

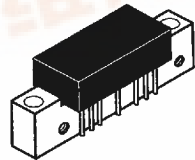
The RF Line 550 MHz CATV Amplifier

... designed specifically for 550 MHz CATV applications. Features ion-implanted arsenic emitter transistors with 7.0 GHz f_T and an all gold metallization system.

- Specified for 77-Channel Performance
- Broadband Power Gain — @ $f = 40-550$ MHz
 $G_p = 12.5$ dB (Typ) @ 50 MHz
 13 dB (Min) @ 550 MHz
- Broadband Noise Figure @ 550 MHz
 $NF = 8.5$ dB (Max)
- Superior Gain, Return Loss and DC Current Stability with Temperature
- All Gold Metallization
- 7.0 GHz Ion-Implanted Transistors

MHW6122

12 dB GAIN
550 MHz
77-CHANNEL
CATV INPUT/OUTPUT
TRUNK AMPLIFIER



CASE 714-06, STYLE 1

ABSOLUTE MAXIMUM RATINGS

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

ELECTRICAL CHARACTERISTICS ($V_{CC} = 24$ Vdc, $T_C = +30^\circ\text{C}$, 75 Ω system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	550	MHz
Power Gain — 50 MHz	G_p	12	12.5	13	dB
Power Gain — 550 MHz	G_p	12.5	—	—	dB
Slope	S	0.2	—	1.5	dB
Gain Flatness (Peak To Valley)	—	—	0.2	0.4	dB
Return Loss — Input/Output ($Z_0 = 75$ Ohms)	40-550 MHz IRL/ORL	18	—	—	dB
Second Order Intermodulation Distortion ($V_{out} = +46$ dBmV, Ch 2, M13, M22) ($V_{out} = +44$ dBmV, Ch 2, M30, M39)	IMD	—	—	-72	dB
Cross Modulation Distortion ($V_{out} = +46$ dBmV) ($V_{out} = +44$ dBmV)	60-Channel FLAT	XMD60	—	-63	dB
	77-Channel FLAT	XMD77	—	-65	-62
Composite Triple Beat ($V_{out} = +46$ dBmV) ($V_{out} = +44$ dBmV)	60-Channel FLAT	CTB60	—	-62	dB
	77-Channel FLAT	CTB77	—	-58	-56
Noise Figure ($f = 550$ MHz)	NF	—	7.0	8.5	dB
DC Current	I_{DC}	—	210	240	mA

