

TA1170

1900-2300 MHz 32 W POWER AMPLIFIER

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

Over / Under / Reverse Voltage Protection
Manual Gain Control

Optional Heatsink
Temp. Monitor Output

Specifications subject to change without notice. Typical performance at +28VDC +25°C, and in a 50Ω system.

RF / ELECTRICAL				
PARAMETER	MIN	TYP.	MAX	UNIT
Operating Frequency	1900		2300	MHz
PSat Power Output		+45.0		dBm
Gain	24.0	25.0		dB
Gain Flatness		1.0		dB ¹
Input Return Loss		-14		dB
Operating Voltage	+27	+28	+29	VDC
Current Draw		3.0		A
Switching Time		1.0	2.0	μS

1 – Gain flatness recorded represents a peak-peak measurement across the **entire operating band**. Gain flatness is typically much lower across significant portions of this band. Consult the gain response plots for details if available.

MECHANICAL

PARAMETER	VALUE	UNIT
Dimensions (L x W x H)	5.3 x 3.25 x 0.57	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	13	oz.
Weight with Heatsink	35	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	+23		dBm
PA Baseplate Shutoff Temperature	+ 90		°C

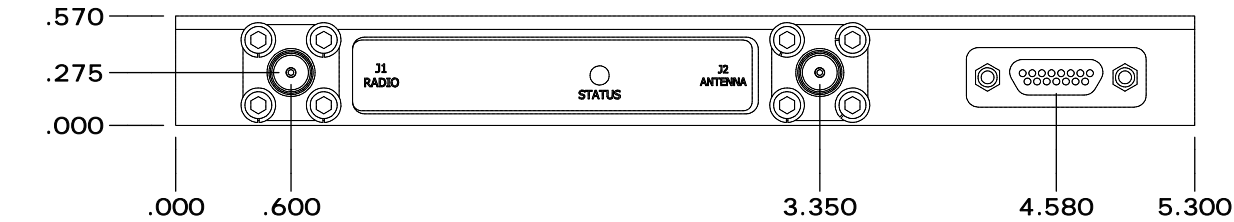
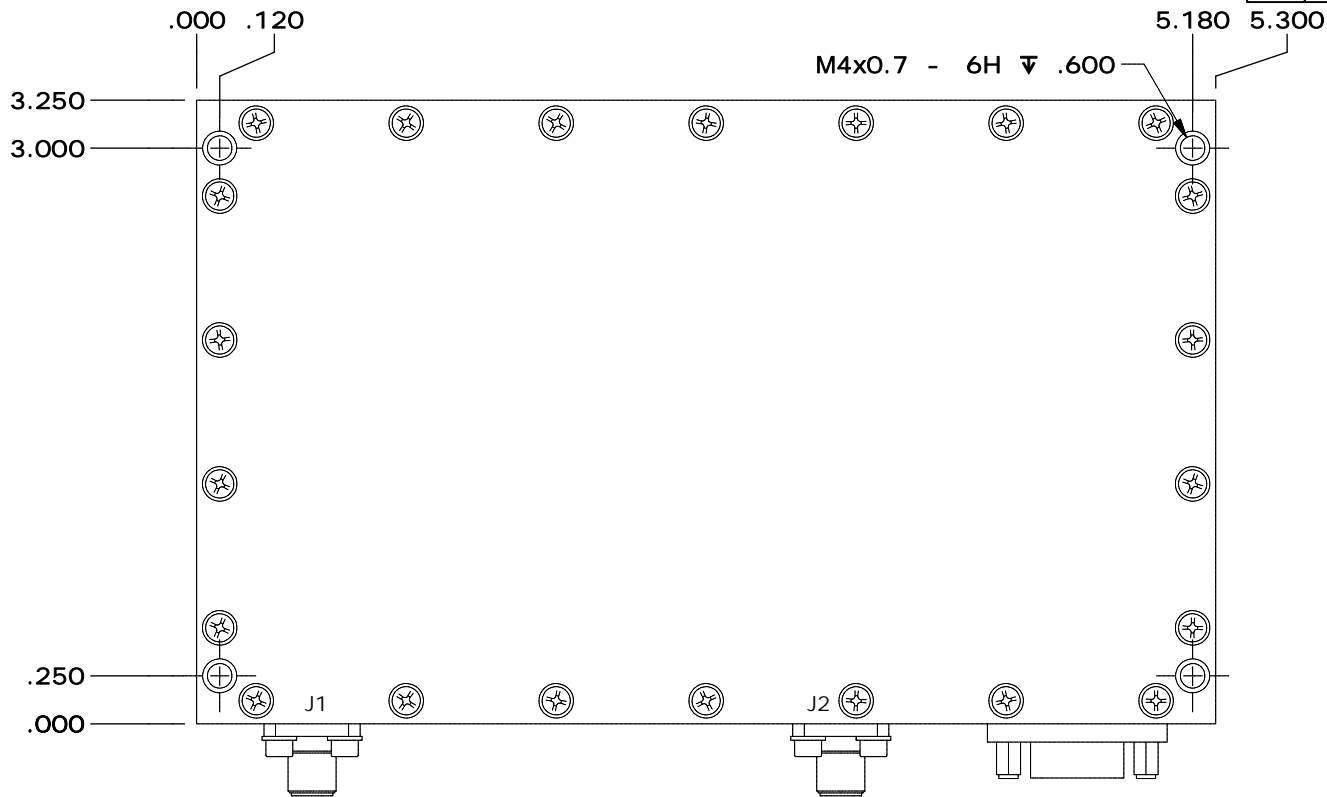
INPUT/OUTPUT PINS

