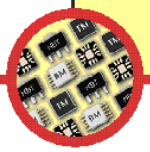
High Power Amplifier Module
30 – 500MHz, 26dB, 125 Watts

AM000551SF-2H
April 2010
Rev 3



DESCRIPTION

AM000551SF-2H is a Broadband High Power Amplifier designed for high power RF applications. It operates from 30MHz to 500MHz and typically delivers 51dBm CW output power and 28dB small signal gain. The amplifier module has an Aluminum heat-sink attachment.

FEATURES

- Broadband design from 30 to 500MHz
- High Gain and High Power, P_{SAT} = 51dBm, Gain = 28dB
- +28VDC Single Bias.

APPLICATIONS

- TV, FM Broadcasting
- Broadband Radio
- Test Bench Amplifier

PERFORMANCE* (Vds = +28V, I_{dq} = 1.4A, T_a = 25°C)

Parameters	Minimum	Typical	Maximum
Frequency		30 – 500MHz	
Gain (Small signal)	23dB	28dB	33dB
Gain Ripple		± 2.5dB	± 4dB
P_{sat}	49dBm	51 dBm	
Efficiency	35%	40%	
Input VSWR		3:1	4:1
Output VSWR		3:1	5:1
Thermal Resistance (Device Junction to Housing)		0.6°C/W	

ABSOLUTE MAXIMUM RATING

Parameters	Symbol	Rating
Drain to Source voltage	V_{ds}	50V
Gate to Source voltage	V_{gs}	15V
Drain source current	I_{ds}	23A
Continuous dissipation at room temperature	P_t	440W
Channel temperature	T_{ch}	200°C
Storage temperature	T_{sto}	-60°C to +150°C

