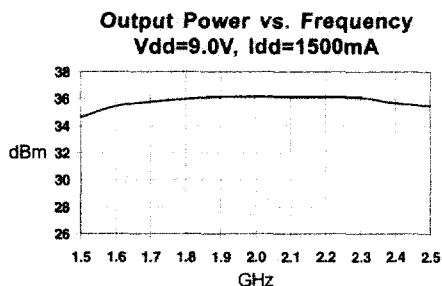


Product Description

Stanford Microdevices' SMM-280-2 is a gallium arsenide monolithic-microwave-integrated circuit (MMIC) amplifier housed in a copper-tungsten package for efficient heat transfer.

Designed for operation in wireless systems operating in the 1.5-2.7 GHz frequency range, this amplifier has 24dB of gain and +33dBm of output power at P1dB.

This 3-stage amplifier's output third-order intercept point is typically +43dBm when biased at 9 volts and 1.5 amps.



SMM-280-2

1.5-2.7 GHz, 2 Watt GaAs MMIC Amplifier



Product Features

- 24dB Gain and +33dBm Output Power
- High Third Order Intercept, +43dBm Typ.
- High Power Added Efficiency
- Low VSWR, 1.7:1 Typ.
- Copper/Tungsten Package

Applications

- Power Amplifier for Wireless Systems

High Power MMICs

Electrical Specifications at Ta = 25C

Symbol	Parameters	Test Condition	Units	Min.	Typ.	Max.
P_{1dB}	Output Power at 1dB Compression: Vdd = 9.0V, Idd = 1500mA	f = 1.8-2.4 GHz f = 1.5-2.7 GHz	dBm	33	33.5 33	
G_{1dB}	Gain at P1dB Compression: Vdd = 9.0V, Idd = 1500mA	f = 1.8-2.4 GHz f = 1.5-2.7 GHz	dB	21 18	24	
P_{SAT}	Saturated Power Output: Vdd = 9.0V, Idd = 1500mA	f = 1.8-2.4 GHz f = 1.5-2.7 GHz	dBm		34 33.5	
VSWR	Input and Output		-		1.7:1	
IP_3	Output 3rd Order Intermodulation Point: Vdd = 9.0V, Idd = 1500mA	f = 1.5-2.7 GHz	dBm		43	
PAE	Power Added Efficiency: Vdd = 9.0V, Idd = 1500mA	f = 1.5-2.7 GHz	%	15	20	

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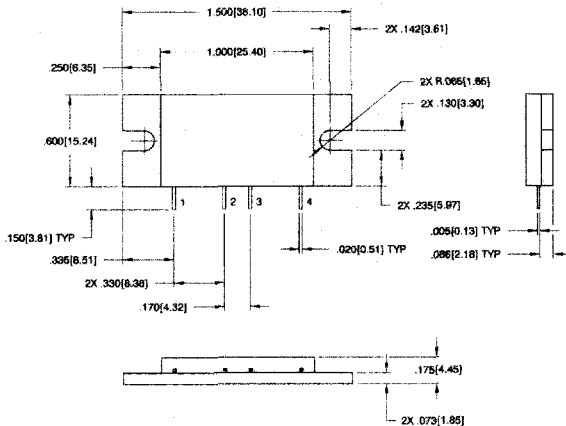
SMM-280-2 1.5-2.7 GHz 2 Watt GaAs MMIC Amplifier

Absolute Maximum Ratings

Parameter	Absolute Maximum
Positive Supply Voltage (V+)	+12V
Positive Supply Current (I+)	1800mA
Negative Supply Voltage (V-)	-10V
RF Input Power (Pin)	500mW
Operating Temperature	-45C to +85C
Storage Temperature	-65C to +150C

Notes:

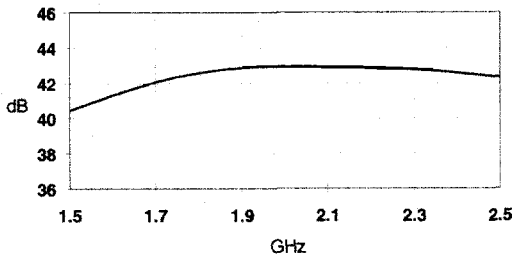
1. Operation of this device above any one of these parameters may cause permanent damage.
2. Mounting Surface Temperature = 25° C



Pin Designation	
1	RF out
2	Vd = +9V
3	Vg = -5V
4	RF in

High Power MMICs

Gain vs. Frequency
Vds= 9.0V, Ids= 1500mA



Output Third Order Intercept vs. Frequency
Vds=9.0V, Ids= 1500mA

