

DESCRIPTION

This class AB GaN 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-Temperature Protection

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	1518		1559	MHz
PSat Power Output		+36.0		dBm
Gain	32.0	33.0		dB
Gain Flatness		3.0		± dB
Input Return Loss	-12	-15		dB
Operating Voltage	+10	+12	+14	VDC
Current Draw		1.6	2.0	A
Tx / Rx Switching Time			2.0	uS
RX SPECIFICATIONS				
PARAMETER	MIN	TYP.	MAX	UNIT
P1dB Power Output		+12.0		dBm
Gain	33.0			dB
Gain Flatness		2.0		± dB
Noise Figure		3.0		dB
Input Return Loss		-10		dB
Current Draw		200.0		mA

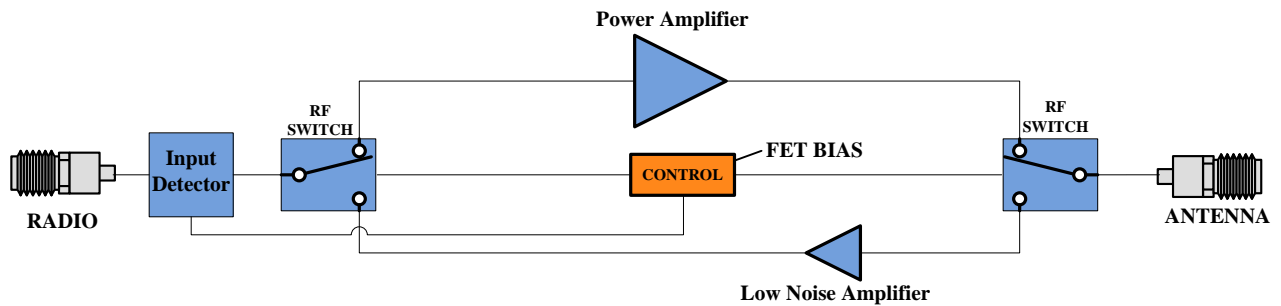
MECHANICAL			
PARAMETER	VALUE		UNIT
Dimensions (L x W x H)	3.645 x 3.48 x 0.506		in
RF Connectors (Input / Output)	MMCX / MMCX		--
DC / Control Connector	Rectangular Locking		--
Cooling	Baseplate Conduction - Optional Heatsink Available		--
Mounting	4-40 Through Holes		--
Weight	5		oz.
ENVIRONMENTAL / PROTECTIONS			
PARAMETER	MIN	MAX	UNIT
Operating Temperature (Housing Temp.)	-40	+85	°C
Humidity Range	0-95		%
Altitude	0-30,000		ft.
Shock / Vibration	MIL-STD-810 and equivalents		--
Max RF Input	5		dBm
PA Baseplate Shutoff Temperature	+85		°C

INPUT/OUTPUT PINS		
AMPLIFIER CONNECTOR TYPE:	RECTANGULAR LOCKING	
TRIAD CABLE PART NUMBER:	CBL74	
PIN LABEL	NAME	DESCRIPTION
1	+VDC	Supply Voltage
2	+VDC	Supply Vplitude
3	TEMP	Temperature Monitor: Temp in DegC = (Vout - 0.5V) *100
4	GND	Ground
5	GND	Ground
6-9	I/O	PA State Control Lines
10	SGND	Signal Ground

802-11G (20 MHz BW) DATA RATE VS. OUTPUT POWER			
OFDM MODULATION	DATA RATE	POUT (W) MIN.	EVM
64QAM	54 Mbps	1	≤ -27 dB
16QAM	36 Mbps	2	≤ -21 dB
QPSK	12 Mbps	2	≤ -15 dB
BPSK	9 Mbps	3	≤ -7 dB

