MHW593

CASE 714-02

WIDEBAND HYBRID AMPLIFIER

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Supply Voltage	V_{DC}	16	Vdc
Input Power	P_{in}	3.0	dBm
Operating Case Temperature Range	T_C	−20 to +90	°C
Storage Temperature Range	T_{stg}	−40 to +100	°C

ELECTRICAL CHARACTERISTICS (V_{DC} = 13.6 Vdc, Z_o = 50 Ω, T_C = 25°C. All characteristics guaranteed over bandwidth listed under "Frequency Range," unless specified otherwise.)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	10	—	400	MHz
Power Gain	G_p	33	34.5	36	dB
Gain Flatness	F	—	—	±1.0	dB
Voltage Standing Wave Ratio, In/Out	VSWR				—
(f = 10–300 MHz)		—	1.5:1	—	
(f = 300–400 MHz)		—	2:1	—	
1 dB Compression	P1				mW
(f = 10 MHz)		—	600	—	
(f = 200 MHz)		500	600	—	
(f = 400 MHz)		—	200	—	
Reverse Isolation	P_{RI}	45	50	—	dB
2nd Harmonic (P_{out} = 10 mW)	d_{so}	—	−55	—	dB
Third Order Intercept	I_{TO}	—	38	—	dBm
Peak Envelope Power for −32 dB Distortion	PEP	—	300	—	mW
Noise Figure	NF				dB
(f = 60 MHz)		—	3.7	—	
(f = 300 MHz)		—	4.0	5.5	
DC Voltage	V_{DC}	—	13.6	16	V
DC Current	I_{DC}	—	300	340	mA

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FIGURE 1 – POWER GAIN AND RETURN LOSS versus FREQUENCY

