

## DESCRIPTION

This class AB GaN 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	Optional Heatsink
High Speed On/Off Control	Temp. Monitor Output
Over-Temperature Protection	

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

RF / ELECTRICAL				
PARAMETER	MIN	TYP.	MAX	UNIT
Operating Frequency	300		6000	MHz
PSat Power Output		+45.0		dBm
Gain		45.0		dB
Gain Flatness		2.0		dB <sup>1</sup>
Input Return Loss		-16		dB
Operating Voltage	+12		+28	VDC
Current Draw		4.0		A
Quiescent Current Draw		3.0		A
Switching Time		1.0	2.0	uS

1 – Gain flatness recorded represents a peak-peak measurement across the **entire operating band**. Gain flatness is typically much lower across significant portions of this band. Consult the gain response plots for details if available.

**MECHANICAL**

PARAMETER	VALUE	UNIT
Dimensions (L x W x H)	3.75 x 2.5 x 0.8	in
RF Connectors (Input / Output)	SMA-F / SMA-F	--
DC / Control Connector	21 Pin Micro-D	--
Cooling	Baseplate Conduction - Optional Heatsink Available	--
Mounting	4-40 Thru	--
Weight	9	oz.
Weight with Heatsink	11	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	+8		dBm
PA Baseplate Shutoff Temperature	+ 85		°C

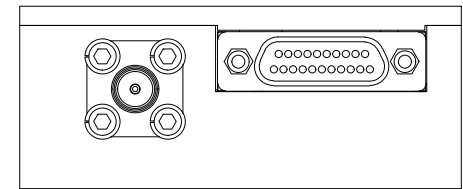
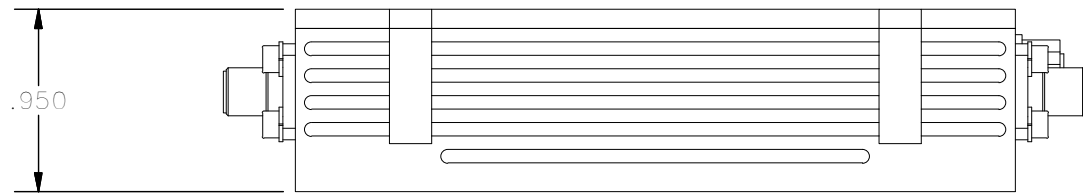
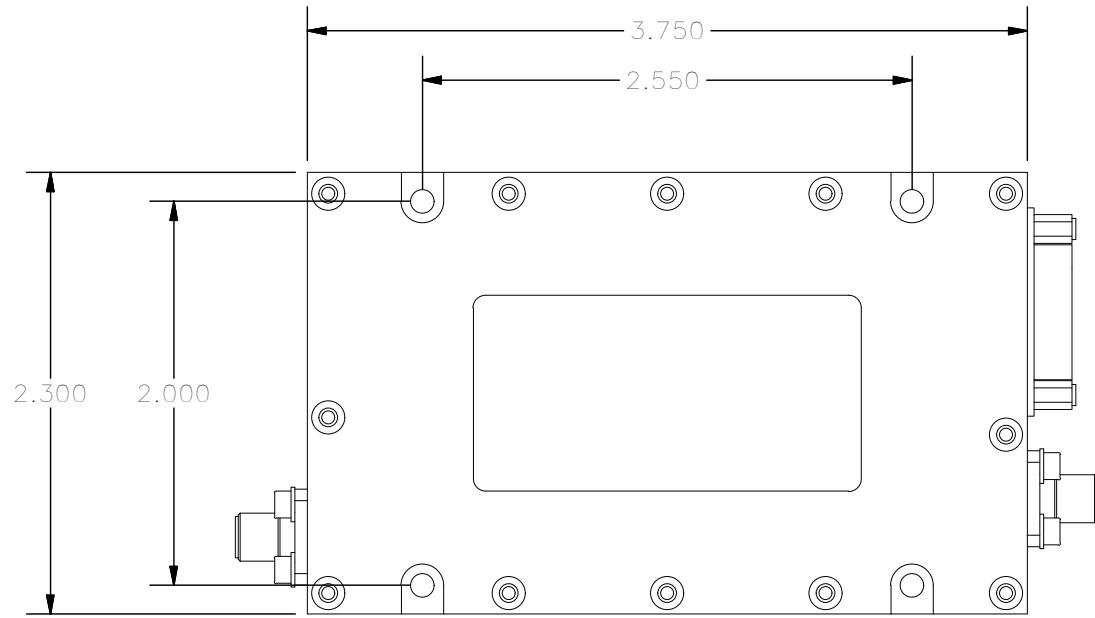
**INPUT/OUTPUT PINS**

<b>AMPLIFIER CONNECTOR TYPE:</b>		21 PIN MICRO-D FEMALE
<b>TRIAD CABLE PART NUMBER:</b>		CBL77
PIN NUMBER	LABEL	DESCRIPTION
1-3, 12-15	+VDC	Supply Voltage - Range Specified in Datasheet
4-7, 16-18	GND	Ground
8	Amp Enable	TTL High = Enable, TTL Low or No Connection = Disable
9	TEMP	Temp Monitor: Temp in DegC = (Vout - 0.5V) *100
10	STATUS	PA Status - TTL High = Normal Operation, TTL Low = Error Condition
21	V STATUS	Voltage Monitor - Power Supply Voltage Level

**Configuration Options**

Model Number	Description
TA1216	No Heat Sink Included
TA1216 – HS	Standard Heat Sink
TA1216 – HSF	Heat Sink with Integrated Cooling Fan
TA1216 – HSX	Custom Heat Sink Configuration
TA1216 – DOX	Custom Amplifier Configuration (issued by Triad upon customer request)

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
1	ECN E19455	05/14/19	PA



DRAWN	PA	6/14/2019
DESIGNED	PA	5/15/2019
CHECKED		
ENG. APPROVED		
MFG. APPROVED		

**TRIAD**  
RF SYSTEMS

11 HARTS LANE SUITE I  
EAST BRUNSWICK, NJ 08816  
855-558-1001

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

SIZE	DWG NO.	REV
A	OL_203R1	1
SCALE: NONE	CAGE CODE 67DZ3	SHEET 1 OF 4

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### TA1216 P1dB, P3dB and PSat Power Output (dBm)

