MHW5225
MHW5225R

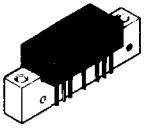
22 dB GAIN
450 MHz
60-CHANNEL
CATV AMPLIFIERS

The RF Line

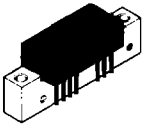
High Output Doubler 450 MHz CATV Amplifiers

. . . designed specifically for 450 MHz CATV applications. Features ion-implanted arsenic emitter transistors with 6.0 to 8.0 GHz f_T and an all gold metallization system.

- Both +24 V (MHW5225) and −24 V (MHW5225R) Supply Voltage
- 4th Generation Die Technology
- Specified for 60-Channel Performance
- Broadband Power Gain — @ f = 40–450 MHz
  G_p = 22 dB (Typ) @ 50 MHz
  23 dB (Typ) @ 450 MHz
- Broadband Noise Figure
  NF = 4.5 dB (Typ)
- Improvement in Distortion Over Conventional Hybrids
- Allows Higher Output Level Operation



CASE 714-04, STYLE 1
MHW5225



CASE 714C-04, STYLE 1
MHW5225R

ABSOLUTE MAXIMUM RATINGS

Rating		Symbol	Value	Unit
RF Voltage Input (Single Tone)		V_{in}	+70	dBmV
DC Supply Voltage	MHW5225 MHW5225R	V_{CC}	+28 −28	Vdc
Operating Case Temperature Range		T_C	−20 to +100	°C
Storage Temperature Range		T_{stg}	−40 to +100	°C

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ELECTRICAL CHARACTERISTICS (V_{CC} = 24 Vdc (MHW5225) or −24 V (MHW5225R), T_A = + 25°C, 75 Ω system unless otherwise noted)

Characteristic		Symbol	Min	Typ	Max	Unit
Frequency Range		BW	40	—	450	MHz
Power Gain	50 MHz 450 MHz	G_p	21.4 22.3	22.0 23.0	22.6 23.7	dB
Slope		S	0.3	1.0	1.8	dB
Gain Flatness (Peak To Valley)		—	—	.25	.5	dB
Return Loss — Input/Output (Z_O = 75 Ohms)	40–450 MHz	IRL/ORL	18	—	—	dB
Second Order Intermodulation Distortion (V_{out} = +46 dBmV per ch., Ch 2, M13, M22)		IMD	—	−74	−69	dB
Cross Modulation Distortion (V_{out} = + 46 dBmV per ch.)	60-Channel FLAT	XMD_{60}	—	−67	−60	dB
Composite Triple Beat (V_{out} = + 46 dBmV per ch.)	60-Channel FLAT	CTB_{60}	—	−65	−62	dB
Noise Figure	450 MHz	NF	—	4.5	6.0	dB
DC Current	MHW5225 MHW5225R	I_{DC}	— —	415 415	440 440	mA