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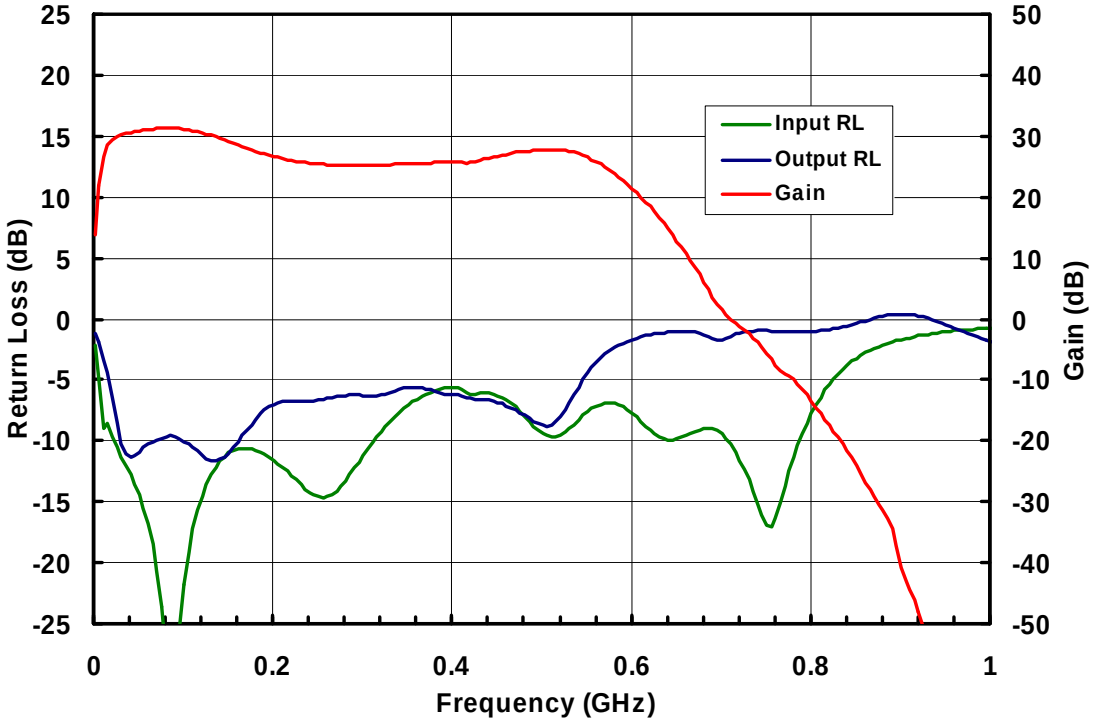
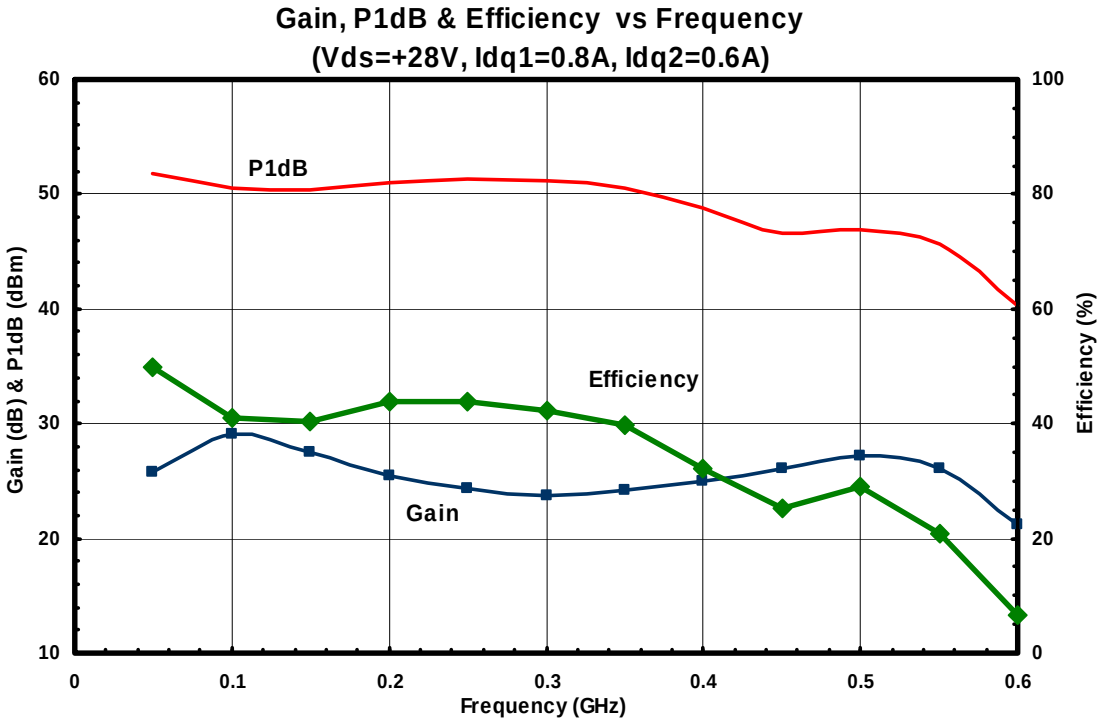
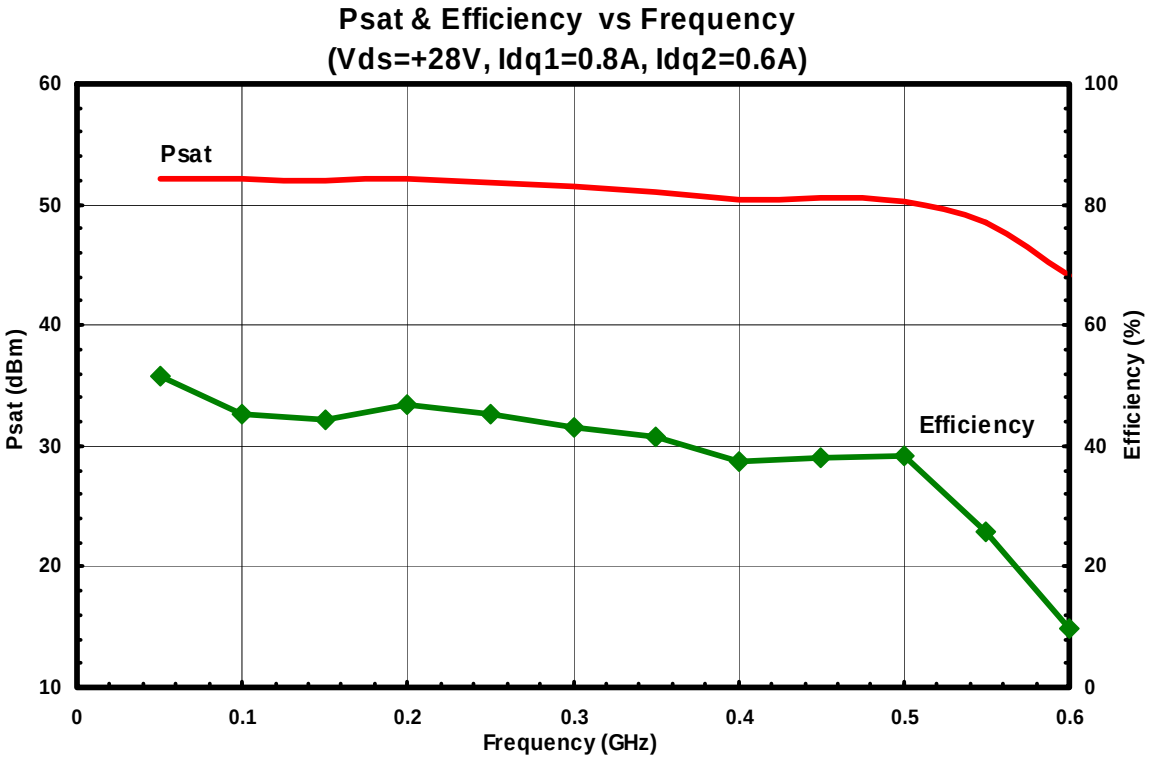
SMALL SIGNAL DATA (V_{ds}= +28V, I_{dq1}=0.8A, I_{dq2}=0.6A, T_a=25°C)



POWER DATA (V_{ds}= +28V, I_{dq}=1.4A, T_a=25°C)




Psat & Efficiency vs Frequency
(Vds=+28V, Idq1=0.8A, Idq2=0.6A)
Psat
Efficiency
Psat (dBm)
Efficiency (%)
Frequency (GHz)
60
50
40
30
20
10
100
80
60
40
20
0
0
0.1
0.2
0.3
0.4
0.5
0.6

PACKAGE OUTLINE