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

Configuration Options

Model Number	Description
TA1170	No Heat Sink Included
TA1170 – HS	Standard Heat Sink
TA1170 – HSF	Heat Sink with Integrated Cooling Fan
TA1170 – HSX	Custom Heat Sink Configuration
TA1170 – DOX	Custom Amplifier Configuration (issued by Triad upon customer request)

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
0	INITIAL RELEASE	5/3/15	DMC
1	E18324	6/4/18	SC



DRAWN	DMC	10/3/2013
DESIGNED	DMC	9/6/2013
CHECKED		
ENG APPROVED		
MFG APPROVED		



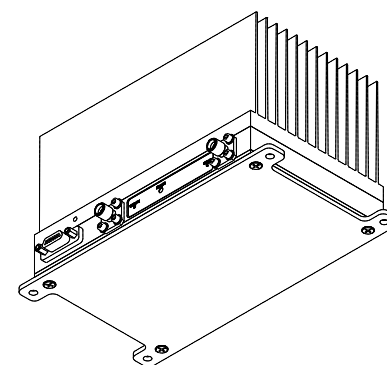
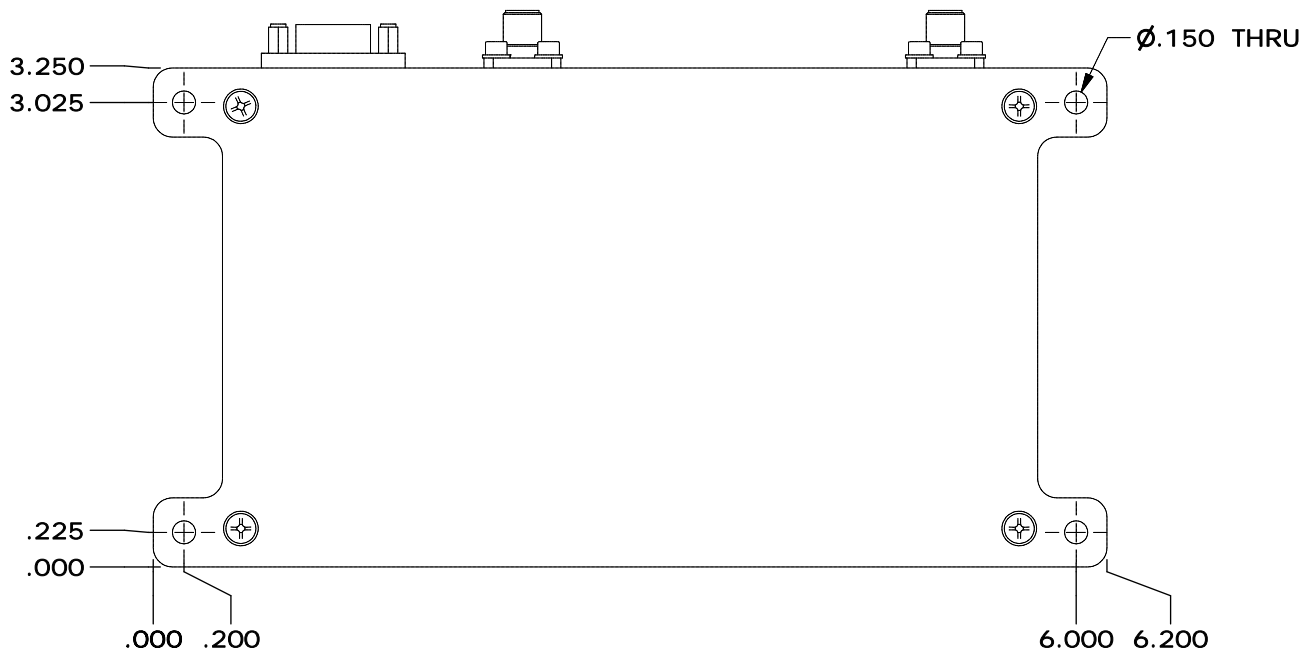
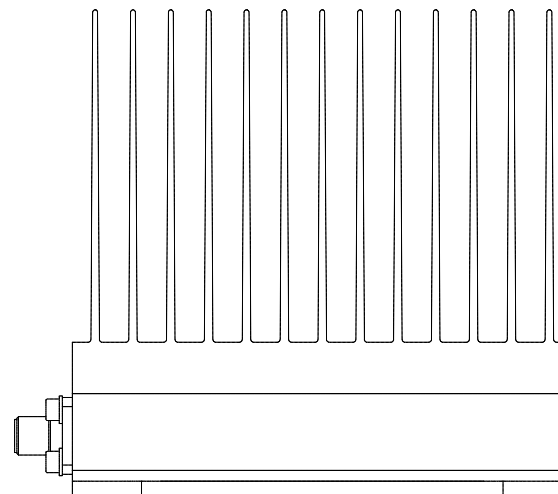
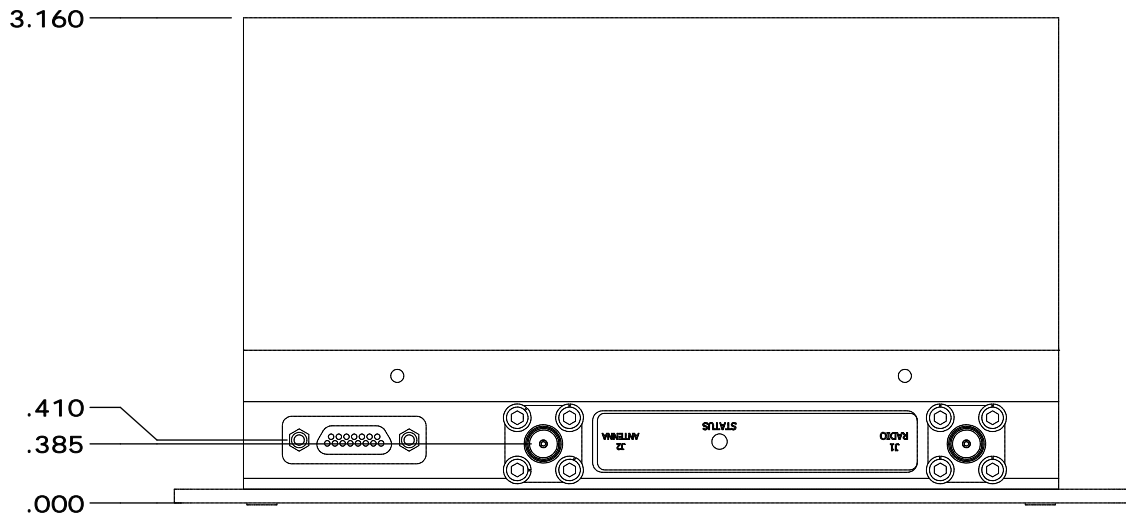
11 HARTS LANE SUITE 1
EAST BRUNSWICK, NJ 08816
855- 558- 1001

