

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

Auto Tx/Rx Switching (RF Detect)

Optional Heatsink

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	2300		2500	MHz
PSat Power Output		+44.0		dBm
Gain	16.0	17.0		dB
Gain Flatness		1.0		± dB
Input Return Loss	-12	-16		dB
Operating Voltage	+27	+28	+30	VDC
Current Draw			2.4	A
Tx / Rx Switching Time		1.0	2.0	μs

Rx SPECIFICATIONS				
PARAMETER	MIN	TYP.	MAX	UNIT
P1dB Power Output		+5.0		dBm
Gain		15.0		dB
Gain Flatness		0.5	1.3	± dB
Noise Figure		2.0	3.0	dB
OIP3		+15.0		dBm
Input Return Loss	-12	-11		dB
Current Draw		40.0	80.0	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.

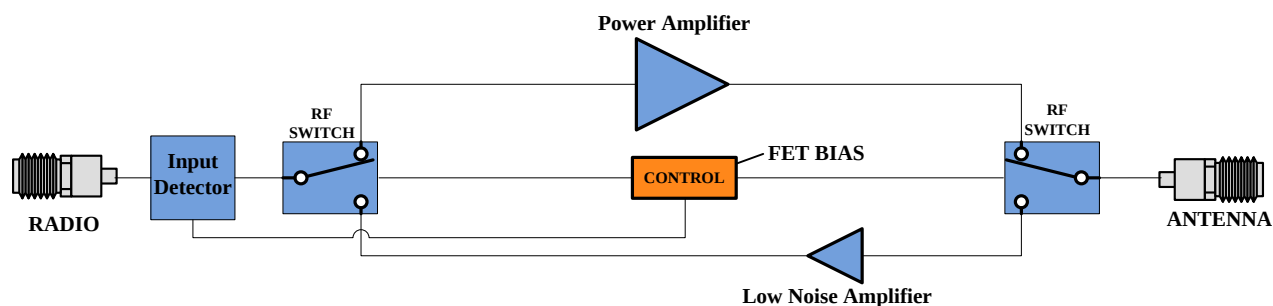
ENVIRONMENTAL / PROTECTIONS			
PARAMETER	MIN	MAX	UNIT
Operating Temperature (Housing Temp.)	-40	+85	°C
Humidity Range	0-100		%
Altitude	0-30,000		ft.
Shock / Vibration	MIL-STD-810 and equivalents		--
Max RF Input	30		dBm
PA Baseplate Shutoff Temperature	+90		°C

INPUT/OUTPUT PINS				
AMPLIFIER CONNECTOR TYPE:		CIRCULAR BAYONET LOCKING MALE		
TRIAD CABLE PART NUMBER:		CBL27		
PIN LABEL	NAME	DESCRIPTION	TYPE	LEVEL
1	N/C	Not Connected		
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
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

REVISIONS

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

1

2

3

4

1

2

3

4

.650 .050 .000

.000

.785

2.545

3.330

.000

.100

2.590

2.690

RADIO

J1

ANTENNA

Ø.120 THRU

.000 .365

1.558 1.665

3.330

.000

.380

.650

RADIO

ANTENNA

DRAWN	AHA	6/17/2014
DESIGNED	Stephe	5/4/2017
CHECKED	BG	6/17/2014
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 I
EAST BRUNSWICK, NJ 08816
855-558-1001

