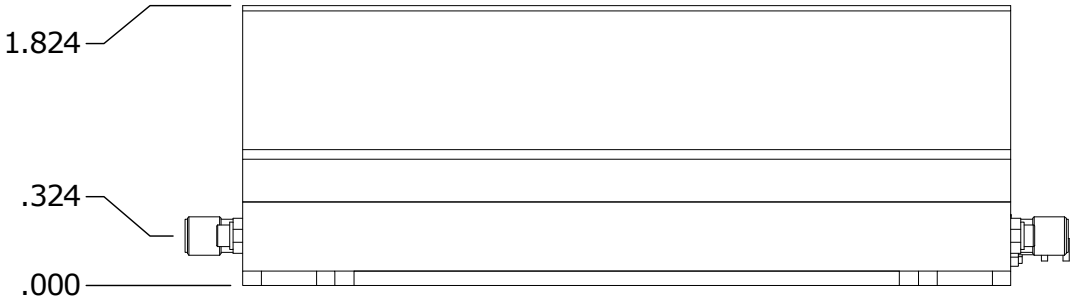
DIMENSIONS ARE IN INCHES
UNLESS SPECIFIED OTHERWISE
TOLERANCES
DECIMALS .XX ±.01 .XXX ±.005
FRACTIONS ±1/32
ANGLES ±2°

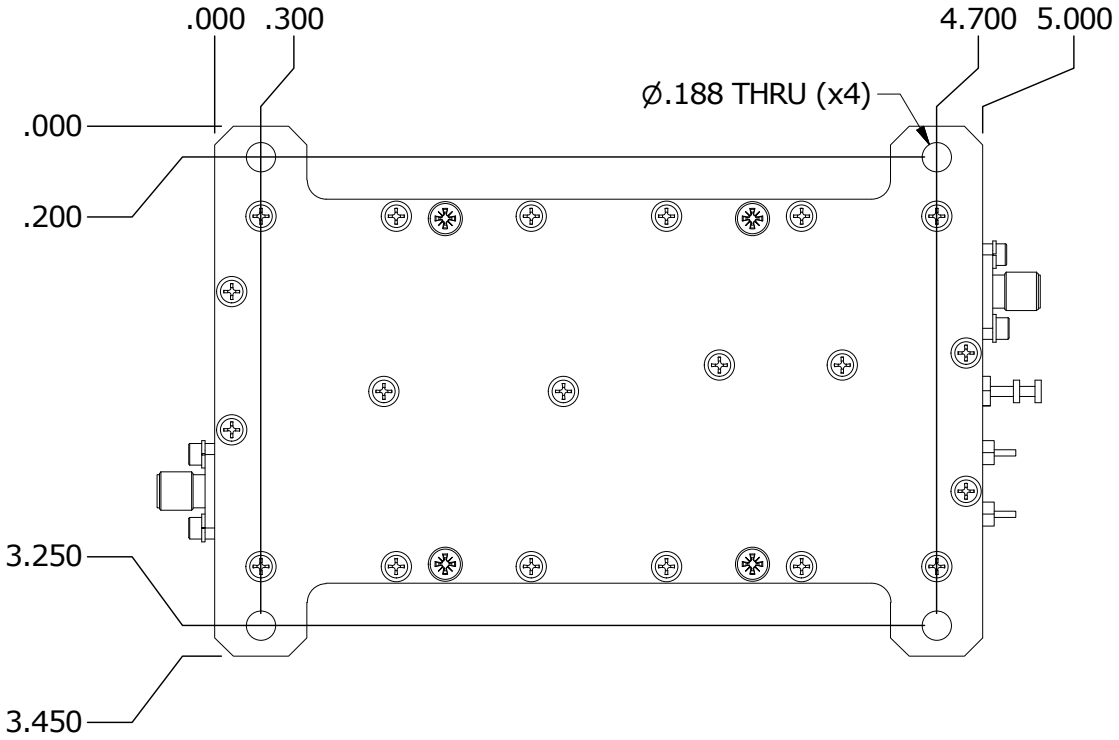
TRIAD RF SYSTEMS
180 TICES LANE
BUILDING A, SUITE 107
EAST BRUNSWICK, NJ 08816
855-558-1001

