ANADIGICS®

Your GaAs IC Source

Advanced Product Information

2 - 6 GHz MMIC AMPLIFIER

FEATURES	APPLICATIONS
■ 2 - 6 GHz Performance ■ 9.5 dB Gain, 50Ω Input and Output ■ +0.75 dB Gain Flatness ■ +14.5 dBm, Po (1 dB) ■ 1.5:1 Input/Output VSWR ■ Cascadable; On-Chip Bias Circuitry ■ Single Supply Operation ■ GaAs Monolithic Chip for Use in Hybrids	■ EW Systems ■ General Purpose Gain Block ■ Instrumentation ■ Expendable Jammers ■ Radar and Telecommunication Systems

Electrical Characteristics (1) (T_A = 25°C; R_S = R_L = 50Ω; V_{DD} = +5V)

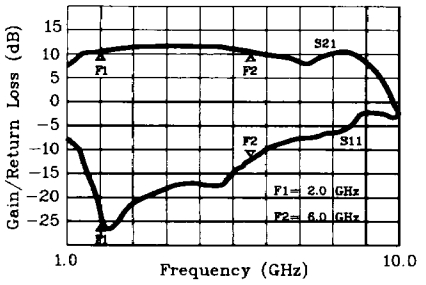
PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Gain	f = 2 to 6 GHz, 1 GHz STEPS; P_{IN} = 0 dBm	8.5	9.5		dB
Gain Flatness	f = 2 to 6 GHz; P_{IN} = 0 dBm		+0.75		dB
Gain Variation Over Temperature	Tcase = -55°C to +125°C; P_{IN} = 0 dBm		0.022		dB/°C
Noise Figure	f = 2 to 6 GHz		6.0		dB
Gain Control Range	f = 2 to 6 GHz; V_{AGC} = 0 to -2V		5.0		dB
Output Power	f = 2 to 6 GHz; at 1 dB Gain Compression		+14.5		dBm
Reverse Isolation	f = 2 to 6 GHz		30		dB
Input VSWR	f = 2 to 6 GHz, 1 GHz STEPS; P_{IN} = 0 dBm		1.5:1	2:1	---
Output VSWR	f = 2 to 6 GHz		1.5:1		---
Supply Current	V_{DD} = +5V	60	100	130	mA

MAXIMUM RATINGS

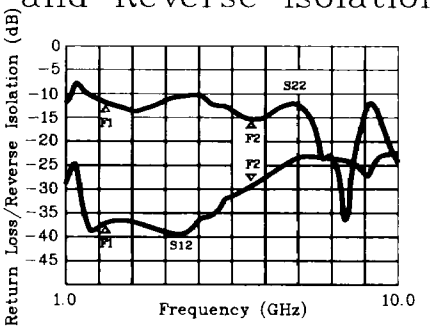
Supply Voltage Range (V_{DD})	+2.5V to +7V
Input Power	+20 dBm
Power Dissipation	1W
Operating Case Temperature (1)	-55°C to +125°C
Storage Temperature	-65°C to +150°C
Current Through Pins 1& 4	150 mA

(1) Case bottom is RF ground. The AWA20601F1 should be attached to a thermally conductive surface.

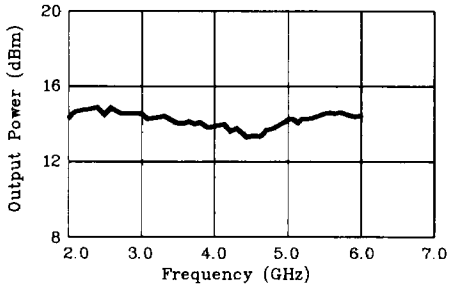
Gain and Input Return Loss



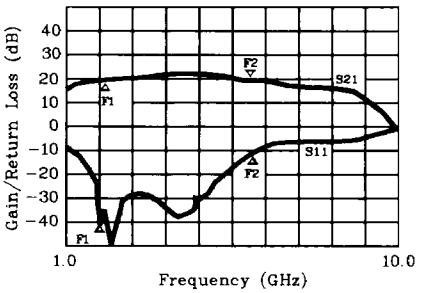
Output Return Loss and Reverse Isolation

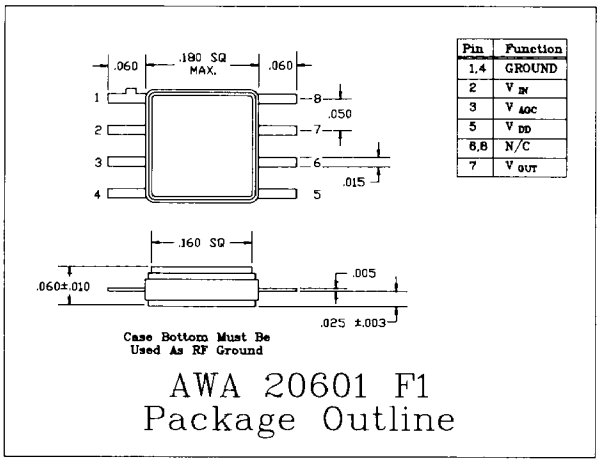


Output Power (at 1 dB Gain Compression)

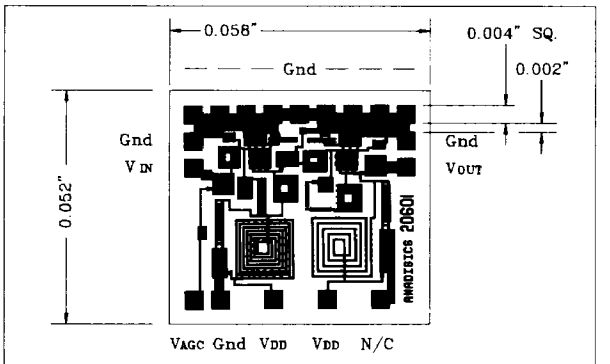


Cascaded AWA 20601D1

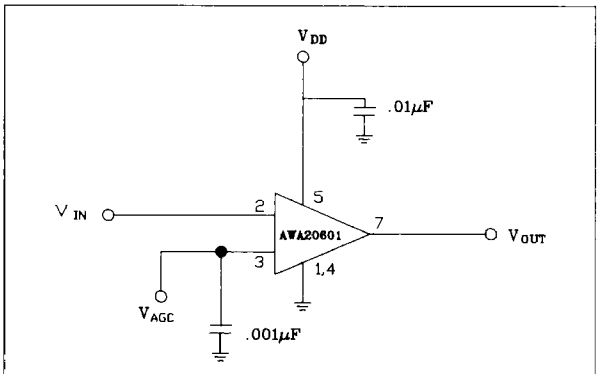




AWA 20601 F1
Package Outline



AWA 20601D1
Bond Pad Locations



AWA 20601 Test Circuit

ANADIGICS reserves the right to make changes in specifications without notice.

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