

### 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

Optional Heatsink

Auto Tx/Rx Switching (RF Detect)

Over / Under / Reverse Voltage 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	902		928	MHz
PSat Power Output		+44.0		dBm
Gain		6.0		dB
Gain Flatness		0.5	1.3	± dB
Input Return Loss	-12			dB
Operating Voltage	+27	+28	+30	VDC
Current Draw		900.0	2400.0	mA
Tx / Rx Switching Time		1.0	2.0	uS

Rx SPECIFICATIONS				
PARAMETER	MIN	TYP.	MAX	UNIT
P1dB Power Output		+5.0		dBm
Gain		20.0		dB
Gain Flatness		0.5	1.0	± dB
Noise Figure		2.5	3.0	dB
OIP3		+15.0		dBm
Input Return Loss		-12		dB
Current Draw		150.0	250.0	mA

MECHANICAL		
PARAMETER	VALUE	UNIT
Dimensions (L x W x H)	3.33 x 2.69 x 0.65	in
RF Connectors (Input / Output)	SMA-F / SMA-F	--
DC / Control Connector	Circular Locking	--
Cooling	Baseplate Conduction - Optional Heatsink Available	--
Mounting	4-40 Thru Holes	--
Weight	5	oz.
Weight With Heatsink	15	oz.

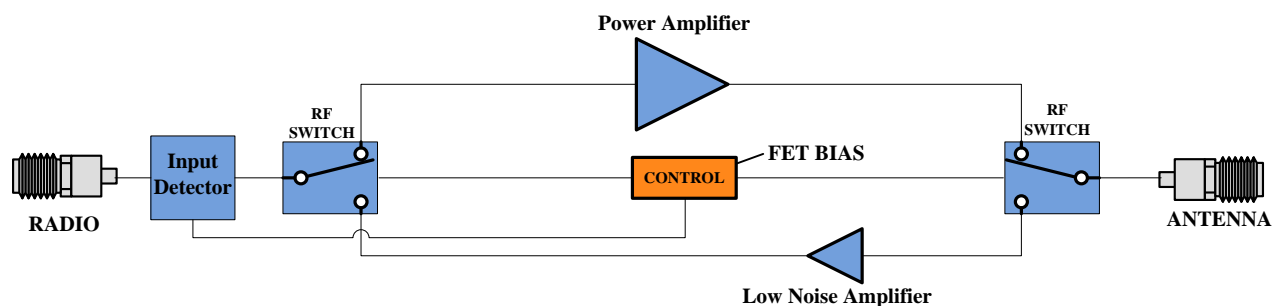
ENVIRONMENTAL / PROTECTIONS			
PARAMETER	MIN	MAX	UNIT
Operating Temperature (Housing Temp.)	-40	+85	°C
Humidity Range	0-100		%
Altitude	0-30,000		ft.
Shock / Vibration	MIL-STD-810 and equivalents		--
Max RF Input	21		dBm
PA Baseplate Shutoff Temperature	+90		°C

INPUT/OUTPUT PINS				
<b>AMPLIFIER CONNECTOR TYPE:</b>		<b>CIRCULAR BAYONET LOCKING MALE</b>		
<b>TRIAD CABLE PART NUMBER:</b>		<b>CBL13</b>		
PIN LABEL	NAME	DESCRIPTION	TYPE	LEVEL
1	Tx/Rx	Tx / Rx Switching (+5V = Tx Amp Active / 0V = Rx Amp Active)	Input	5V TTL
2	GND	Ground	Power	--
3	+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	6	≤ -27 dB
16QAM	36 Mbps	11	≤ -21 dB
QPSK	12 Mbps	13	≤ -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

