

The RF Line CATV Amplifier Module

Features

- Specified for 77- and 110-Channel Loading
- Excellent Distortion Performance
- Silicon Bipolar Transistor Technology
- Unconditionally Stable Under All Load Conditions

Applications

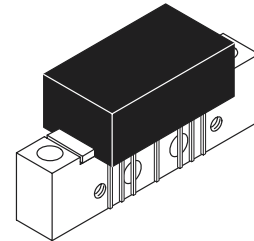
- CATV Systems Operating in the 40 to 750 MHz Frequency Range
- Output Stage Amplifier in Optical Nodes, Line Extenders and Trunk Distribution Amplifiers for CATV Systems
- Driver Amplifier in Linear General Purpose Applications

Description

- 24 Vdc Supply, 40 to 750 MHz, CATV Forward Power Doubler Amplifier

MHW7185C

**750 MHz
 19.4 dB GAIN
 110-CHANNEL
 CATV AMPLIFIER**



CASE 714Y-04, STYLE 1

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, $T_C = +30$ °C, 75 Ω system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	750	MHz
Power Gain	G_p	18.3	18.8	19.3	dB
		19	19.4	20	
Slope	S	0	0.4	1.0	dB
Gain Flatness (40-750 MHz, Peak to Valley)	G_F	—	0.3	0.6	dB
Return Loss — Input/Output ($Z_0 = 75$ Ohms)	IRL/ORL				
		19	—	—	dB
		—	—	0.006	dB/MHz
Composite Second Order					dBc
($V_{out} = +44$ dBmV/ch., Worst Case)	CSO_{110}	—	-72	-64	
	CSO_{77}	—	-80	-68	
Cross Modulation Distortion @ Ch 2					dBc
($V_{out} = +44$ dBmV/ch., FM = 55 MHz)	XMD_{110}	—	-66	-63	
	XMD_{77}	—	-70	-68	

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

Characteristic	Symbol	Min	Typ	Max	Unit	
Composite Triple Beat ($V_{out} = +44$ dBmV/ch., Worst Case)	110-Channel FLAT 77-Channel FLAT	CTB ₁₁₀ CTB ₇₇	— —	-64 -71	-62 -69	dBc
Noise Figure	50 MHz 550 MHz 750 MHz	NF	— — —	5.0 5.8 6.2	6.0 — 7.5	dB
DC Current ($V_{DC} = 24$ V, $T_C = 30^\circ\text{C}$)		I_{DC}	365	400	435	mA

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