

## 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-Temperature Protection

High Speed On/Off Control

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

RF / ELECTRICAL				
PARAMETER	MIN	TYP.	MAX	UNIT
Operating Frequency	2000		2500	MHz
PSat Power Output	+35.0	+36.0		dBm
Gain		28.0		dB
Gain Flatness		0.5	1.0	dB <sup>1</sup>
Input Return Loss	-15			dB
Operating Voltage	+ 9	+12	+14	VDC
Current Draw		0.8	1.25	A
Quiescent Current Draw		0.3		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)	2.7 x 1.3 x 0.339	in
RF Connectors (Input / Output)	MMCX Edge / MMCX Edge	--
DC / Control Connector	6 Pin Rectangular	--
Cooling	Baseplate Conduction - Optional Heatsink Available	--
Mounting	2-56 Thru Hole	--
Weight	1	oz.
Weight with Heatsink	2	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	+16		dBm
Load VSWR @ P1dB	Open / Short Output Protection		--
PA Baseplate Shutoff Temperature	+ 90		°C

**INPUT/OUTPUT PINS**

<b>AMPLIFIER CONNECTOR TYPE:</b>		6 PIN RECTANGULAR MALE
<b>TRIAD CABLE PART NUMBER:</b>		CBL53
PIN NUMBER	LABEL	DESCRIPTION
1	Amp Enable	TTL Hi or No Connection = Enable, TTL Lo = Disable
2	Sig. GND	Signal Ground
3,4	GND	Ground
5,6	+VDC	Supply Voltage - Range Specified in Datasheet

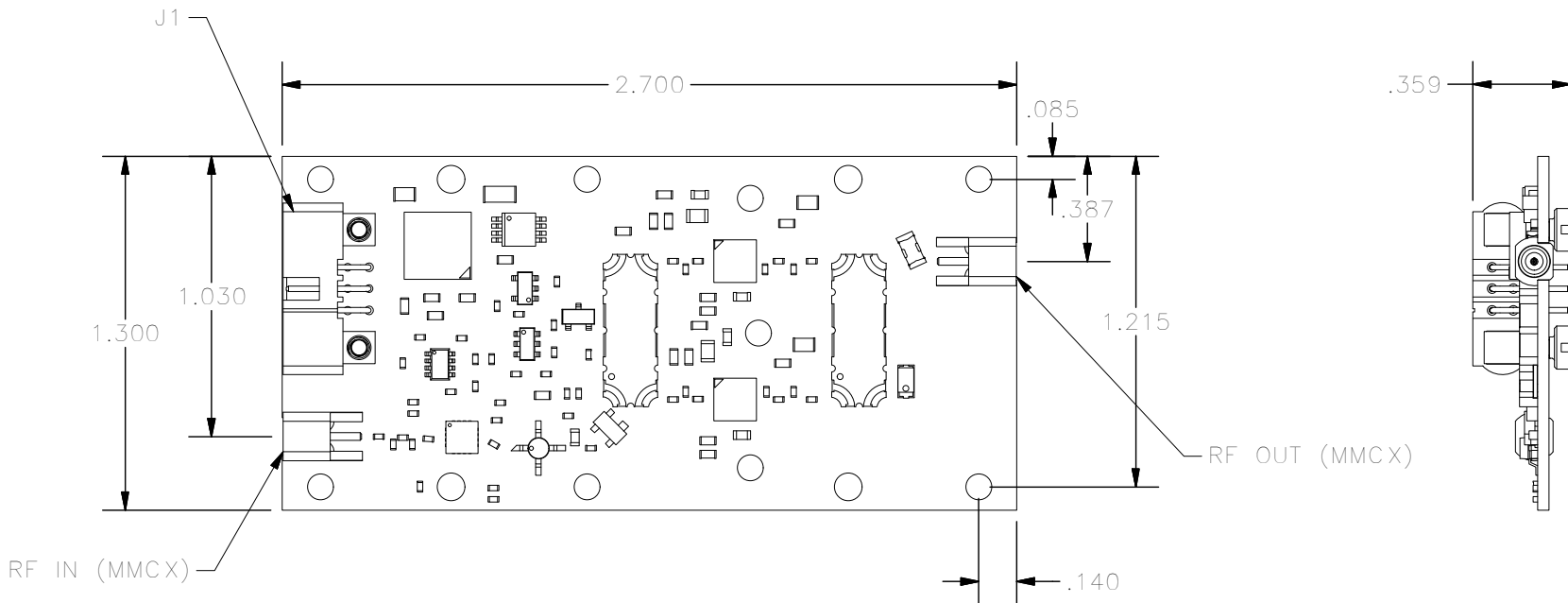
**Configuration Options**

Model Number	Description
TA1109	No Heat Sink Included
TA1109 – HS	Standard Heat Sink
TA1109 – HSF	Heat Sink with Integrated Cooling Fan
TA1109 – HSX	Custom Heat Sink Configuration
TA1109 – D0X	Custom Amplifier Configuration (issued by Triad upon customer request)

MATERIAL: ALLOY 6061

FINISH: MIL-DTL-5541 TYPE 2 CLASS 3

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



DRAWN	CFD	4/12/2018
DESIGNED	DMC	1/22/2018
CHECKED		
ENG. APPROVED		
MFG. APPROVED		



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TA1109

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

SIZE	DWG. NO.	REV
A	TA1109	1
SCALE: NONE	CAGE CODE 67DZ3	SHEET 1 OF 2