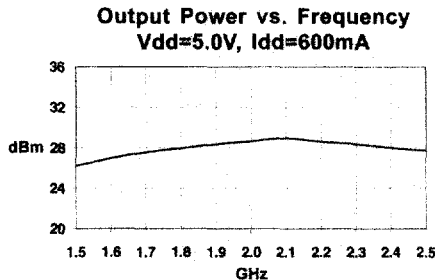


Product Description

Stanford Microdevices' SMM-208 is a gallium arsenide monolithic-microwave-integrated circuit (MMIC) amplifier housed in a low cost, surface-mountable ceramic package. Designed for operation in wireless systems operating in the 1.5 to 2.5 GHz frequency range, this amplifier has 25dB of gain with +28dBm of output power at mid-band with proper heat-sinking.

The SMM-208 will operate with supply voltages as low as 3 volts, making it suitable for use in portables.

Also available in die form, its small size (2.0 x 1.5mm), makes it suitable for use on thin and thick film circuits. Proven gold-based metallization and die passivation add to the reliability and durability of this device.



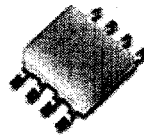
Electrical Specifications at Ta = 25C

Symbol	Parameter	Units	Typ	Min	Max
P _{1dB}	Output Power at 1dB Compression: V _{ds} = 5.0V, I _{ds} = 600mA	f = 2.0 GHz f = 2.4 GHz	dBm	27	28 27
G _A	Associated Power Gain V _{ds} = 5.0V, I _{ds} = 600mA	f = 2.0 GHz f = 2.4 GHz	dB	25	27 24
P _{SAT}	Saturated Output Power V _{ds} = 5.0V, I _{ds} = 600mA	f = 2.0 GHz f = 2.4 GHz	dBm	30	31 29
P _{1dB}	Output Power at 1dB Compression: V _{ds} = 3.0V, I _{ds} = 400mA	f = 2.0 GHz f = 2.4 GHz	dBm	24	25 24
G _A	Associated Power Gain V _{ds} = 3.0V, I _{ds} = 400mA	f = 2.0 GHz f = 2.4 GHz	dB	21	23 22
PAE	Power Added Efficiency V _{ds} = 5.0V, I _{ds} = 600mA		%	20	25
VSWR	Input and Output		-		2:1
IP ₃	Output 3rd Order Intermodulation Point V _{ds} = 5.0V, I _{ds} = 600mA	f = 2.0 GHz	dBm	37	38

The information provided herein is believed to be reliable at press time. Stanford Microdevices assumes no responsibility for inaccuracies or omissions. Stanford Microdevices assumes no responsibility for the use of this information, and all such information shall be entirely at the user's own risk. Prices and specifications are subject to change without notice. No patent rights or licenses to any of the circuits described herein are implied or granted to any third party. Stanford Microdevices does not authorize or warrant any Stanford Microdevices product for use in life-support devices and/or systems.
Copyright 1997 Stanford Microdevices, Inc. All worldwide rights reserved.

SMM-208

1.5-2.5 GHz, 0.8 Watt GaAs MMIC Amplifier



Product Features

- 25dB Gain and +28dBm P_{1dB}
- High Power Added Efficiency
- 5dB Noise Figure
- Characterized at 3 Volts
- Low Cost Surface-Mountable Package

Applications

- 1.9 and 2.4 GHz Wireless Systems
- Portable applications

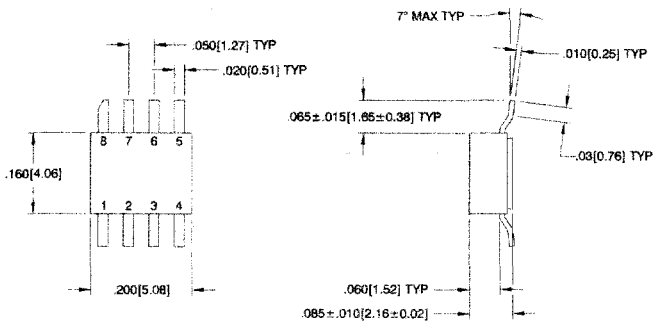
SMM-208 1.5-2.5 GHz 0.8 Watt GaAs MMIC Amplifier

Absolute Maximum Ratings

Parameter	Absolute Maximum
Positive Supply Voltage (V+)	+10V
Positive Supply Current (I+)	700mA
Negative Supply Voltage (V-)	-10V
RF Input Power (P _{in})	250mW
Operating Temperature	-45C to +85C
Storage Temperature	-65C to +150C

Notes:

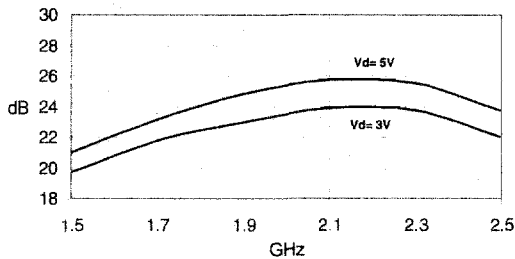
1. Operation of this device above any one of these parameters may cause permanent damage.
2. Mounting Surface Temperature = 25° C



Pin Designation	
1	Ground
2	V _{dd}
3	RF in
4	Ground
5	Ground
6	RF out
7	V _g = -5V
8	Ground

Pin numbers shown for reference only, not marked on part

Gain vs. Frequency
I_{ds}=600mA



Output Third Order Intercept vs. Frequency
V_{ds}=5V, I_{ds}=600mA

