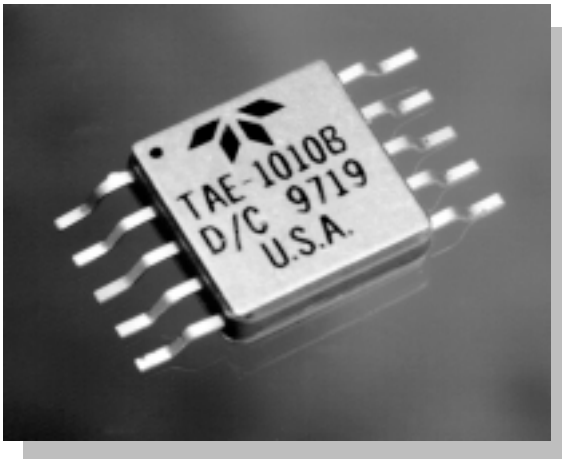
TAE-1010AB
2.45 GHz GaAs MMIC
ISM Band Power Amplifier



Features

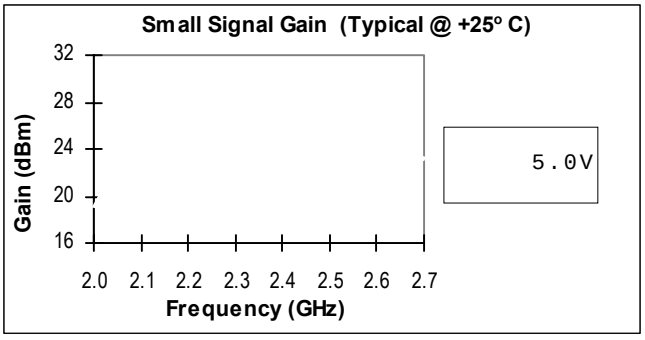
- +24dBm Output Power @ 1dB Gain Compression
- 25 dB Gain
- Low Voltage Operation
- Surface Mount Molly-Copper Package

Product Description

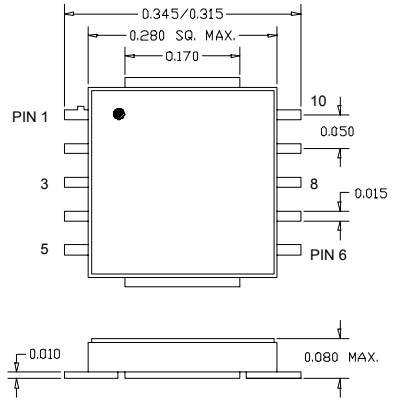
The TAE-1010AB is a 3 stage GaAs MMIC MESFET power amplifier for 2.45 GHz ISM applications. It offers excellent linearity, operating at 5V with excellent power and gain performance and is housed in a small surface mount package.

Electrical Specifications *(All Specifications at 25°C, V_d = +7.0V, I_d = 600 mA)*

Parameter	Symbol	Min	Typical	Units
Operating Frequency	F_{OP}	-	2.45	GHz
Output Power @ 1dB Gain Compression	P_{-1dB}	24	25.0	dBm
Small Signal Gain	S_{21}	25	28.0	dB
Thermal Resistance	-	-	18.0	°C/W
VSWR	-	-	1.6:1	-
Current Small Signal Gain	-	-	200	mA
Gate Voltage	-	-	-1.2	Volt

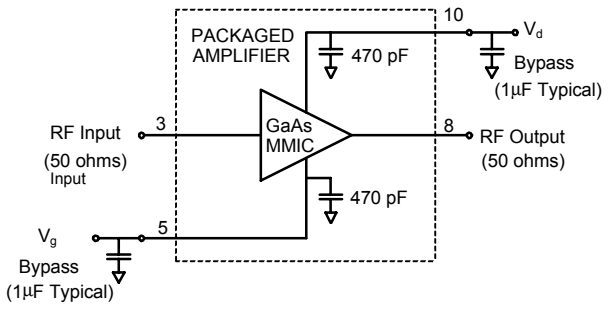


Package Outline



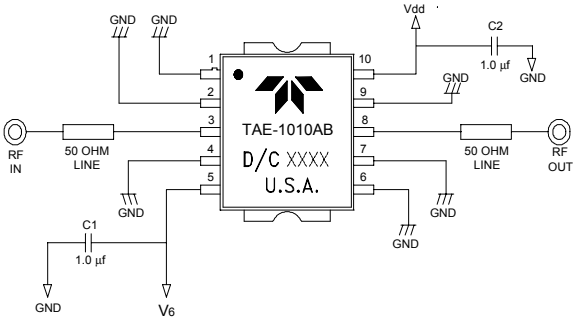
Tolerance: .XXX ±0.005

Typical Biasing Configuration

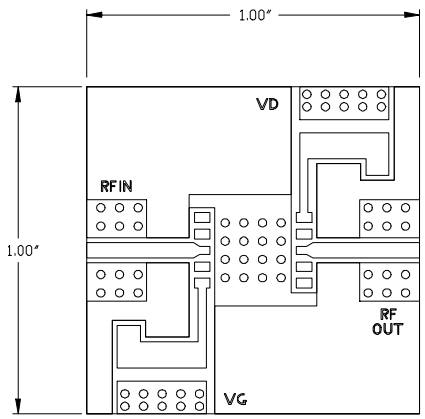


External Components Required:
Bypass Capacitors: 1µ F, typical
50 Ohm microsrtip interface

Evaluation Circuit



Evaluation Board



Notes

1. Dual bias supply required. Normal bias (50% IDSS) is 500mA at +5 Volts on V_d with approximately -1 Volt on V_g.
2. DC supply sequencing or protection circuitry not included. User must supply sufficient negative bias to V_g before applying positive bias to V_d to prevent damage to amplifier.
3. The bias point is set by V_g for a given V_d and can be varied to obtain lower DC current levels and improved efficiency.
4. A 470 pF DC supply line decoupling capacitor is included on both V_d and V_g lines. Additional external capacitance may be required (see typical biasing configuration shown above).
5. The unit must be soldered to DC and RF ground for best results.
6. Pin numbers indicated on outline drawing are for user information only. Units are not labeled with pin numbers.