

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 Tx/Rx Switching (TTL)

Optional Heatsink

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	1350		1390	MHz
PSat Power Output		+44.0		dBm
Gain	24.0	25.0		dB
Gain Flatness		1.0	1.5	± dB
Input Return Loss	-12	-13		dB
Operating Voltage	+27	+28	+30	VDC
Current Draw		1.0	2.5	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	9.0	11.0		dB
Gain Flatness		0.5	1.3	± dB
Noise Figure		2.0	3.0	dB
OIP3		+15.0		dBm
Input Return Loss	-8	-12		dB
Current Draw		40.0	60.0	mA

MECHANICAL		
PARAMETER	VALUE	UNIT
Dimensions (L x W x H)	4.5 x 5.3 x 0.663	in
RF Connectors (Input / Output)	SMA-F / SMA-F	--
DC / Control Connector	15 Pin Micro-D Female	--
Cooling	Baseplate Conduction - Optional Heatsink Available	--
Mounting	4-40 Thru Holes	--
Weight	15	oz.
Weight With Heatsink	33	oz.

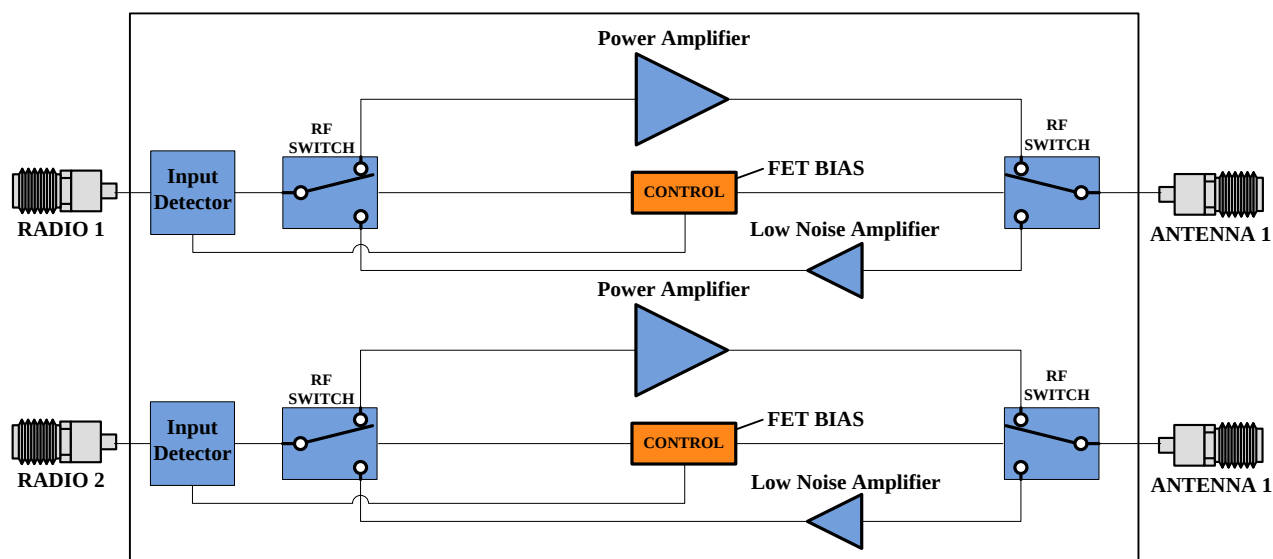
ENVIRONMENTAL / PROTECTIONS			
PARAMETER	MIN	MAX	UNIT
Operating Temp. (Housing Temp.)	-40	+85	°C
Humidity Range	0-100		%
Altitude	0-30,000		ft.
Shock / Vibration	MIL-STD-810 and equivalents		--
Max RF Input (Per Channel)	+22		dBm
PA Baseplate Shutoff Temperature	+90		°C

DC / CONTROL PINS		
AMPLIFIER CONNECTOR TYPE:		15 PIN MICRO-D FEMALE
TRIAD CABLE PART NUMBER:		CBL44
PIN LABEL	NAME	DESCRIPTION
1-4	+VDC	Supply Voltage - Range Specified in Datasheet
5	Sig. GND	Return for all Signal and CTRL Pins
7	Status	TTL Lo = Internal Fault
8	TEMP	Temp Monitor: Temp in DegC = (Vout - 0.5V) *100
9-12	GND	+VDC Supply Return
6, 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	5	≤ -27 dB
16QAM	36 Mbps	11	≤ -21 dB
QPSK	12 Mbps	16	≤ -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

