

DESCRIPTION

This class AB LDMOS 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

- High Speed On/Off Control
- Manual or Automatic Tx/Rx Switching Available
- Over-Temperature Protection

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

Tx SPECIFICATIONS				
PARAMETER	MIN	TYP.	MAX	UNIT
Operating Frequency	2200		2400	MHz
PSat Power Output		+50.0		dBm
Gain		38.0		dB
Gain Flatness		1.0		± dB
Input Return Loss		-16		dB
Operating Voltage	+27	+28	+30	VDC
Current Draw		3.0		A
Tx / Rx Switching Time		1.0	2.0	uS

Rx SPECIFICATIONS				
PARAMETER	MIN	TYP.	MAX	UNIT
P1dB Power Output		+7.0		dBm
Gain		12.0		dB
Gain Flatness		1.0		± dB
Noise Figure		2.3	3.0	dB
Input Return Loss	-12			dB
Current Draw		1.4		A

MECHANICAL		
PARAMETER	VALUE	UNIT
Dimensions (L x W x H)	5.38 x 4.39 x 1.31	in
RF Connectors (Input / Output)	N-F / N-F	--
DC / Control Connector	Circular Locking	--
Cooling	Baseplate Conduction - Optional Heatsink Available	--
Mounting	#6 Through Holes	--
Weight	28	oz.
Weight With Heatsink	37	oz.

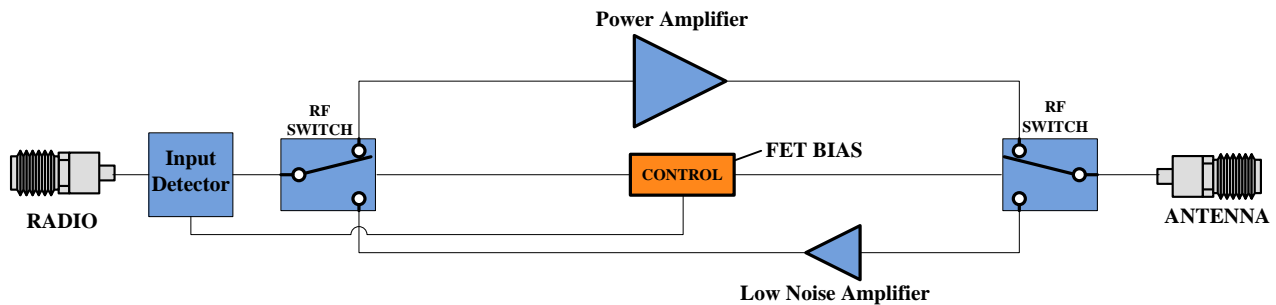
ENVIRONMENTAL / PROTECTIONS			
PARAMETER	MIN	MAX	UNIT
Operating Temperature (Housing Temp.)	-40	+85	°C
Storage Temperature	-60	+100	°C
Humidity Range	0-100		%
Altitude	0-30,000		ft.
Shock / Vibration	MIL-STD-810 and equivalents		--
Max RF Input	15		dBm
Load VSWR @ P1dB	Open / Short Output Protection		--
PA Baseplate Shutoff Temperature	+85		°C

INPUT/OUTPUT PINS				
AMPLIFIER CONNECTOR TYPE:		CIRCULAR BAYONET LOCKING MALE		
TRIAD CABLE PART NUMBER:		CBL32		
PIN LABEL	NAME	DESCRIPTION	TYPE	LEVEL
A	ON/OFF+	PA ON/OFF CONTROL (RS-422)	Input	RS-422
B	ON/OFF-	PA ON/OFF CONTROL (RS-422)	Input	5V TTL
E	TX/RX+	TX/RX CONTROL (RS-422)	Input	RS-422
F	TX/RX-	TX/RX CONTROL (RS-422)	Input	RS-422
G	BIT+	PA BUILT IN TEST (RS-422)	Output	RS-422
H	BIT-	PA BUILT IN TEST (RS-422)	Output	RS-422
J	GND	GROUND	Power	--
K	+VDC	Supply Voltage - Range Specified in Datasheet	Power	--
L	GND	GROUND	Power	--
M	+VDC	Supply Voltage - Range Specified in Datasheet	Power	--

