

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

- Under Voltage Protection
- Over-Temperature Protection
- Amplifier Status Output
- Temp. Monitor Output
- Manual or Automatic Tx/Rx Switching Available
- Internal Bypass Relay

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	3550		3700	MHz
PSat Power Output		+40.0		dBm
Gain		25.0		dB
Gain Flatness		1.0		± dB
Input Return Loss	-15			dB
Operating Voltage	+10	+28	+30	VDC
Tx / Rx Switching Time		1.0	2.0	uS

Rx SPECIFICATIONS				
PARAMETER	MIN	TYP.	MAX	UNIT
P1dB Power Output		+5.0		dBm
Gain		10.0		dB
Gain Flatness			1.0	± dB
Noise Figure		2.5		dB
OIP3		+15.0		dBm
Input Return Loss	-10			dB
Current Draw		100.0		mA

MECHANICAL		
PARAMETER	VALUE	UNIT
Dimensions (L x W x H)	2.3 x 2.3 x 0.45	in
RF Connectors (Input / Output)	SMP / SMP	--
DC / Control Connector	12 Pin Rectangular Locking	--
Cooling	Baseplate Conduction - Optional Heatsink Available	--
Mounting	4-40 Thru Holes	--
Weight	3	oz.
Weight With Heatsink	0	oz.

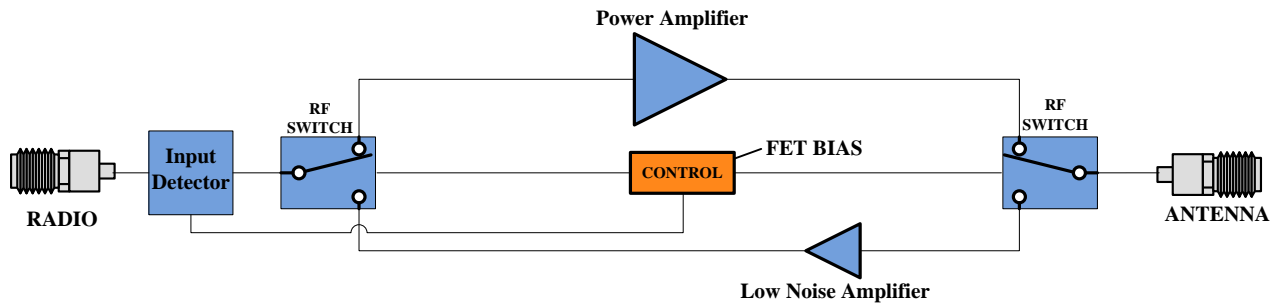
ENVIRONMENTAL / PROTECTIONS			
PARAMETER	MIN	MAX	UNIT
Operating Temperature (Housing Temp.)	-40	+85	°C
Humidity Range	0-95		%
Altitude	0-30,000		ft.
Shock / Vibration	MIL-STD-810 and equivalents		--
Max RF Input	17		dBm
PA Baseplate Shutoff Temperature	+85		°C

INPUT/OUTPUT PINS				
AMPLIFIER CONNECTOR TYPE:		12 PIN RECTANGULAR LOCKING		
TRIAD CABLE PART NUMBER:		CBL64		
PIN LABEL	NAME	DESCRIPTION	TYPE	LEVEL
1,3,5	GND	Ground	--	--
2	STATUS 1	BDA Operational State - TTL High = Tx Amp Active, TTL Low = Rx Amp Active	Output	5V TTL
6	TEMP	Temp Monitor: Temp in DegC = (Vout - 0.5V) * 100	Output	Analog
7	STATUS 2	BDA Status - TTL High = Normal Operation, TTL Low = Error Condition	Output	5V TTL
9	BYPASS	Bypass Control: TTL High or Open: Amplifier Mode, GND: Bypass	Input	5V TTL
11	Tx/Rx	Tx/Rx Switching - TTL High = Tx Amp Enabled, TTL = Rx Amp Enabled	Input	5V TTL
8,10,12	VDC	Supply Voltage - Range Specified in Datasheet	Power	--

802-11G (20 MHz BW) DATA RATE VS. OUTPUT POWER			
OFDM MODULATION	DATA RATE	POUT (W) MIN.	EVM
64QAM	54 Mbps	2	≤ -27 dB
16QAM	36 Mbps	4	≤ -21 dB
QPSK	12 Mbps	6	≤ -15 dB
BPSK	9 Mbps	10	≤ -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
TTRMXXXX	- 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

