

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

Manual or Automatic Tx/Rx Switching Available
Over-Temperature Protection

Temp. Monitor Output
Amplifier Status Output

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	2200		2500	MHz
PSat Power Output		+44.0		dBm
Gain		25.0		dB
Gain Flatness		1.0		± dB
Input Return Loss	-15			dB
Operating Voltage	+12	+28	+30	VDC
Current Draw		2.4		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		2.5		dB
OIP3		+15.0		dBm
Input Return Loss	-10			dB
Current Draw		250.0		mA

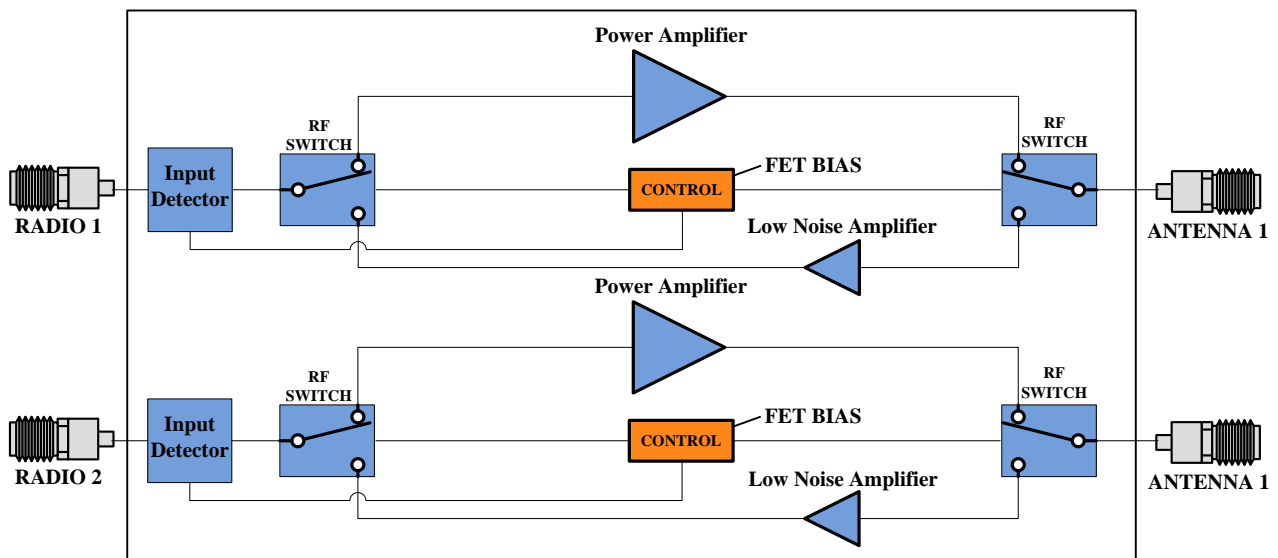
MECHANICAL			
PARAMETER	VALUE		UNIT
Dimensions (L x W x H)	3.25 x 3.75 x 1.9		in
RF Connectors (Input / Output)	TNC-F / TNC-F		--
DC / Control Connector	Circular Locking		--
Cooling	Baseplate Conduction - Optional Heatsink Available		--
Mounting	4-40 Thru Holes		--
Weight	20		oz.
ENVIRONMENTAL / PROTECTIONS			
PARAMETER	MIN	MAX	UNIT
Operating Temperature (Housing Temp.)	-20	+85	°C
Humidity Range	0-95		%
Altitude	0-30,000		ft.
Shock / Vibration	MIL-STD-810 and equivalents		--
Max RF Input	33		dBm
PA Baseplate Shutoff Temperature	+85		°C

INPUT/OUTPUT PINS		
AMPLIFIER CONNECTOR TYPE:	10 PIN CIRCULAR LOCKING	
TRIAD CABLE PART NUMBER:	CBL83	
MATING CONNECTOR PART NUMBER:	MKJ1A6F7-10SA	
PIN LABEL	NAME	DESCRIPTION
1	Status	Operational State - TTL High = Amp Active, TTL Low = Amp Fault
2	TEMP	Temp Monitor: Temp in DegC = (Vout - 0.5V) * 100
3	Tx/Rx	TTL High = Transmit Mode, TTL Low = Receive Mode
5,7,9	+VDC	Supply Voltage - Range Specified in Datasheet
6,8,10	GND	Ground

802-11G (20 MHz BW) DATA RATE VS. OUTPUT POWER(PER CHANNEL)			
OFDM MODULATION	DATA RATE	POUT (W) MIN.	EVM
64QAM	54 Mbps	4	≤ -27 dB
16QAM	36 Mbps	6	≤ -21 dB
QPSK	12 Mbps	10	≤ -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

