

DESCRIPTION

This class A 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

- Optional Heatsink
- High Speed Tx/Rx Switching Control
- Manual Tx/Rx Switching (TTL)
- Temp. Monitor Output

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

TX SPECIFICATIONS (PER CHANNEL)				
PARAMETER	MIN	TYP.	MAX	UNIT
Operating Frequency	400		450	MHz
PSat Power Output		+48.0		dBm
Gain	27.0	28.0		dB
Gain Flatness		1.0		± dB
Input Return Loss	-16	-18		dB
Operating Voltage	+11	+12	+13	VDC
Current Draw		8.0	10.0	A
Tx / Rx Switching Time		2.0	3.0	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		2.5	4.0	dB
OIP3		+15.0		dBm
Input Return Loss	-12	-14		dB
Current Draw		200.0	450.0	mA

MECHANICAL		
PARAMETER	VALUE	UNIT
Dimensions (L x W x H)	5.5 x 6 x 0.79	in
RF Connectors (Input / Output)	SMA-F / SMA-F	--
DC / Control Connector	15 Pin Micro-D	--
Cooling	Baseplate Conduction - Optional Heatsink Available	--
Mounting	M4 x 0.7 -6H (4X)	--
Weight	30	oz.
Weight With Heatsink	62	oz.

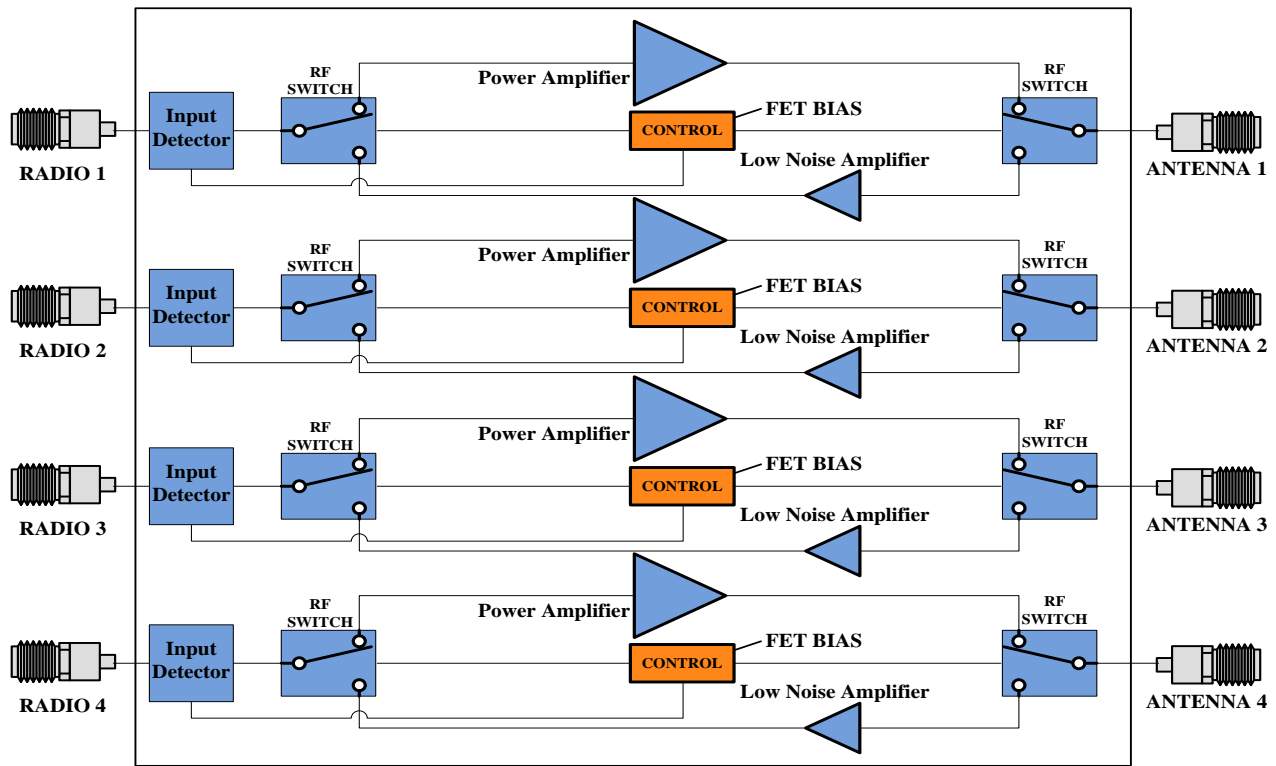
ENVIRONMENTAL / PROTECTIONS			
PARAMETER	MIN	MAX	UNIT
Operating Temp. (Housing Temp.)	-40	+85	°C
Humidity Range	0-100		%
Altitude	0-30,000		ft.
Shock / Vibration	MIL-STD-810 and equivalents		--
Max RF Input (Per Channel)	+19		dBm
PA Baseplate Shutoff Temperature	+90		°C

DC / CONTROL PINS		
PIN LABEL	NAME	DESCRIPTION
1-4	+VDC	Supply Voltage - Range Specified in Datasheet
5	Sig. GND	Return for all Signal and CTRL Pins
6	Gain CTRL	High=No Gain Change, Low=Gain Reduced by 3dB
7	Status	TTL Lo = Internal Fault
8	TEMP	Temp Monitor: Temp in DegC = (Vout - 0.5V) *100
9-12	GND	+VDC Supply Return
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	0	≤ -27 dB
16QAM	36 Mbps	0	≤ -21 dB
QPSK	12 Mbps	0	≤ -15 dB
BPSK	9 Mbps	0	≤ -7 dB

