

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
Temp. Monitor Output

Manual or Automatic Tx/Rx Switching Available

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	2200		2500	MHz
PSat Power Output	+42.0	+44.0		dBm
Gain	24.0	25.0		dB
Gain Flatness		1.5		± dB
Input Return Loss	-16	-18		dB
Operating Voltage	+27	+28	+30	VDC
Current Draw			4200.0	mA
Tx / Rx Switching Time		1.0	2.0	uS

Rx SPECIFICATIONS				
PARAMETER	MIN	TYP.	MAX	UNIT
P1dB Power Output		+5.0		dBm
Gain		11.0		dB
Gain Flatness		1.0		dB
Noise Figure		2.5		
OIP3		+15.0		dBm
Input Return Loss	-10			dB
Current Draw		60.0		mA

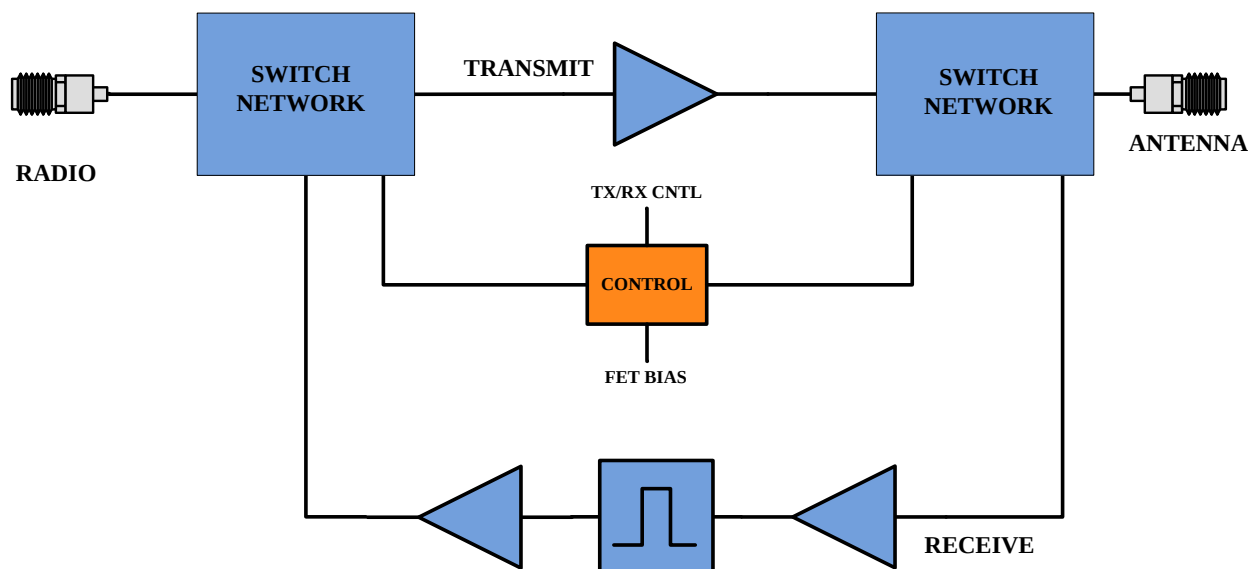
MECHANICAL		
PARAMETER	VALUE	UNIT
Dimensions (L x W x H)	4.1 x 4.226 x 0.818	in
RF Connectors (Input / Output)	SMA-F / SMA-F	--
DC / Control Connector	9 Pin Micro-D	--
Cooling	Baseplate Conduction - Optional Heatsink Available	--
Mounting	4-40 Thru Holes	--
Weight	15	oz
Weight With Heatsink	33	oz

ENVIRONMENTAL / PROTECTIONS			
PARAMETER	MIN	MAX	UNIT
Operating Temp. (Housing Temp.)	-40	+85	°C
Storage Temp Range	-60	+100	°C
Humidity Range	0-95		%
Altitude	0-30,000		ft.
Shock / Vibration	MIL-STD-810 and equivalents		--
Max RF Input	+22		dBm
Load VSWR @ P1dB	Open / Short Output Protection		--
PA Baseplate Shutoff Temperature	+90		°C