HOUSING OUTLINE DRAWING 103

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

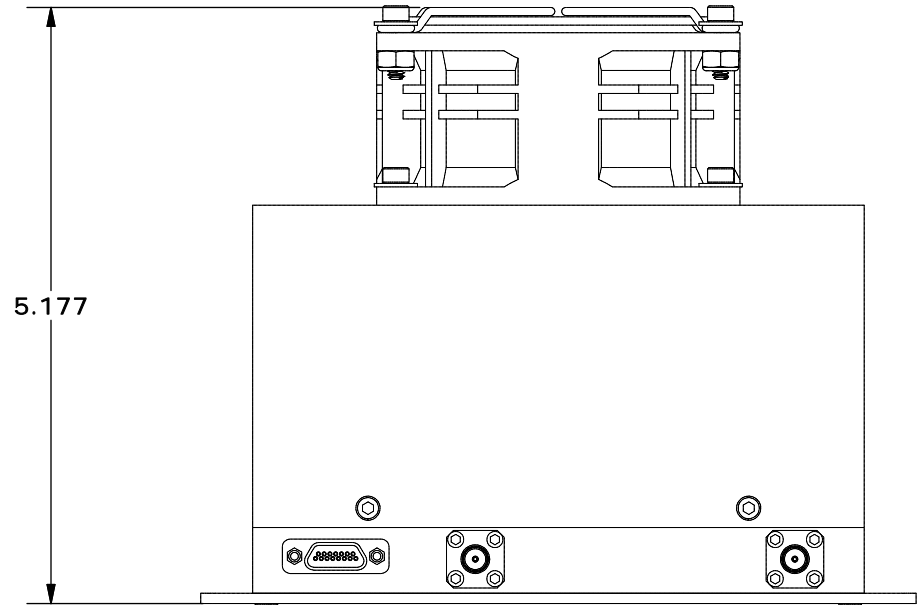
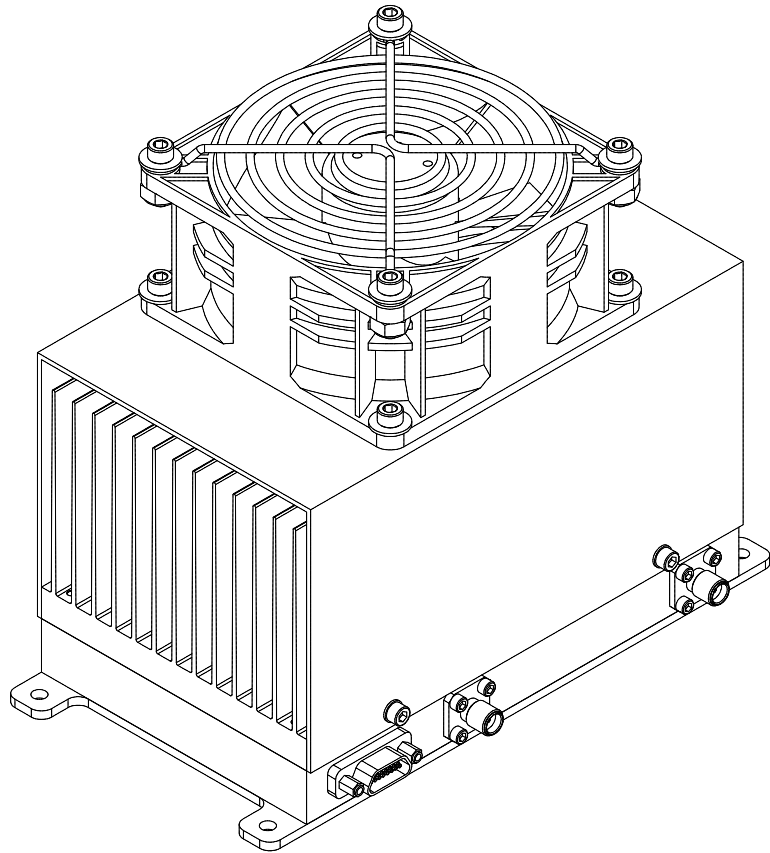
SIZE A	DWG NO. OL_103	REV 1
SCALE: NONE	CAGE CODE 67DZ3	SHEET 1 OF 4