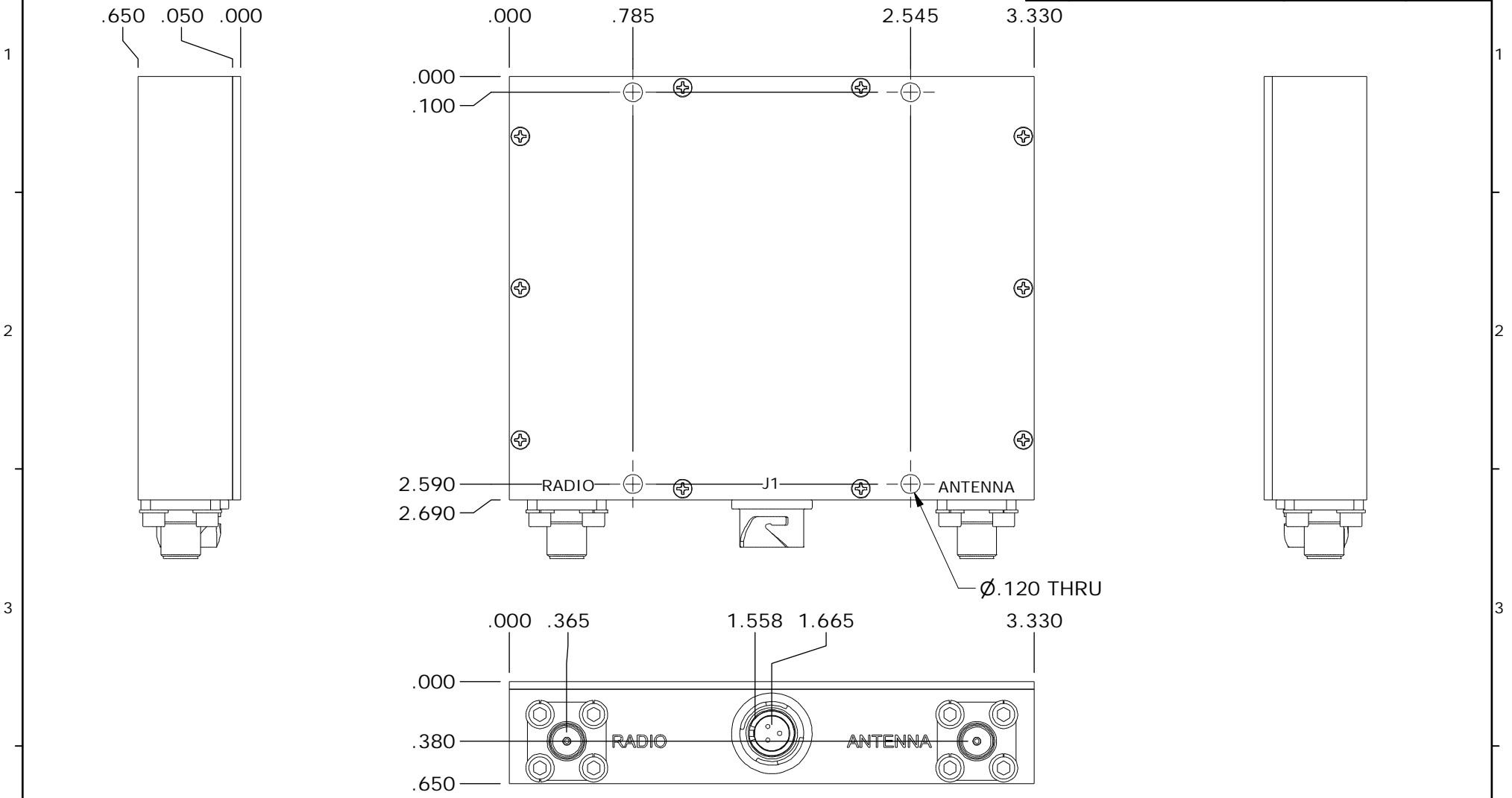
### High-Level Block Diagram



Ordering Guide – Configuration Information		
Model Number	Amplifier Option	Heat Sink Option
<b>TTRMXXXX</b>	<b>- XXX</b>	<b>- XXX</b>

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

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
0	INITIAL RELEASE	08/03/2014	DMC
1	E18329	6/6/18	SC