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

High-Level Block Diagram

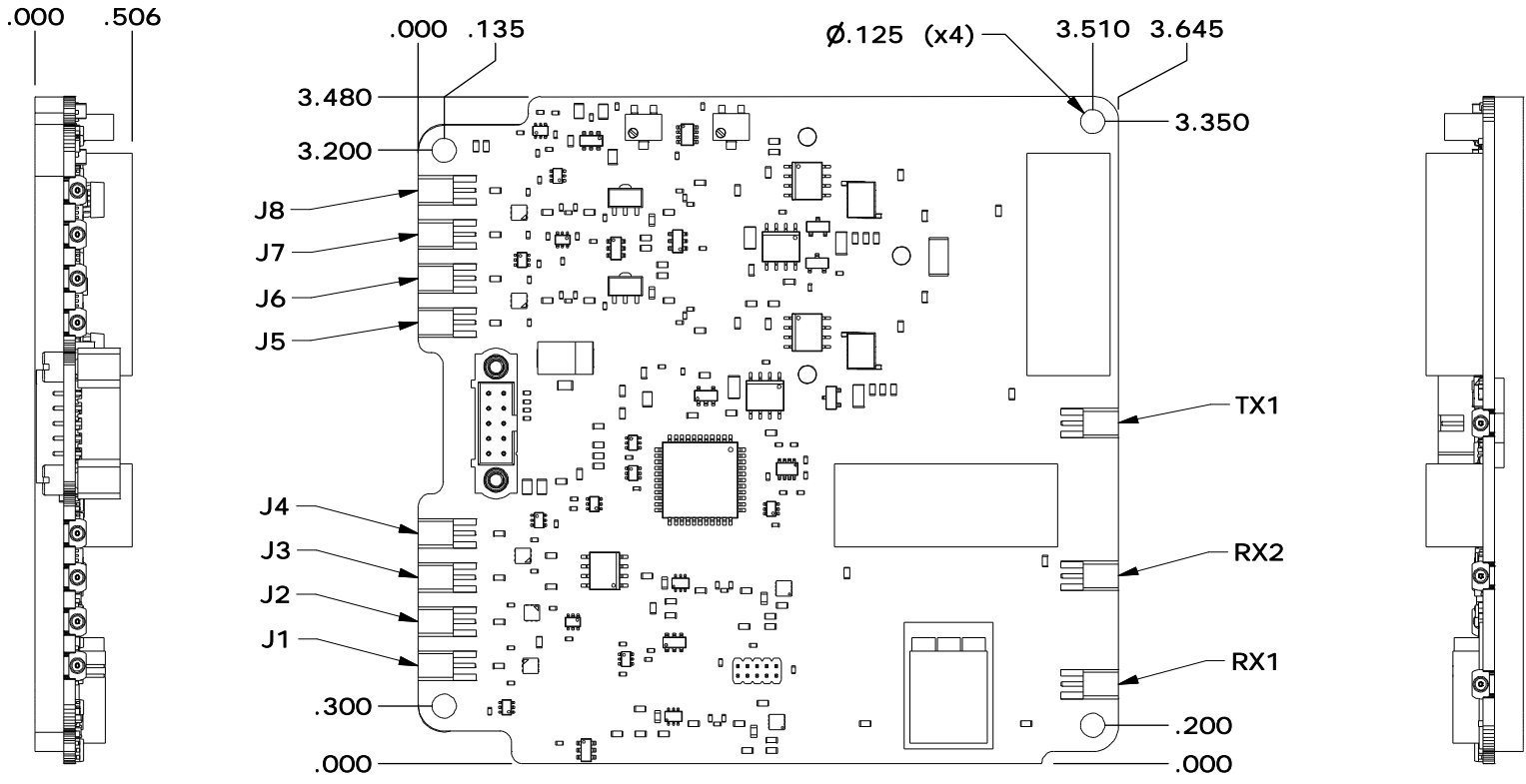


Amplifier Options	
Suffix	Description
D01	Automatic Tx/Rx Switching
D02	Manual Tx/Rx Switching
DXX	Custom Amplifier Configuration (issued by Triad upon customer request)

Heat Sink Options	
Suffix	Description
(none)	No Heat Sink Included
HS	Standard Heat Sink
HSF	Heat Sink with Integrated Cooling Fan
HSX	Custom Heat Sink Configuration

Please confirm with Triad that the desired configuration is available prior to ordering.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
O	INITIAL RELEASE	3/28/19	DMC



DRAWN	DMC	3/29/2019
DESIGNED	DMC	3/8/2019
CHECKED	DMC	3/29/2019
ENG APPROVED	DMC	3/29/2019
MFG APPROVED	DMC	3/29/2019

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



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OUTLINE DRAWING OL_209

SIZE	DWG NO.	REV
A	OL_209	O
SCALE: NONE	CAGE CODE 67DZ3	SHEET 1 OF 1