HEATSINK



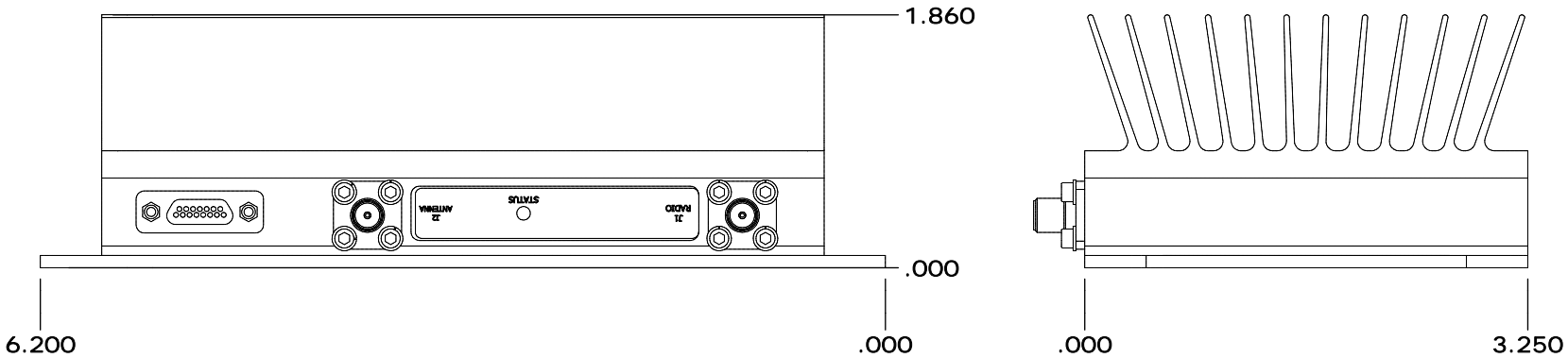
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DESIGNED	DMC	9/6/2013	SIZE	DWG NO.	REV
CHECKED			A	OL_103	1
ENG APPROVED			SCALE: NONE	CAGE CODE	67DZ3
MFG APPROVED				SHEET	2 OF 4

HEATSINK AND FAN



DRAWN	DMC	10/3/2013	HOUSING OUTLINE DRAWING 103		
DESIGNED	DMC	6/11/2015	SIZE	DWG NO.	REV
CHECKED			A	OL_103	1
ENG APPROVED			SCALE: NONE	CAGE CODE 67DZ3	SHEET 3 OF 4
MFG APPROVED					

LOW PROFILE HEATSINK OPTION
 CONTACT TRIAD FOR SAFE OPERATING
 CONDITIONS REQUIRED FOR USE OF LOWER
 HEIGHT HEATSINK



DRAWN	DMC	10/3/2013	HOUSING OUTLINE DRAWING 103		
DESIGNED	DMC	9/6/2013			
CHECKED			SIZE	DWG NO.	REV
ENG APPROVED			A	OL_103	1
MFG APPROVED			SCALE: NONE	CAGE CODE 67DZ3	SHEET 4 OF 4