DRAWN	AHA	6/17/2014
DESIGNED	Stephen	5/4/2017
CHECKED	BG	6/17/2014
ENG APPROVED		
MFG APPROVED		

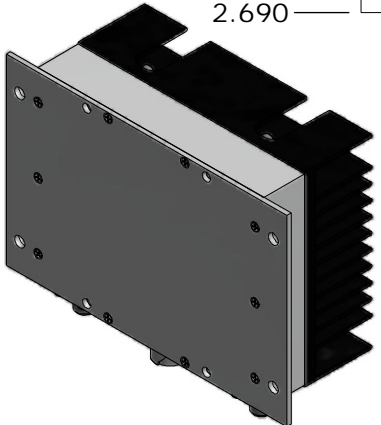
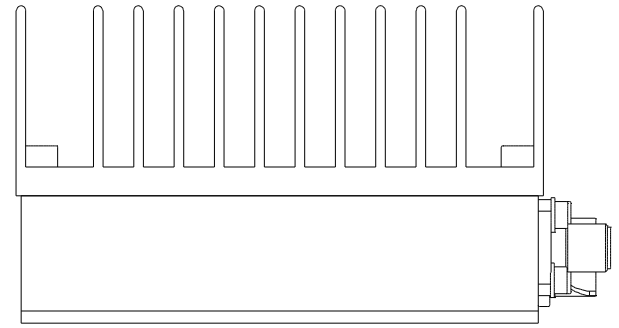
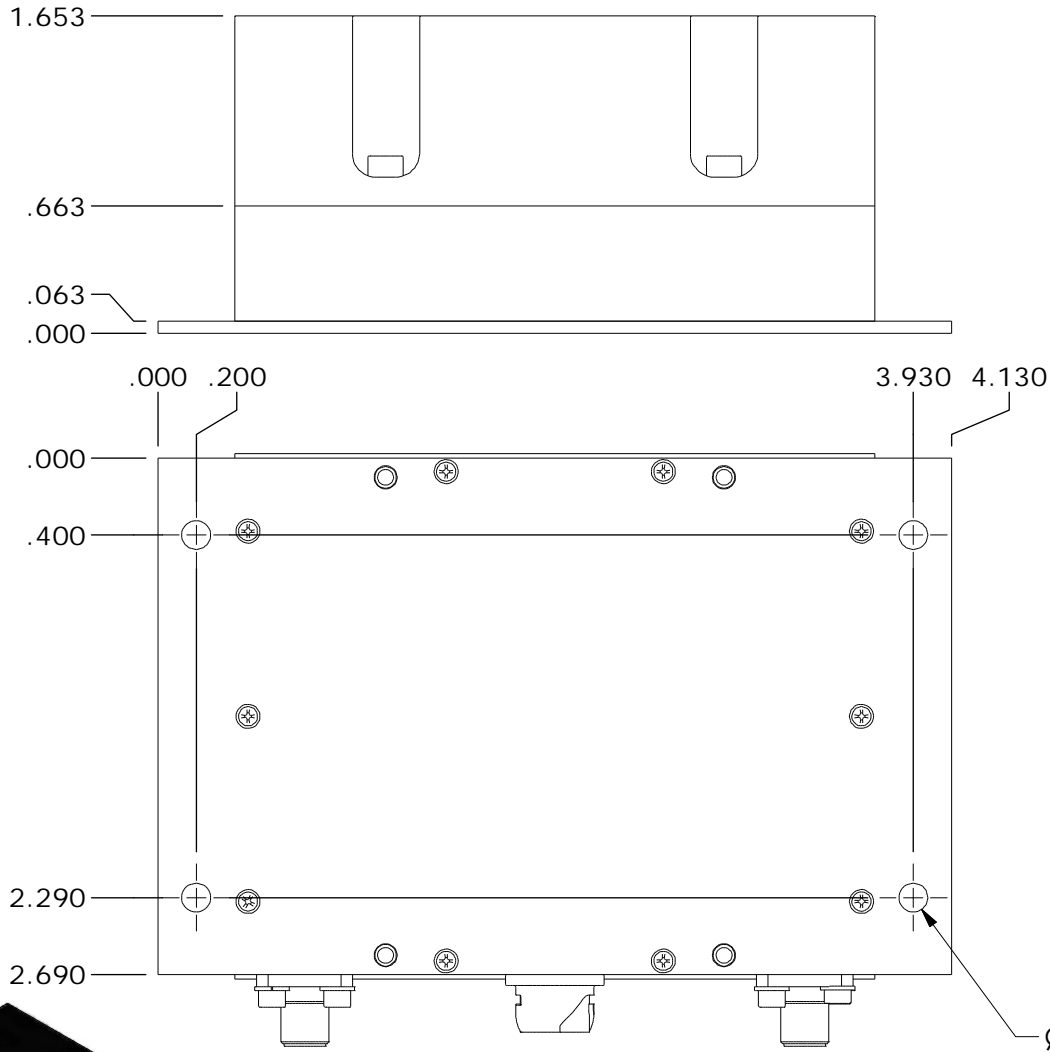
**TRIAD** RF SYSTEMS  
 11 HARTS LANE SUITE 1  
 EAST BRUNSWICK, NJ 08816  
 855- 558- 1001

