

DESCRIPTION

This class A GaAs 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 or Automatic Tx/Rx Switching Available

Optional Heatsink

Over / Under / Reverse Voltage Protection

Thermal Shutdown

VDS Versatile DC Supply +9 to +36

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	30		3000	MHz
P1dB Power Output	+33.0	+35.0		dBm
Gain	19.0	23.0		dB
Gain Flatness		1.0	2.0	± dB
Input Return Loss	-11	-16		dB
Operating Voltage	+9	+28	+36	VDC
Current Draw		600.0	1000.0	mA
Tx / Rx Switching Time		1.0	2.0	μs

Rx SPECIFICATIONS				
PARAMETER	MIN	TYP.	MAX	UNIT
P1dB Power Output		+5.0		dBm
Gain		20.0		dB
Gain Flatness		1.5	2.0	dB
Noise Figure		2.0	3.0	dB
OIP3		+15.0		dBm
Input Return Loss	-7	-14		dB
Current Draw		200.0	250.0	mA

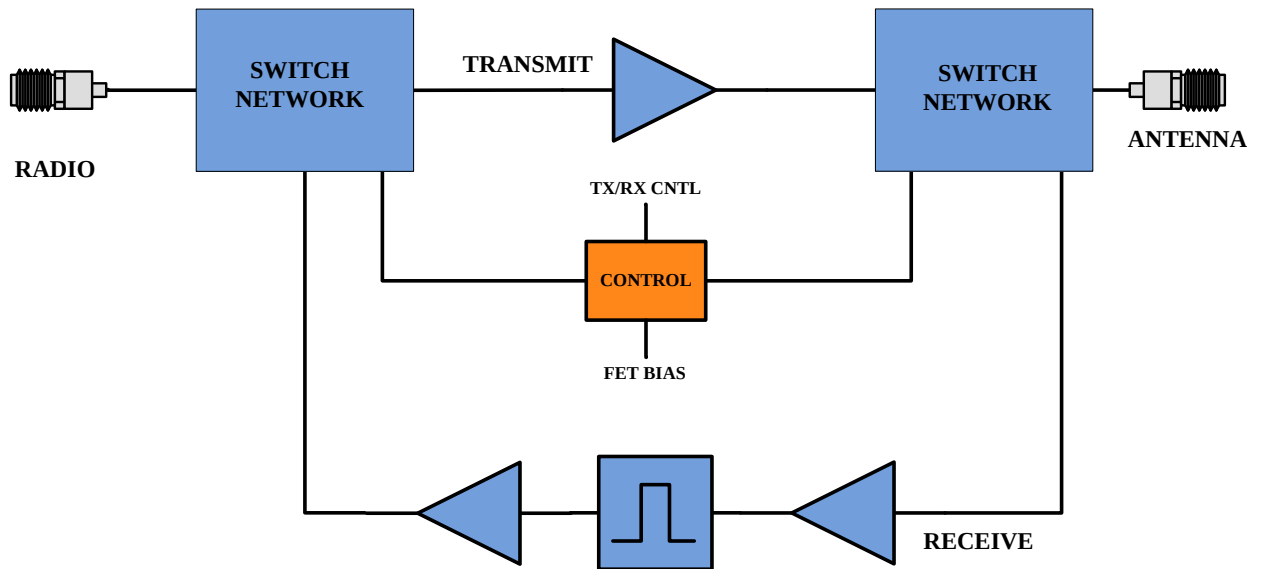
MECHANICAL		
PARAMETER	VALUE	UNIT
Dimensions (L x W x H)	3.25 x 2 x 0.993	in
RF Connectors (Input / Output)	SMA-F / SMA-F	--
DC / Control Connector	Circular Locking	--
Cooling	Baseplate Conduction - Optional Heatsink Available	--
Mounting	2-56 Thru Holes	--
Weight	6	oz.
Weight With Heatsink	16	oz.

