

Features

- Wideband Solid State Power Amplifier
- Gain: 33dB Typical
- Psat: +32dBm Typical
- Supply Voltage: +15V



Typical Applications

- Wireless Infrastructure
- RF Microwave and Vsat
- Test Instrumentation

Short Haul / High Capacity Links
Military & Aerospace Applications

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	1-30			30-45			GHz
Gain		35			30		dB
Gain Flatness		± 4			± 7		dB
Gain Variation Over Temperature (-45 ~ +85)		± 3			± 3		dB
Input Return Loss		10			8		dB
Output Return Loss		12			8		dB
Output 1dB Compression Point (P1dB)		31			28		dBm
Saturated Output Power (Psat)		32			29		dBm
Isolation S12		-65			-65		dB
Supply Current (Vcc=+15V)		1000	1200		1000	1200	mA
Input Max Power (No damage)	Psat – Gain						dBm

Weight	41 ounces	Impedance	50ohms
Input / Output Connectors	2.92mm-Female	Material	Aluminum / Copper
Finishing	Standard: Gold 40 micron; Nickel 220 micron thickness	Package Sealing	Epoxy Sealing (Standard)
	Option: Gold 80 micron; Nickel 180 micron thickness		Hermetically Sealed (Option with extra charge)

QOTANA TECHNOLOGIES

1.6W Ultra Wide Band Power Amplifier 1GHz~45GHz

Absolute Maximum Ratings

Operating Voltage	+18V
RF Input Power	Psat-Gain

Note: Maximum RF input power is set to assure safety of amplifier. Input power may be increased at own risk to achieve full power of amplifier. Please reference gain and power curves.

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output with 50 Ohm source/load. (in band VSWR<1.9:1 or >10dB return loss)
Step 3	Connect +15V

Power OFF Procedure

Step 1	Turn Off +15V
Step 2	Remove RF Connection
Step 3	Remove Ground

Environmental Specifications

Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45°C~+55°C (Case Temperature less than 85C)
Storage Temperature		-50°C~+125°C
Thermal Shock		1 Hour@ -45°C → 1 Hour @ +85°C (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature +85°C for 72 Hours
Shock		1. Weight >20g, 50g half sine wave for 11ms, Speed variation 3.44m/s 2. Weight <=20g, 100g Half sine wave for 6ms, Speed variation 3.75m/s 3. Total 18 times (6 directions, 3 repetitions per direction).
Altitude	MIL-STD-883	Standard: 30,000 Ft (Epoxy Sealed Controlled Environment) Optional: Hermetically Sealed (60,000 ft. 1.0 PSI min)
Hermetically Sealed (Optional)		MIL-STD-883 (For Hermetically Sealed Units)

Note: The operating temperature for the unit is specified at the package base. It is the user's responsibility to ensure the part is in an environment capable of maintaining the temperature within the specified limits

Outline Drawing:

All Dimensions in mm (inches)

Heat Sink required during operation(Sold Separately)