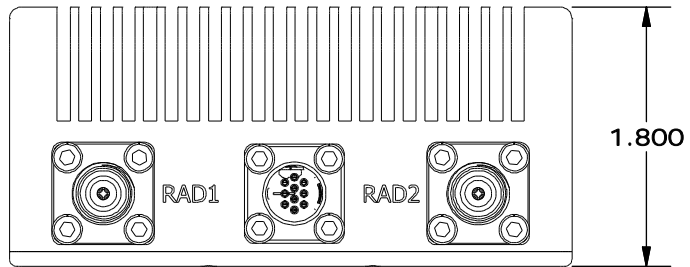
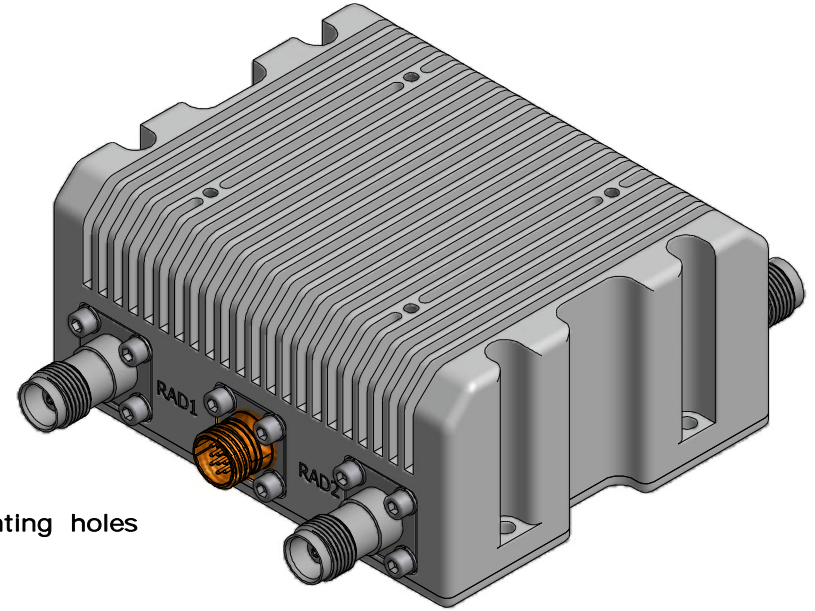
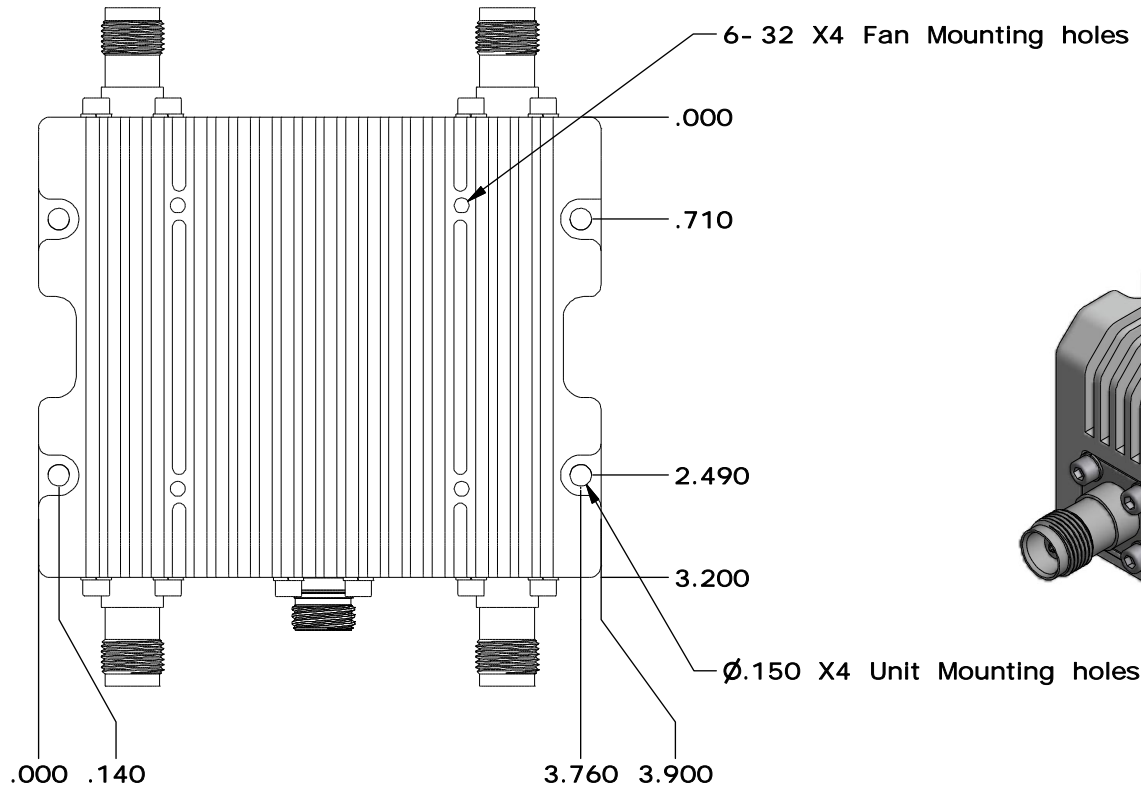


Ordering Guide – Configuration Information

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)		

Please confirm with Triad that the desired configuration is available prior to ordering.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
0	Initial Release	9/26/19	AC
1	E20535	3/27/20	AC



DRAWN	ankur	9/10/2019
DESIGNED	ankur	9/9/2019
CHECKED	DMC	3/27/2020
ENG APPROVED	DMC	3/27/2020
MFG APPROVED	DMC	3/27/2020



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HOUSING OUTLINE 206

DIMENSIONS ARE IN INCHES UNLESS SPECIFIED OTHERWISE TOLERANCES			SIZE	DWG NO.	REV
DECIMALS	FRACTIONS	ANGLES	A	OL_206	1
XX ±.01	± 1/32	± 2°	SCALE: NONE	CAGE CODE 67DZ3	SHEET 1 OF 1
.XXX ±.005					