

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

Optional Heatsink
Temp. Monitor Output

Manual Tx/Rx Switching (TTL)

Specifications subject to change without notice. Typical performance at +28VDC at 25°C in a 50Ω system

TX SPECIFICATIONS (PER CHANNEL)				
PARAMETER	MIN	TYP.	MAX	UNIT
Operating Frequency	1780		1850	MHz
PSat Power Output	+42.0	+44.0		dBm
Gain	24.0	25.0		dB
Gain Flatness		1.5		± dB
Input Return Loss	-16	-18		dB
Operating Voltage	+27	+28	+30	VDC
Current Draw		3.0	3.4	A
Tx / Rx Switching Time		1.0	2.0	uS

RX SPECIFICATIONS (PER CHANNEL)				
PARAMETER	MIN	TYP.	MAX	UNIT
P1dB Power Output		+5.0		dBm
Gain		11.0		dB
Gain Flatness		1.0		± dB
Noise Figure		3.0		dB
OIP3		+15.0		dBm
Input Return Loss	-10			dB
Current Draw		120.0		mA

MECHANICAL		
PARAMETER	VALUE	UNIT
Dimensions (L x W x H)	5.4 x 5.4 x 3	in
RF Connectors (Input / Output)	TNC-F / TNC-F	--
DC / Control Connector	Circular Locking	--
Cooling	Baseplate Conduction - Optional Heatsink Available	--
Mounting	4-40 Thru Holes	--
Weight	58	oz.

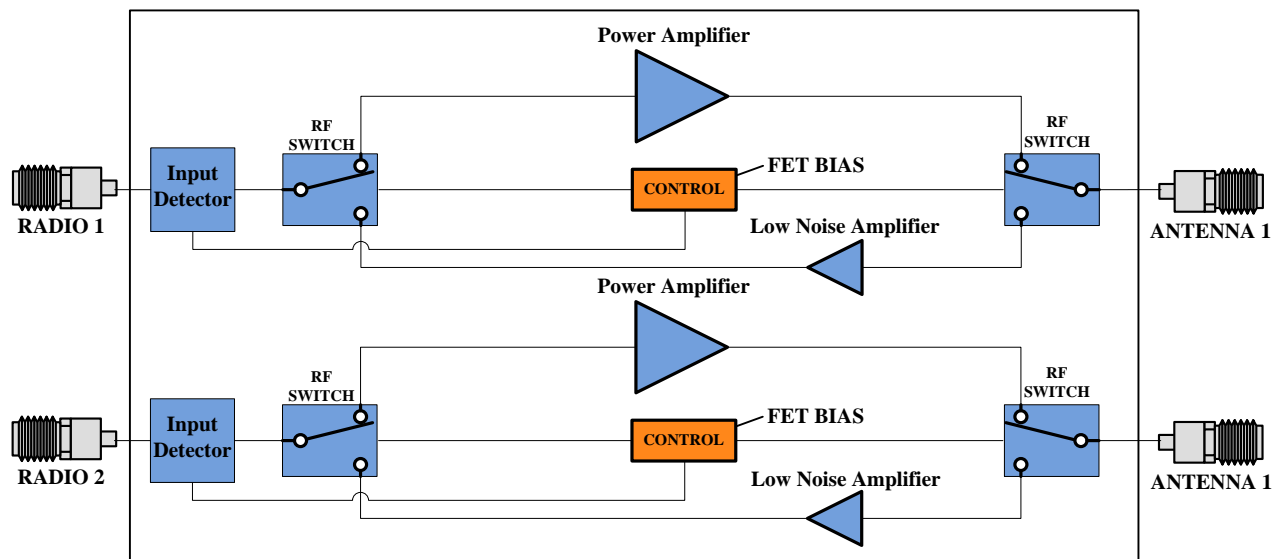
ENVIRONMENTAL / PROTECTIONS			
PARAMETER	MIN	MAX	UNIT
Operating Temp. (Housing Temp.)	-40	+85	°C
Humidity Range	0-95		%
Altitude	0-30,000		ft.
Shock / Vibration	MIL-STD-810 and equivalents		--
Max RF Input (Per Channel)	+21		dBm
PA Baseplate Shutoff Temperature	+90		°C

DC / CONTROL PINS		
AMPLIFIER CONNECTOR TYPE:		15 PIN MICRO-D FEMALE
TRIAD CABLE PART NUMBER:		CBL44
PIN LABEL	NAME	DESCRIPTION
1-4	+VDC	Supply Voltage - Range Specified in Datasheet
5	Sig. GND	Return for all Signal and CTRL Pins
7	Status	TTL Lo = Internal Fault
8	TEMP	Temp Monitor: Temp in DegC = (Vout - 0.5V) *100
9-12	GND	+VDC Supply Return
6, 13-14	N/C	No Connection
15	TX/RX CTRL	Hi = TX, Lo = RX

802-11G (20 MHz BW) DATA RATE VS. OUTPUT POWER (PER CHANNEL)			
OFDM MODULATION	DATA RATE	POUT (W) MIN.	EVM
64QAM	54 Mbps	5	≤ -27 dB
16QAM	36 Mbps	8	≤ -21 dB
QPSK	12 Mbps	16	≤ -15 dB
BPSK	9 Mbps	20	≤ -7 dB

