

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 T/R Switching Control

Manual or Automatic Tx/Rx Switching Available

Temp. Monitor Output

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

Tx SPECIFICATIONS				
PARAMETER	MIN	TYP.	MAX	UNIT
Operating Frequency	300		400	MHz
PSat Power Output		+45.0		dBm
Gain		28.0		dB
Gain Flatness		1.5		± dB
Input Return Loss	-14	-18		dB
Operating Voltage	+11	+12	+13	VDC
Current Draw		7.0	8.5	A
Tx / Rx Switching Time		2.0	3.0	uS

Rx SPECIFICATIONS				
PARAMETER	MIN	TYP.	MAX	UNIT
P1dB Power Output		+5.0		dBm
Gain		11.0		dB
Gain Flatness		1.0		± dB
Noise Figure		3.0		dB
OIP3		+15.0		dBm
Input Return Loss		-12		dB
Current Draw		200.0	450.0	mA

MECHANICAL		
PARAMETER	VALUE	UNIT
Dimensions (L x W x H)	5.3 x 3.25 x 0.8	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	19	oz.
Weight With Heatsink	41	oz.

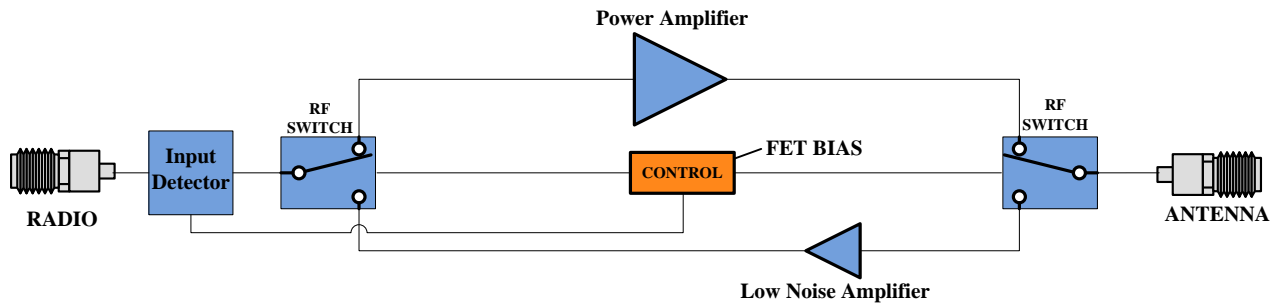
ENVIRONMENTAL / PROTECTIONS			
PARAMETER	MIN	MAX	UNIT
Operating Temperature (Housing Temp.)	-40	+85	°C
Humidity Range	0-100		%
Altitude	0-30,000		ft.
Shock / Vibration	MIL-STD-810 and equivalents		--
Max RF Input	20		dBm
PA Baseplate Shutoff Temperature	+90		°C

INPUT/OUTPUT PINS				
AMPLIFIER CONNECTOR TYPE:		15 PIN MICRO-D FEMALE		
TRIAD CABLE PART NUMBER:		CBL20		
PIN LABEL	NAME	DESCRIPTION	TYPE	LEVEL
1-4	+VDC	Supply Voltage - Range Specified in Datasheet	Power	--
5	Sig. GND	Return for all Signal and CTRL Pins	--	--
6	Gain CTRL	High=No Gain Change, Low=Gain Reduced by 3dB	Input	3.3V TTL
7	Status	TTL Lo = Internal Fault	Output	3.3V TTL
8	TEMP	Temp Monitor: Temp in DegC = (Vout - 0.5V) *100	Output	Analog
9-12	GND	+VDC Supply Return	Power	--
13-14	N/C	No Connection	--	--
15	TX/RX CTRL	Hi = TX, Lo = RX	Input	3.3V TTL

802-11G (20 MHz BW) DATA RATE VS. OUTPUT POWER			
OFDM MODULATION	DATA RATE	POUT (W) MIN.	EVM
64QAM	54 Mbps	8	≤ -27 dB
16QAM	36 Mbps	14	≤ -21 dB
QPSK	12 Mbps	16	≤ -15 dB
BPSK	9 Mbps	25	≤ -7 dB