DC / CONTROL PINS		
PIN LABEL	NAME	DESCRIPTION
1	+VDC	Supply Voltage - Range Specified in Datasheet
2	+VDC	Supply Voltage - Range Specified in Datasheet
3	NC	No Connection
4	NC	No Connection
5	TEMP	Analog Temperature Sensor Output
6	GND	Ground
7	GND	Ground
8	NC	No Connection
9	TX/RX	3.3V TTL. High = TX, Low (or No Connection) = RX

DATA RATE VS. OUTPUT POWER	
OFDM MODULATION	POUT (W)
64QAM OFDM	5.7
16QAM OFDM	9.0
QPSK	15.0
BPSK	25.0

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



A

B

C

D

E

REVISIONS

REV	DESCRIPTION	DATE	APPROVED
0	INITIAL RELEASE	4 / 21 / 14	DMC

1

.000 .126

3.973 4.100

.818 .000

.000
.120

2

3

4.106
4.226

RAD 2

J1

ANT 2

RAD 1

ANT 1

Ø.120 THRU

.000 .462 1.026 1.736 2.331 3.605

.413
.195
.000

4

A

B

C

D

E

DRAWN	DMC	4 / 21 / 2014
DESIGNED	DH	4 / 21 / 2014
CHECKED		
ENG APPROVED		
MFG APPROVED		

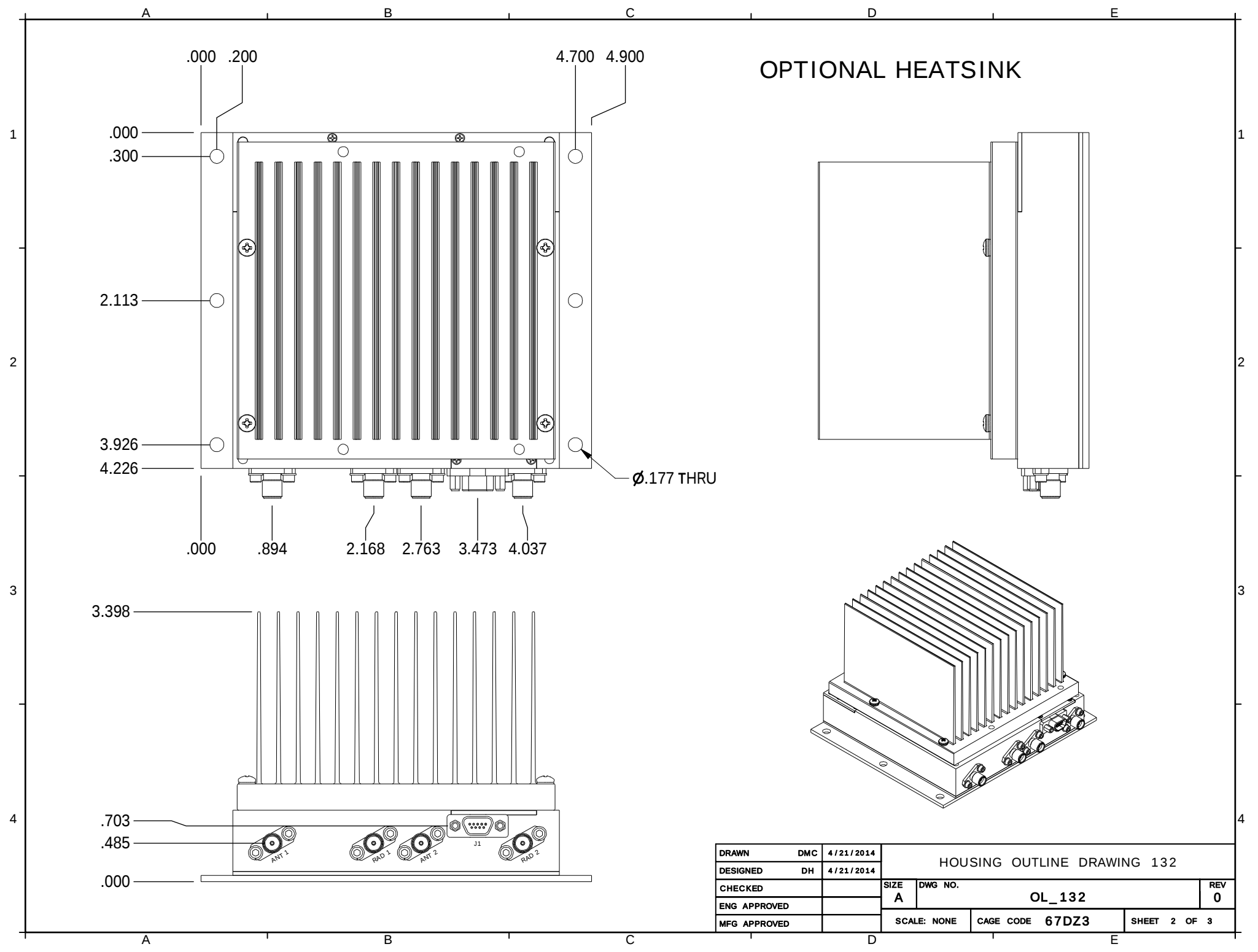
DIMENSIONS ARE IN INCHES
UNLESS SPECIFIED OTHERWISE
TOLERANCES
DECIMALS FRACTIONS ANGLES
.XX ±.01 ± 1/32 ± 2°
.XXX ±.005