HOUSING OUTLINE DRAWING 118

SIZE	DWG NO.	REV
A	OL_118	1
SCALE: NONE	CAGE CODE 67DZ3	SHEET 1 OF 3

A

B

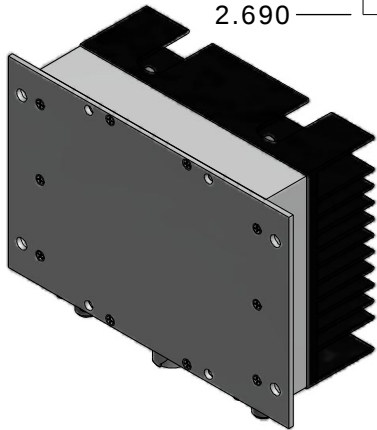
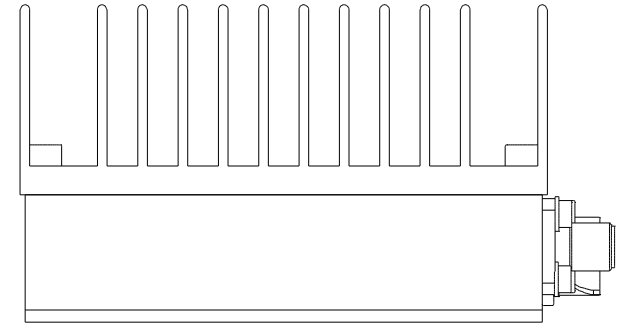
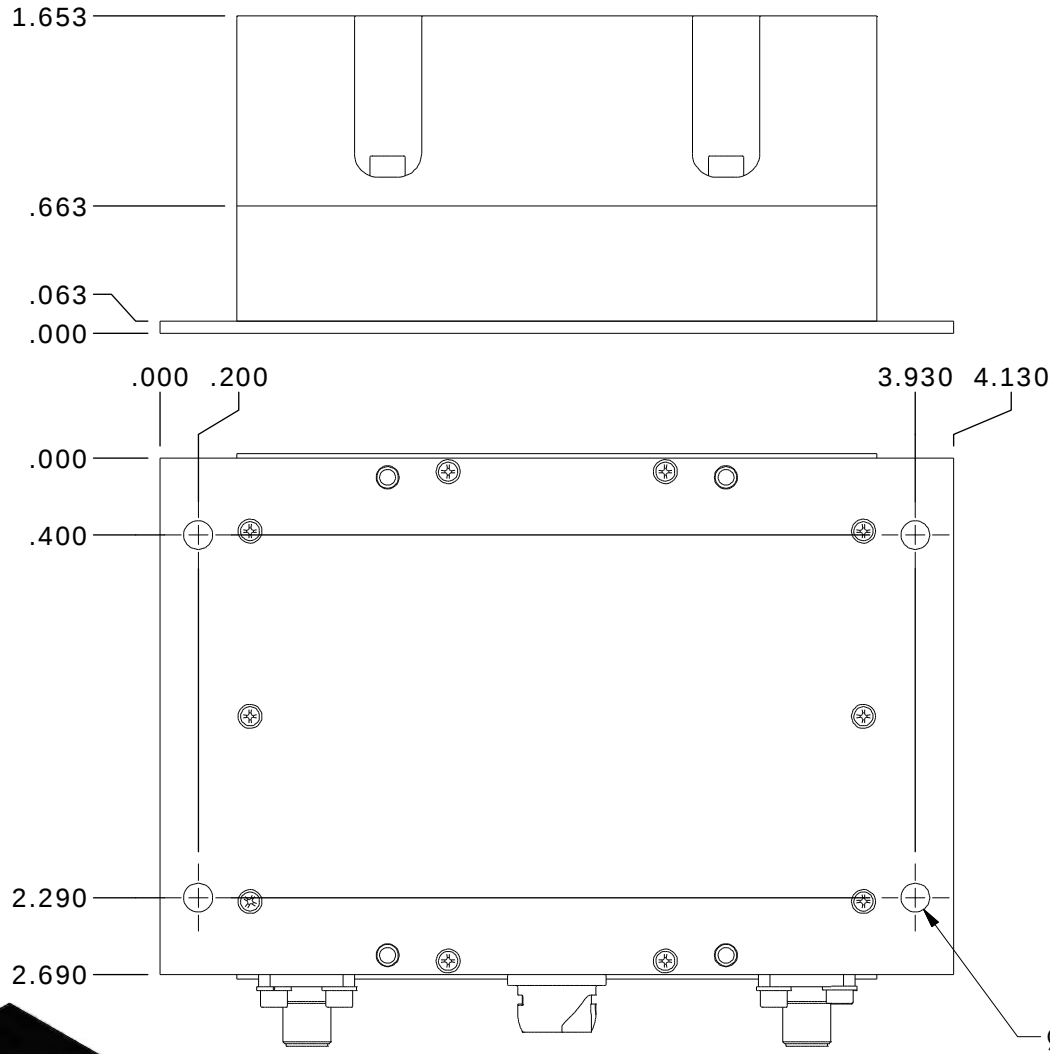
C