ENVIRONMENTAL / PROTECTIONS			
PARAMETER	MIN	MAX	UNIT
Operating Temp. (Housing Temp.)	-40	+85	°C
Storage Temp Range	-60	+100	°C
Humidity Range	0-100		%
Altitude	0-30,000		ft.
Shock / Vibration	MIL-STD-810 and equivalents		--
Max RF Input	+15		dBm
Load VSWR @ P1dB	Open / Short Output Protection		--
PA Baseplate Shutoff Temperature	+90		°C

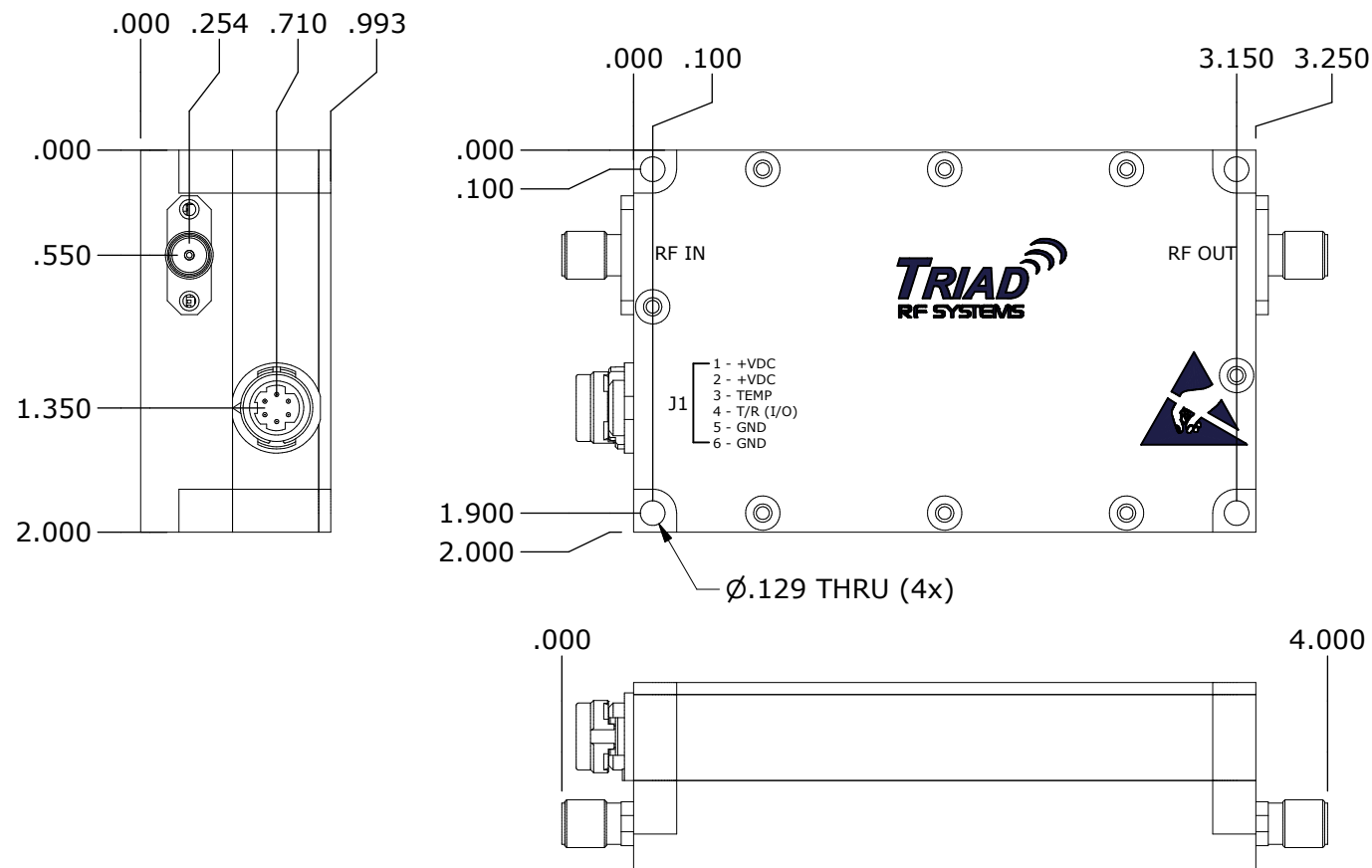
DC / CONTROL PINS		
PIN LABEL	NAME	DESCRIPTION
1	+VDC	Supply Voltage - Range Specified in Datasheet
2	+VDC	Supply Voltage - Range Specified in Datasheet
3	TEMP	Temp Monitor: Temp in DegC = (Vout - 0.5V) * 100
4	Tx/Rx	T/R Control - TTL Hi = Tx Mode, TTL Lo = Rx Mode
5	GND	Ground
6	GND	Ground