802-11G (20 MHz BW) DATA RATE VS. OUTPUT POWER			
OFDM MODULATION	DATA RATE	POUT (W) MIN.	EVM
64QAM	54 Mbps	20	≤ -27 dB
16QAM	36 Mbps	30	≤ -21 dB
QPSK	12 Mbps	50	≤ -15 dB
BPSK	9 Mbps	63	≤ -7 dB

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

High-Level Block Diagram

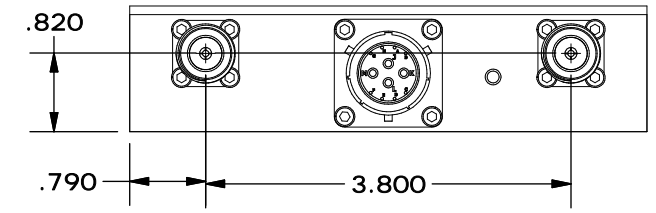
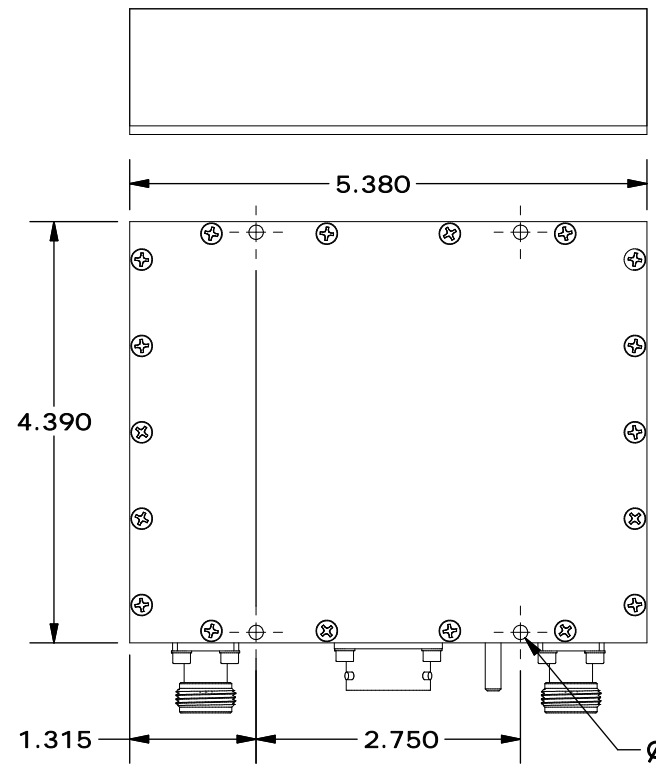
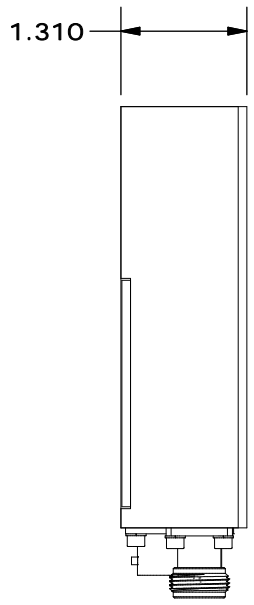


Ordering Guide – Configuration Information		
Model Number	Amplifier Option	Heat Sink Option
TTRMXXXX - XXX - XXX		