HOUSING OUTLINE DRAWING 118

DIMENSIONS ARE IN INCHES UNLESS SPECIFIED OTHERWISE TOLERANCES			SIZE	DWG NO.	REV
DECIMALS	FRACTIONS	ANGLES	A	OL_118	1
XX ±.01	± 1/32	± 2°	SCALE: NONE	CAGE CODE 67DZ3	SHEET 1 OF 3
XXX ±.005					

A B C D E

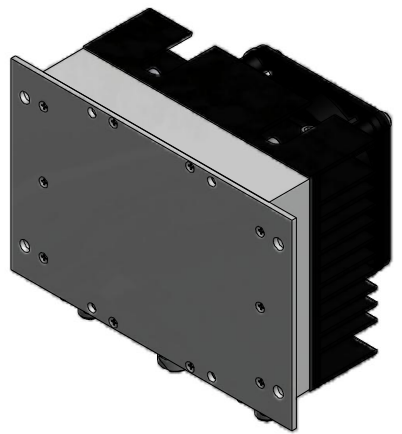
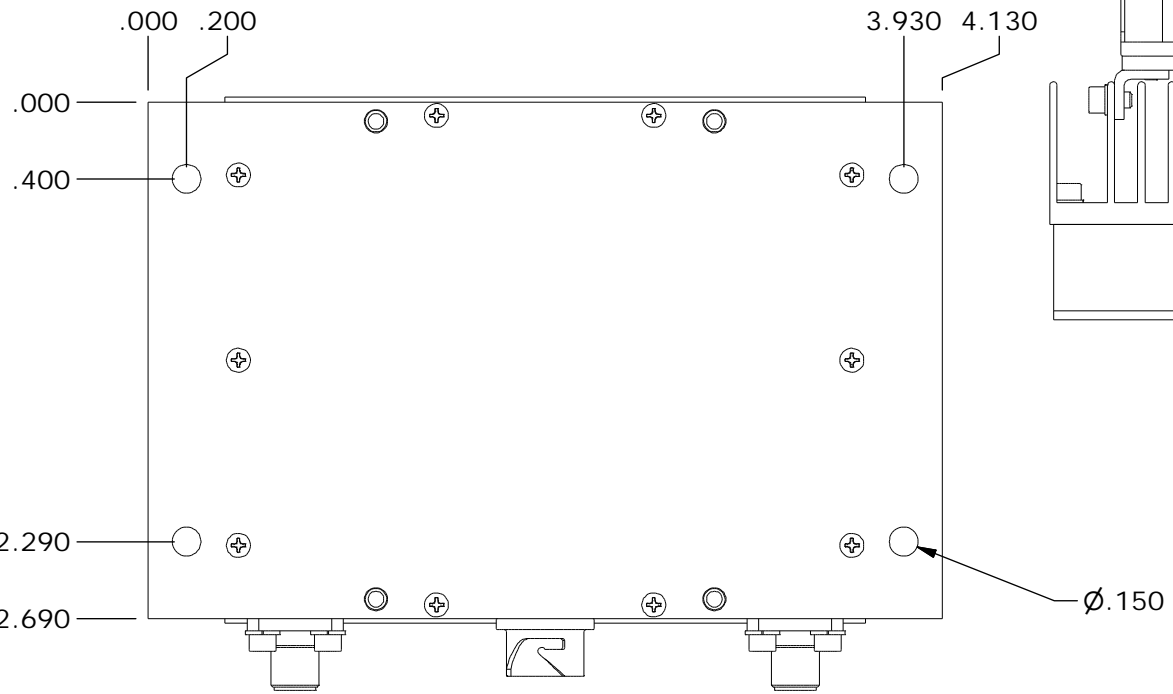
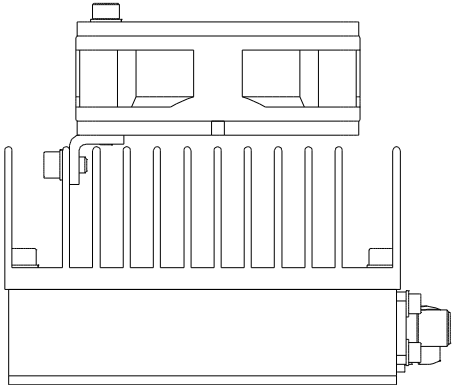
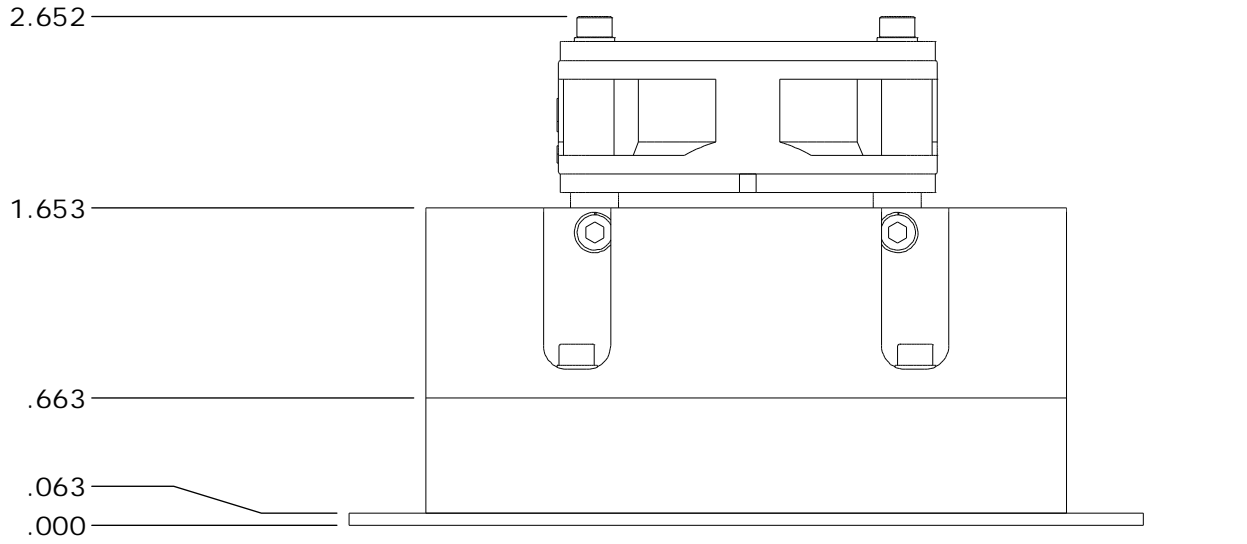
HEATSINK OPTION



A B C D E

DRAWN	AHA	6/17/2014	HOUSING OUTLINE DRAWING 118		
DESIGNED	DCH	7/12/2013			
CHECKED	BG	6/17/2014	SIZE	DWG NO.	REV
ENG APPROVED			A	OL_118	1
MFG APPROVED			SCALE: NONE	CAGE CODE 67DZ3	SHEET 2 OF 3

HEATSINK FAN OPTION



DRAWN	AHA	6/17/2014	HOUSING OUTLINE DRAWING 118		
DESIGNED	Stephen	5/4/2017	SIZE	DWG NO.	REV
CHECKED	BG	6/17/2014	A	OL_118	1
ENG APPROVED			SCALE: NONE	CAGE CODE	SHEET 3 OF 3
MFG APPROVED				67DZ3	