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A B C D E

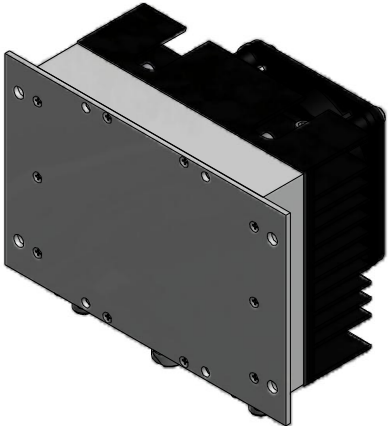
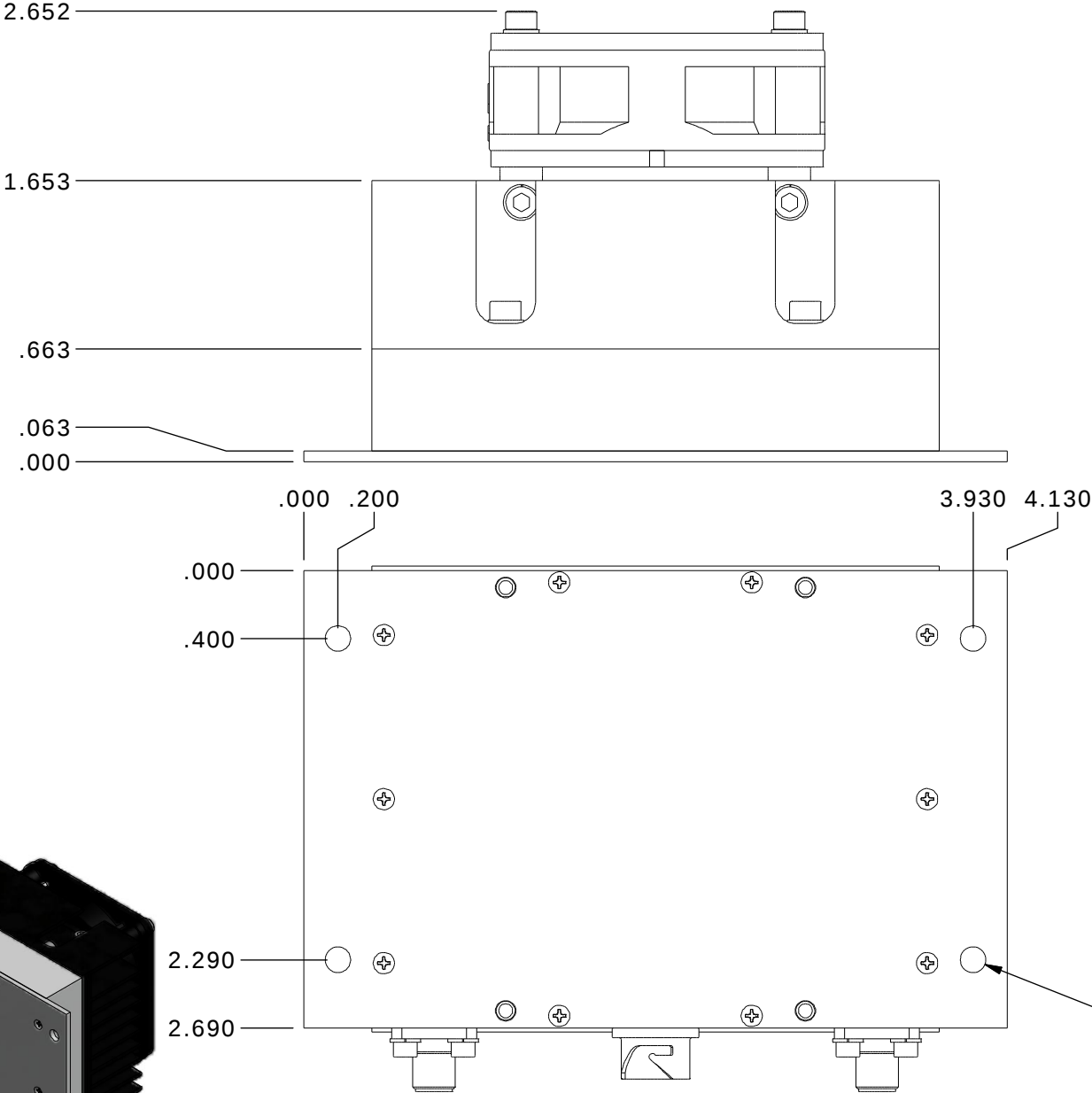
HEATSINK OPTION



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

A B C D E

HEATSINK FAN OPTION



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