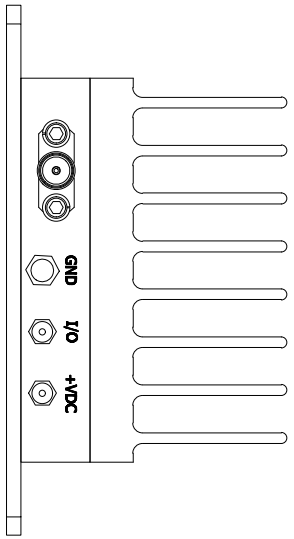
Housing Outline Drawing 101

SIZE	DWG/PART NO.	REV
A		0

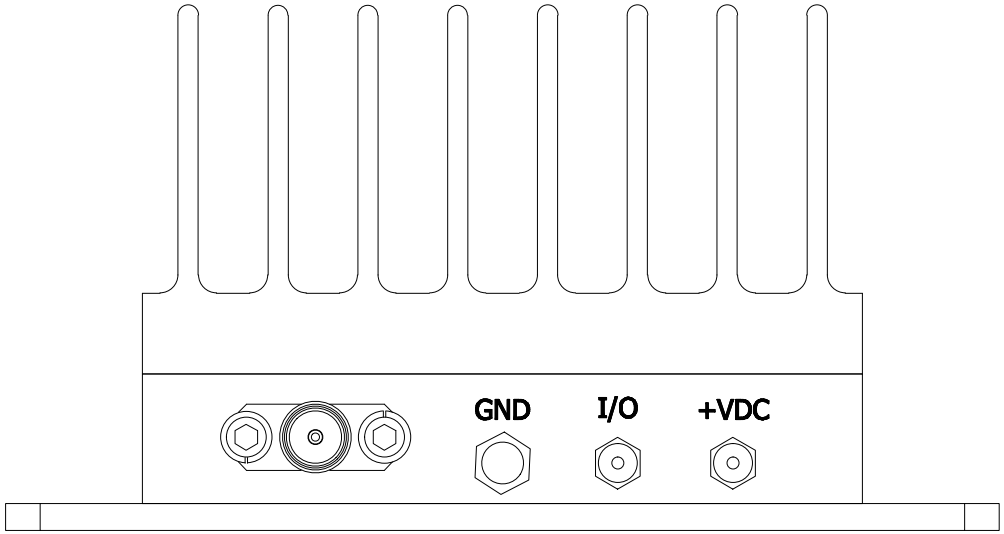
SCALE: NONE | CAGE CODE 67DZ3 | SHEET 1 OF 3







DRAWN	AHA	7/19/2014	Housing Outline Drawing 101		
DESIGNED	DMC	5/11/2012			
CHECKED	BG	6/17/2014	SIZE A	DWG/PART NO.	REV 0
ENG APPROVED			SCALE: NONE	CAGE CODE 67DZ3	SHEET 2 OF 3
MFG APPROVED					



CONNECTOR PINOUT		
PIN	FUNCTION	NOTES
1	GND	RETURN FOR ALL SIGNAL AND CTRL PINS
2	+VDC	SUPPLY VOLTAGE - RANGE SPECIFIED IN DATASHEET
3	I/O	TTL ON/OFF CONTROL. HIGH = ON, OFF = OFF. NO CONNECTION IS ON

NOTES:

1. VIEW FACING CONNECTOR INTERFACE (AMP SIDE)

DRAWN	AHA	7/19/2014
DESIGNED	DMC	5/11/2012
CHECKED	BG	6/17/2014
ENG APPROVED		
MFG APPROVED		

Housing Outline Drawing 101

SIZE	DWG/PART NO.	REV
A		0

SCALE: NONE	CAGE CODE 67DZ3	SHEET 3 OF 3