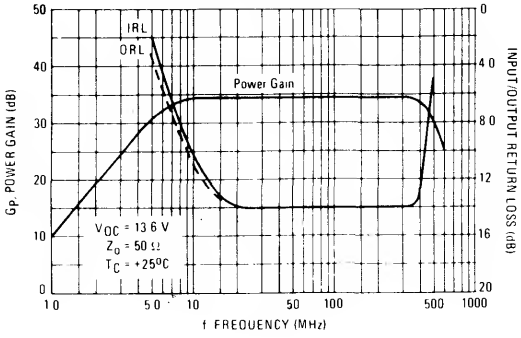


FIGURE 2 – POWER GAIN versus FREQUENCY

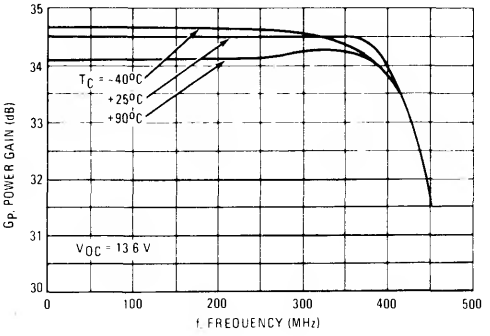


FIGURE 3 – POWER GAIN versus SUPPLY VOLTAGE

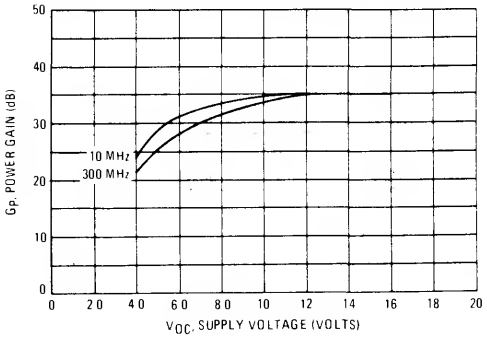


FIGURE 4 – NOISE FIGURE versus SUPPLY VOLTAGE

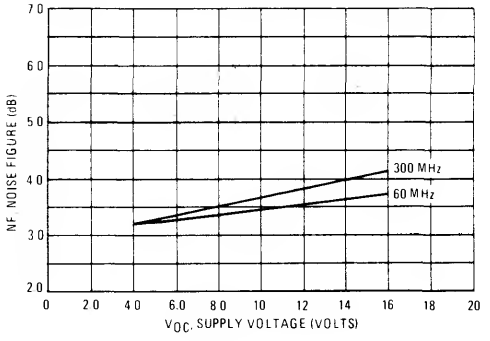


FIGURE 5 – OUTPUT POWER versus INPUT POWER

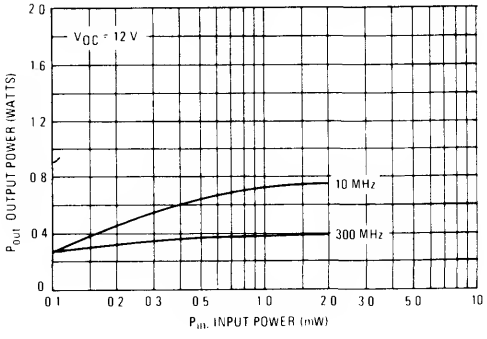


FIGURE 6 – OUTPUT POWER versus INPUT POWER

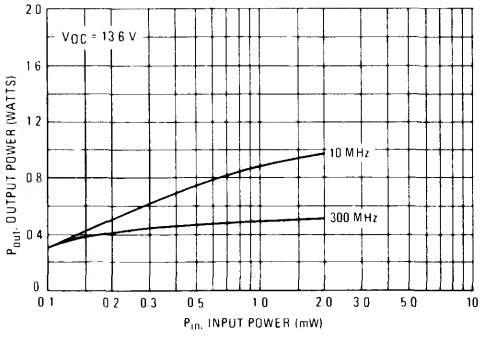


FIGURE 7 – INTERMODULATION DISTORTION – THIRD ORDER versus OUTPUT POWER

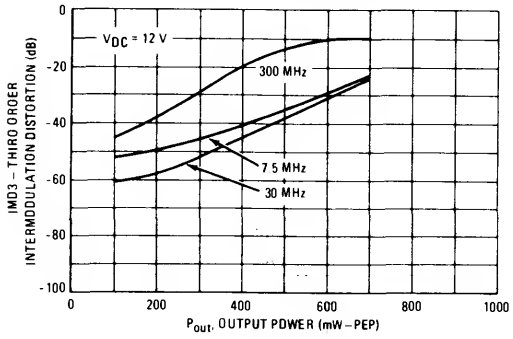


FIGURE 8 – INTERMODULATION DISTORTION – FIFTH ORDER versus OUTPUT POWER

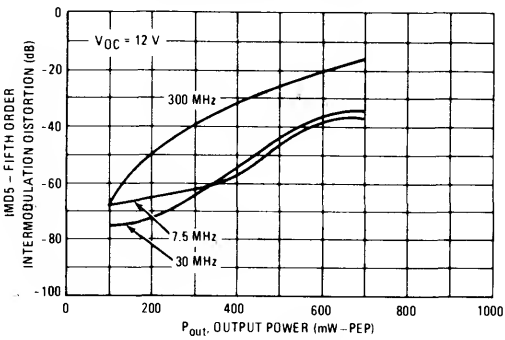


FIGURE 9 – INTERMODULATION DISTORTION – THIRD ORDER versus OUTPUT POWER

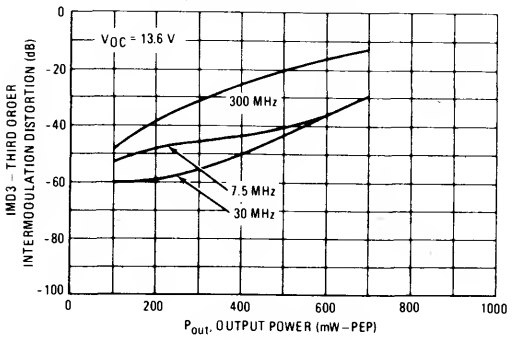


FIGURE 10 – INTERMODULATION DISTORTION – FIFTH ORDER versus OUTPUT POWER

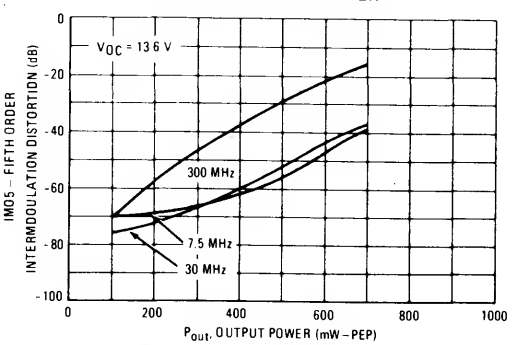
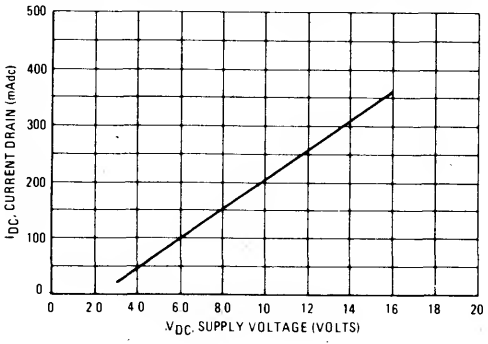


FIGURE 11 – DC CURRENT DRAIN versus SUPPLY VOLTAGE



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