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

High-Level Block Diagram



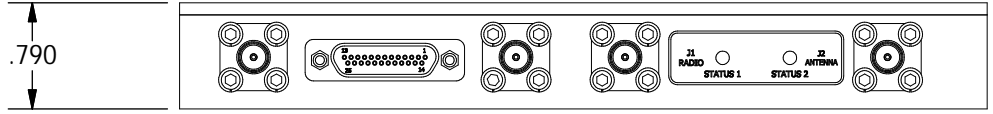
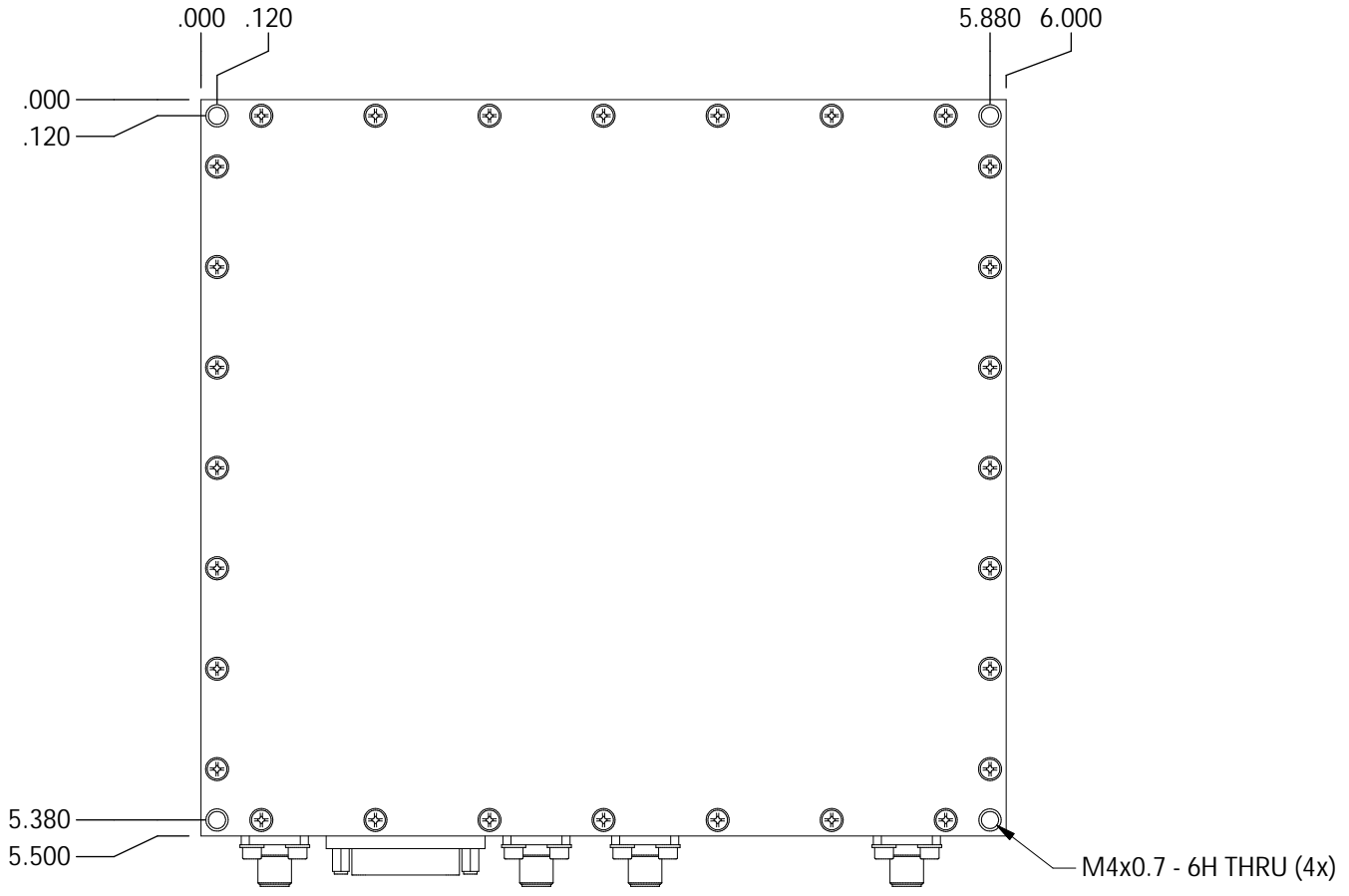
Ordering Guide – Configuration Information		
Model Number	Amplifier Option	Heat Sink Option
TTRM	XXXXQ	- XXX - XXX

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

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
0	INITIAL RELEASE	3/20/17	DH

1
2
3
4



DRAWN	DEAN	3/20/2017
DESIGNED	PA	1/14/2016
CHECKED		
ENG APPROVED		
MFG APPROVED		

TRIAD
RF SYSTEMS

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TTRM1076D ASSEMBLY

DIMENSIONS ARE IN INCHES UNLESS SPECIFIED OTHERWISE TOLERANCES		SIZE	DWG NO.	REV
DECIMALS	FRACTIONS	ANGLES	A	O
XX ± .01	± 1/32	± 2°	TTRM1076D	
.XXX ± .005			SCALE: NONE	CAGE CODE 67DZ3
			SHEET 1 OF 1	

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