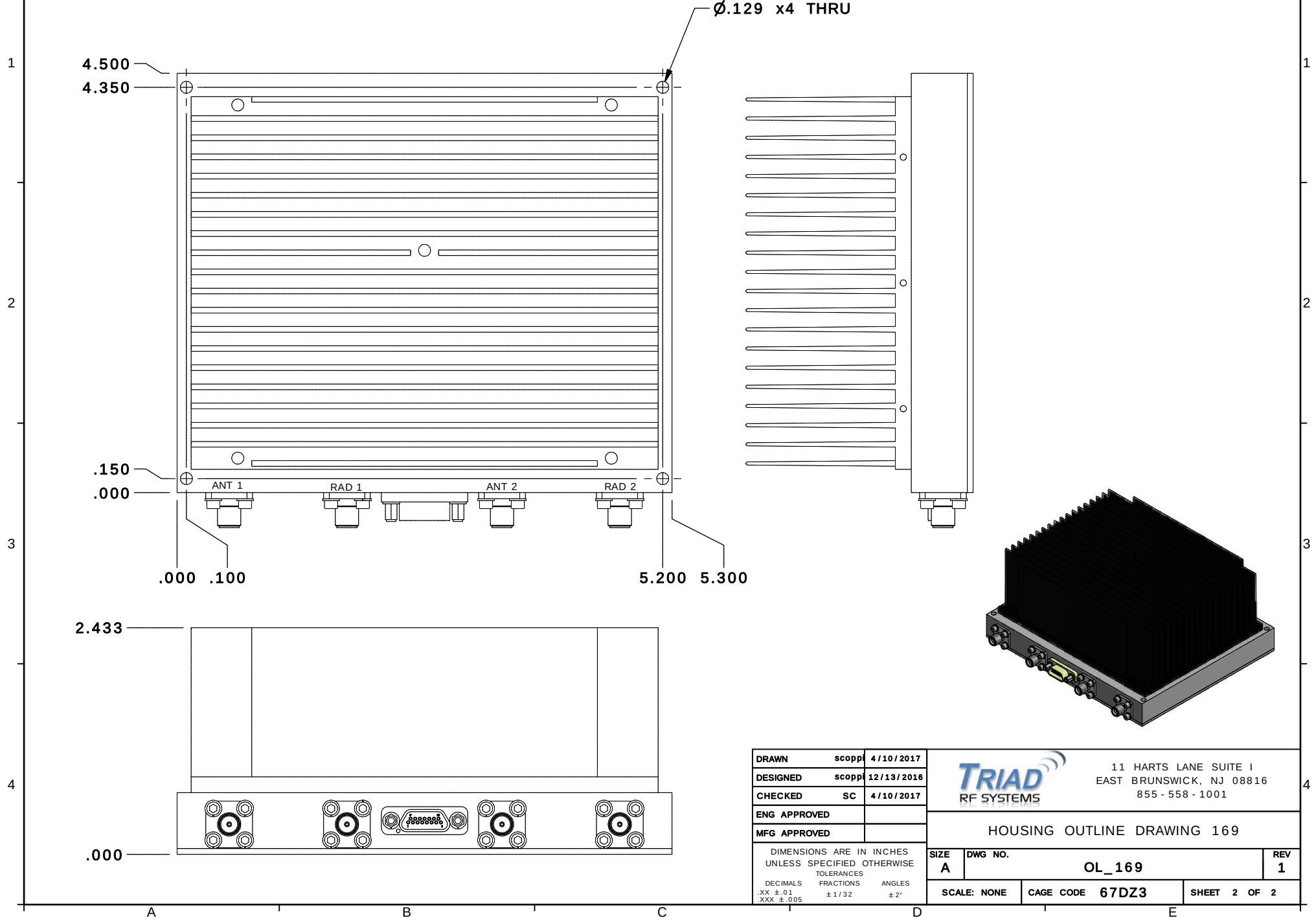
High-Level Block Diagram



Ordering Guide – Configuration Information		
Model Number	Amplifier Option	Heat Sink Option
TTRMXXXXD	- 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

OPTIONAL HEATSINK



DRAWN	scopp	4/10/2017
DESIGNED	scopp	12/13/2016
CHECKED	SC	4/10/2017
ENG APPROVED		
MFG APPROVED		

DIMENSIONS ARE IN INCHES UNLESS SPECIFIED OTHERWISE		
TOLERANCES		
DECIMALS	FRACTIONS	ANGLES
.XX ±.01	± 1/32	± 2°
.XXX ±.005		



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HOUSING OUTLINE DRAWING 169

SIZE	DWG NO.	REV
A	OL_169	1
SCALE: NONE	CAGE CODE 67DZ3	SHEET 2 OF 2