See our [application note](#) that describes how this table was calculated and provides notes on in-system performance

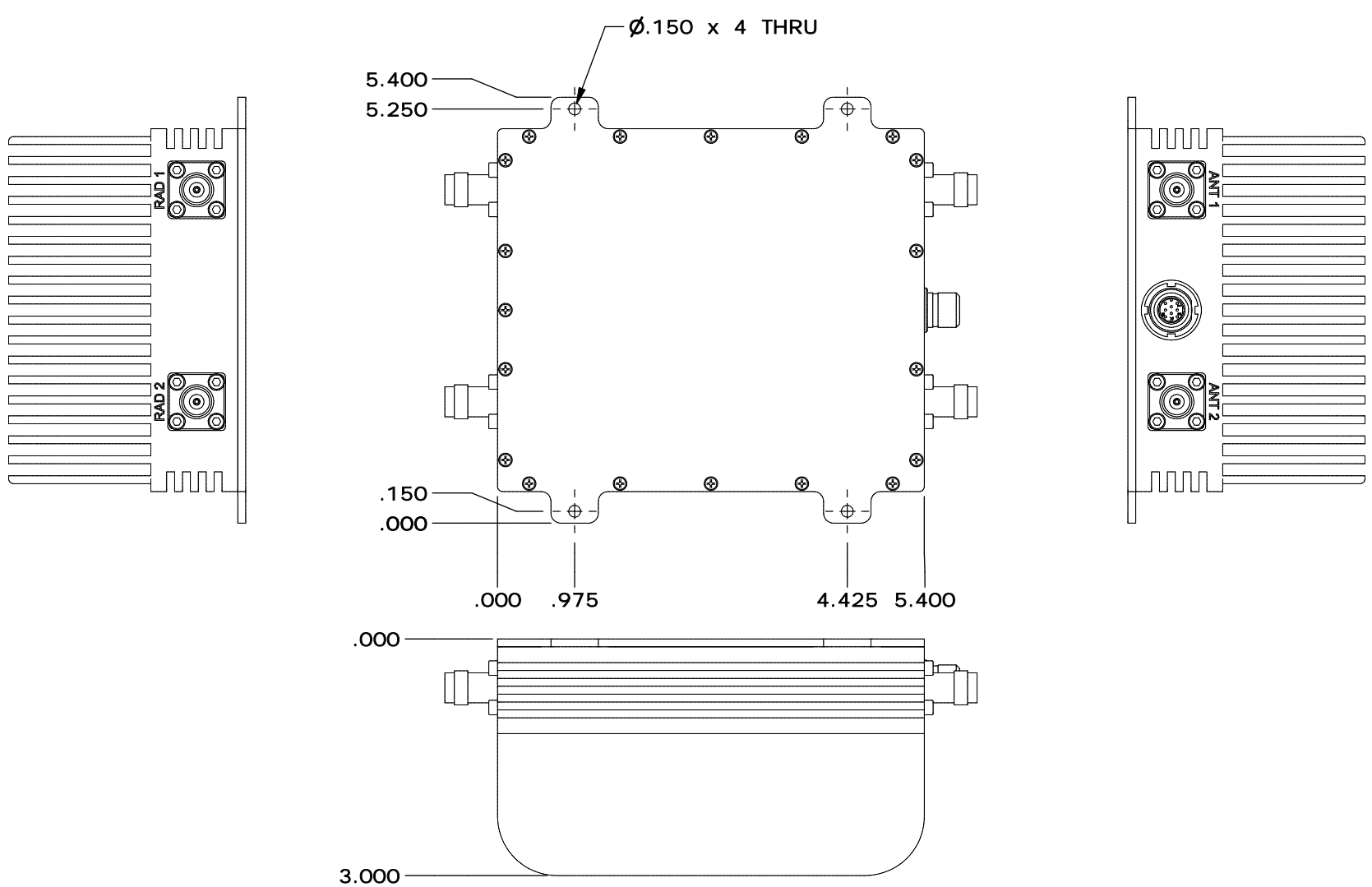
High-Level Block Diagram



Ordering Guide – Configuration Information		
Model Number	Amplifier Option	Heat Sink Option
TTRMXXXXD	- XXX	- XXX

Amplifier Options		Heat Sink Options	
Suffix	Description	Suffix	Description
D01	Automatic Tx/Rx Switching	(none)	Integrated Heat Sink
D02	Manual Tx/Rx Switching	F	Fan with Integrated Heat Sink
DXX	Custom Amplifier Configuration (issued by Triad upon customer request)		

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
O	INITIAL RELEASE	4/30/19	SC



DRAWN	scopp	4/30/2019
DESIGNED	scopp	4/16/2019
CHECKED	SC	4/30/2019
ENG APPROVED		
MFG APPROVED		

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

TRIAD RF SYSTEMS

11 HARTS LANE SUITE 1
EAST BRUNSWICK, NJ 08816
855- 558- 1001

Housing Outline 213

SIZE	DWG NO.	REV
A	OL_213	O

SCALE: NONE	CAGE CODE 67DZ3	SHEET 1 OF 1
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