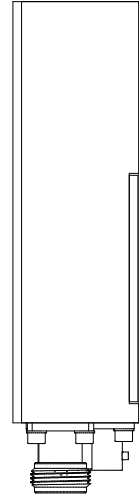
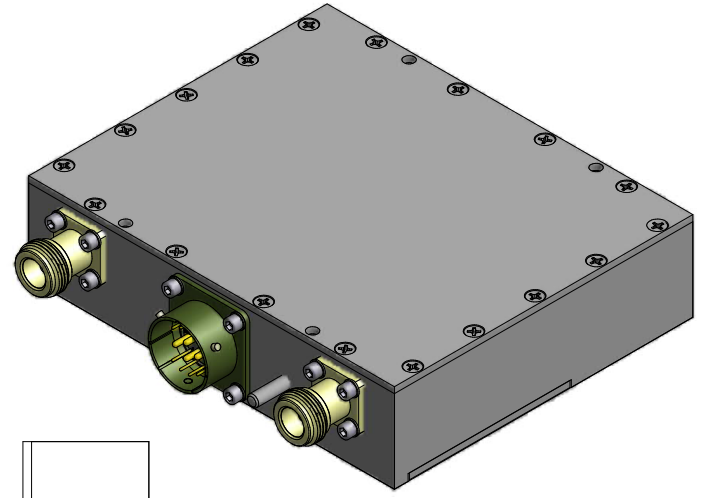
Amplifier Options		Heat Sink Options	
Suffix	Description	Suffix	Description
D01	Automatic Tx/Rx Switching	(none)	No Heat Sink Included
D02	Manual Tx/Rx Switching	HS	Standard Heat Sink
DXX	Custom Amplifier Configuration (issued by Triad upon customer request)	HSF	Heat Sink with Integrated Cooling Fan
		HSX	Custom Heat Sink Configuration

A B C D E

1
2
3
4



Ø.150 x 4 THRU



DRAWN	scopp	12/22/2015
DESIGNED	scopp	12/22/2015
CHECKED		
ENG APPROVED		
MFG APPROVED		

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

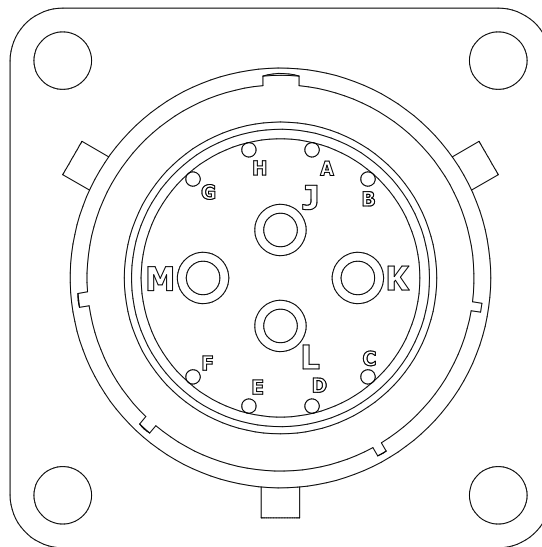
TRIAD
RF SYSTEMS

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

HOUSING OUTLINE 148

SIZE	DWG NO.	REV
A	OL_148	
SCALE: NONE	CAGE CODE 67DZ3	SHEET 1 OF 2

A B C D E



CONNECTOR ON AMPLIFIER: AMPHENOL CONNEX P/N PT02E-14-12P
(TRIAD P/N 400-039)

MATING CABLE REQUIRED: AMPHENOL P/N PT06E-14-12S(470)
(TRIAD P/N 400-083)

EQUIVALENT CONNECTOR FROM ALTERNATE MANUFACTURERS MAY BE USED -
CONTACT TRIAD FOR APPROVAL

TTRM1104 PINOUT		
PIN #	LABEL	FUNCTION
A	PA ON/OFF CONTROL (RS-422)	ON/OFF +
B	PA ON/OFF CONTROL (RS-422)	ON/OFF -
E	TX/RX CONTROL (RS-422)	TX/RX +
F	TX/RX CONTROL (RS-422)	TX/RX -
G	PA BUILT IN TEST (RS-422)	BIT +
H	PA BUILT IN TEST (RS-422)	BIT -
J,L	GND	GROUND
K,M	+VDC	SUPPLY VOLTAGE SPECIFIED ON DATASHEET

DRAWN	scopp	12/22/2015
DESIGNED	DH	4/10/2014
CHECKED		
ENG APPROVED		
MFG APPROVED		



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