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

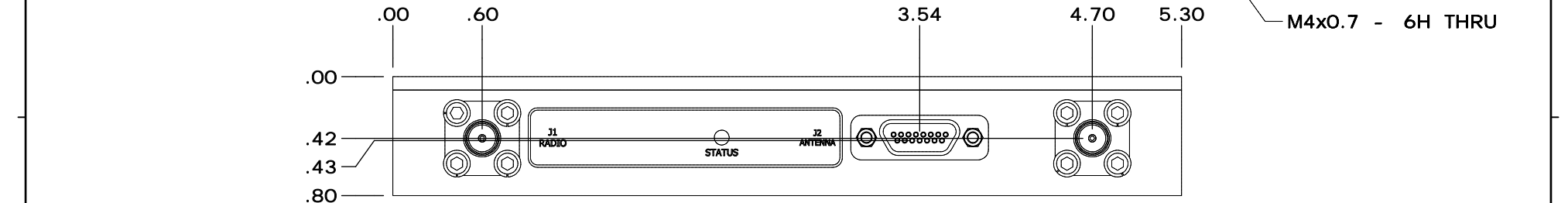
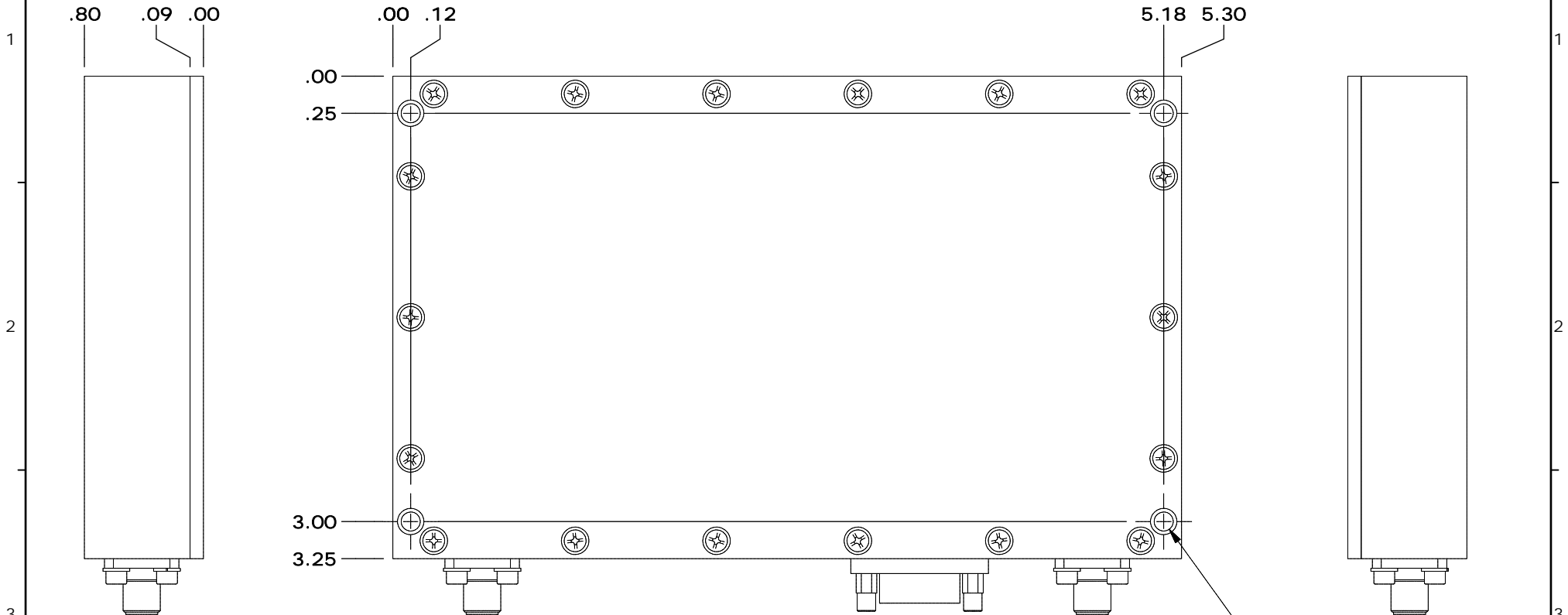
High-Level Block Diagram



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

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
0	INITIAL RELEASE	8/12/15	DMC
1	E18338	6/12/18	SC



DRAWN	DMC	8/12/2015
DESIGNED	PA	5/1/2015
CHECKED		
ENG APPROVED		
MFG APPROVED		



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EAST BRUNSWICK, NJ 08816
855- 558- 1001

HOUSING OUTLINE DRAWING 140

DIMENSIONS ARE IN INCHES UNLESS SPECIFIED OTHERWISE TOLERANCES		SIZE	DWG NO.	REV
DECIMALS	FRACTIONS	ANGLES	A	1
XX ±.01	± 1/32	± 2°	OL_140	
.XXX ±.005			SCALE: NONE	CAGE CODE 67DZ3
			SHEET 1 OF 2	

A

B

C

D

E

HEATSINK

3.39

.89

.09

.00

.00 .20

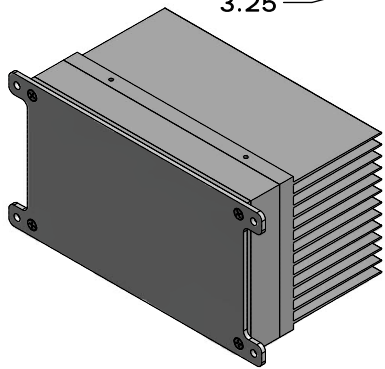
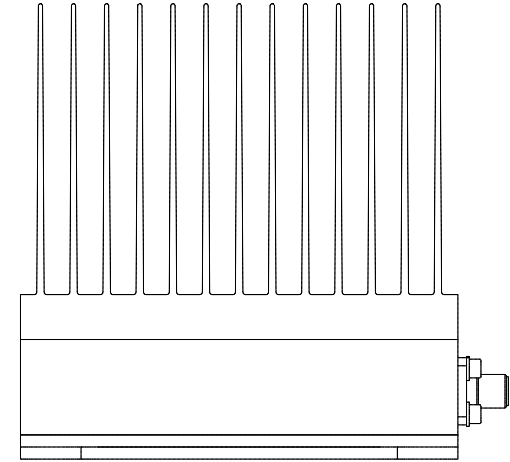
.00

.23

6.00 6.20

3.03

3.25



DRAWN	DMC	8/12/2015	HOUSING OUTLINE DRAWING 140		
DESIGNED	PA	5/1/2015	SIZE	DWG NO.	REV
CHECKED			A	OL_140	1
ENG APPROVED			SCALE: NONE	CAGE CODE 67DZ3	SHEET 2 OF 2
MFG APPROVED					

A

B

C

D

E