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855 - 558 - 1001

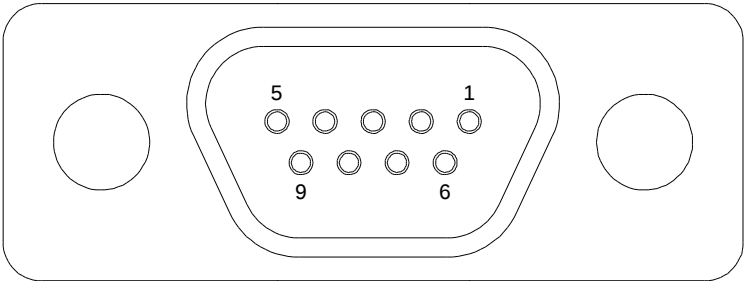
HOUSING OUTLINE DRAWING 132

SIZE	DWG NO.	REV
A	OL_132	0
SCALE: NONE	CAGE CODE 67DZ3	SHEET 1 OF 3



DRAWN	DMC	4 / 21 / 2014	HOUSING OUTLINE DRAWING 132		
DESIGNED	DH	4 / 21 / 2014			
CHECKED			SIZE	DWG NO.	REV
ENG APPROVED			A	OL_132	0
MFG APPROVED			SCALE: NONE	CAGE CODE 67DZ3	SHEET 2 OF 3

J1 CONNECTOR DETAIL



VIEW FACING CONNECTOR INTERFACE (AMP SIDE)

P/N OF CONNECTOR ON AMPLIFIER: ITT M83513/02-AC
P/N OF MATING CONNECTOR REQUIRED: ITT M83513/01-AC OR EQUIVALENT

CONNECTOR PINOUT		
PIN	FUNCTION	NOTES
1-2	+VDC	SUPPLY VOLTAGE - RANGE SPECIFIED IN DATA SHEET
5	TEMP	ANALOG TEMPERATURE SENSOR OUTPUT (VOLTAGE READ AT PIN - 0.5V) x 100 = AMPLIFIER TEMP in DEG C
6-7	GND	SUPPLY VOLTAGE RETURN
9	Tx/Rx CTRL	3.3V TTL LOGIC INPUT HIGH = SSPA IN TX MODE (LNA OFF, PA ON) LOW (OR NO CONNECTION) = SSPA IN RX MODE (LNA ON, PA OFF)

DRAWN	DMC	4/21/2014	HOUSING OUTLINE DRAWING 132			
DESIGNED	DH	12/12/2014				
CHECKED			SIZE	DWG NO.		REV
ENG APPROVED			A	OL_132		0
MFG APPROVED			SCALE: NONE	CAGE CODE	67DZ3	SHEET 3 OF 3