DATA RATE VS. OUTPUT POWER	
OFDM MODULATION	P _{OUT} (W)
64QAM OFDM	1.0
16QAM OFDM	1.58
QPSK	2.24
BPSK	3.16

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



REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
0	INITIAL RELEASE	07/07/2014	DMC



DRAWN	DCH	7/7/2014
DESIGNED	DCH	9/28/2012
CHECKED	SNB	8/14/2015
ENG. APPROVED		
MFG. APPROVED		

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

		180 TICES LANE BUILDING A, SUITE 107 EAST BRUNSWICK, NJ 08816 855-558-1001	
		Housing Outline 119	
SIZE A	DWG NO.	REV	
SCALE: NONE	CAGE CODE 67DZ3	SHEET 1 OF 4	

A

B

C

D

E

OPTIONAL HEATSINK

.000 .283 .739

1.983

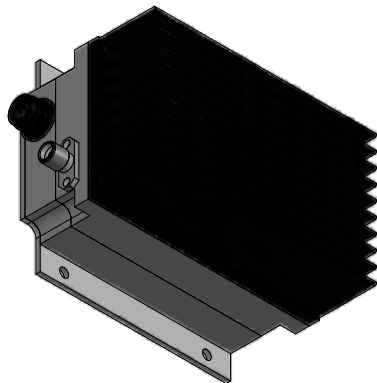
.000 .575

2.675 3.025 3.250

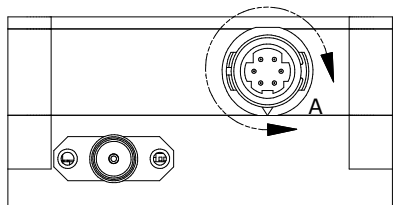
2.700
2.540.160
.000

Ø.129 THRU (4x)

1.983

.063
.000

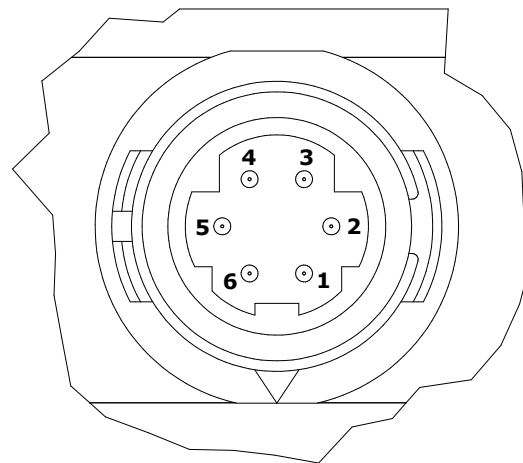
DRAWN	DCH	7/7/2014	Housing Outline 119			
DESIGNED	DCH	9/28/2012				
CHECKED	SNB	8/14/2015	SIZE A	DWG NO.	REV	
ENG. APPROVED						
MFG. APPROVED			SCALE: NONE		CAGE CODE 67DZ3	SHEET 2 OF 4



NOTES:

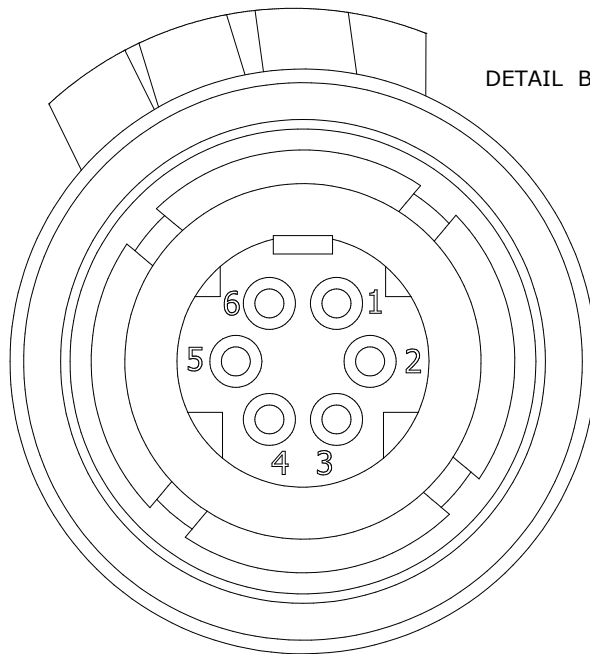
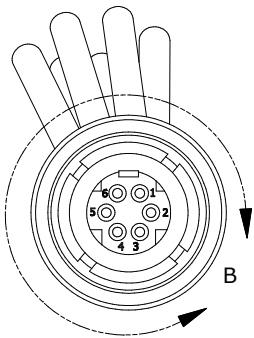
1. VIEW FACING CONNECTOR INTERFACE (AMP SIDE)
2. P/N OF CONNECTOR ON AMPLIFIER: HIROSE HR30-6R-6P
3. CONNECTOR MATE P/N: HR30-6P-3S
4. MATING CABLE (SOLD SEPARATELY): TRIAD P/N C1407071

PINOUT TABLE		
PIN	LABEL	NOTES
1	+VDC	VDC IN, REFER TO DATASHEET FOR SUPPLY VOLTAGE RANGE
2	+VDC	VDC IN, REFER TO DATASHEET FOR SUPPLY VOLTAGE RANGE
3	TEMP	TEMP MONITOR OUT: TEMP IN DEG C = ((VOLTAGE MEASURED AT PIN - .5) * 100)
4	T/R	TX/RX CNTRL: TTL HIGH = SSPA IN TX MODE , TTL LO = SSPA IN RX MODE NOTE -FOR TRANSMIT ONLY AMPLIFIERS, THIS PIN CONTROLS I/O: TTL HIGH = SSPA ON , TTL LO = SSPA OFF
5	GND	GROUND
6	GND	GROUND

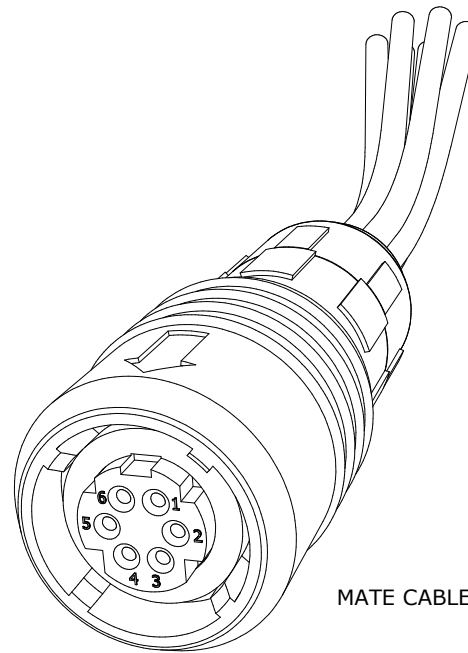


DETAIL A
SCALE 4 : 1

DRAWN	DCH	7/7/2014	Housing Outline 119		
DESIGNED	DCH	9/28/2012			
CHECKED	SNB	8/14/2015	SIZE A	DWG NO.	REV
ENG. APPROVED					
MFG. APPROVED			SCALE: NONE	CAGE CODE 67DZ3	SHEET 3 OF 4



C14070701



MATE CABLE

NOTES:

1. P/N OF MATING CONNECTOR REQUIRED: HR30-6P-6S (71)
2. TRIAD CABLE P/N: C14070701
3. WIRE DIAMETER: 24 AWG

DRAWN	DCH	7/7/2014	Housing Outline 119		
DESIGNED	---	8/30/2013			
CHECKED	SNB	8/14/2015	SIZE A	DWG NO.	REV 0
ENG. APPROVED					
MFG. APPROVED			SCALE: NONE	CAGE CODE 67DZ3	SHEET 4 OF 4