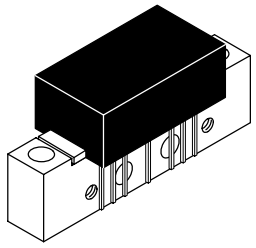
CATV Amplifier Module

MHW9182B

**1000 MHz
19.4 dB GAIN
152-CHANNEL
CATV AMPLIFIER MODULE**



CASE 714Y-04, STYLE 1

Features

- Specified for 110- and 152-Channel Loading
- Excellent Distortion Performance
- Superior Gain, Return Loss and DC Current Stability over Temperature
- Silicon Bipolar Transistor Technology
- Unconditionally Stable Under All Load Conditions

Applications

- CATV Systems Operating in the 40 to 1000 MHz Frequency Range
- Input Stage Amplifier in Optical Nodes, Line Extenders and Trunk Distribution Amplifiers for CATV Systems
- Driver Amplifier in Linear General Purpose Applications
- Output Stage Amplifier on Applications Requiring Low Power Dissipation

Description

- 24 Vdc Supply, 40 to 1000 MHz, CATV Forward Amplifier Module

ARCHIVE INFORMATION

Table 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

Table 2. Electrical Characteristics (V_{CC} = 24 Vdc, T_C = +30°C, 75 Ω system unless otherwise noted)

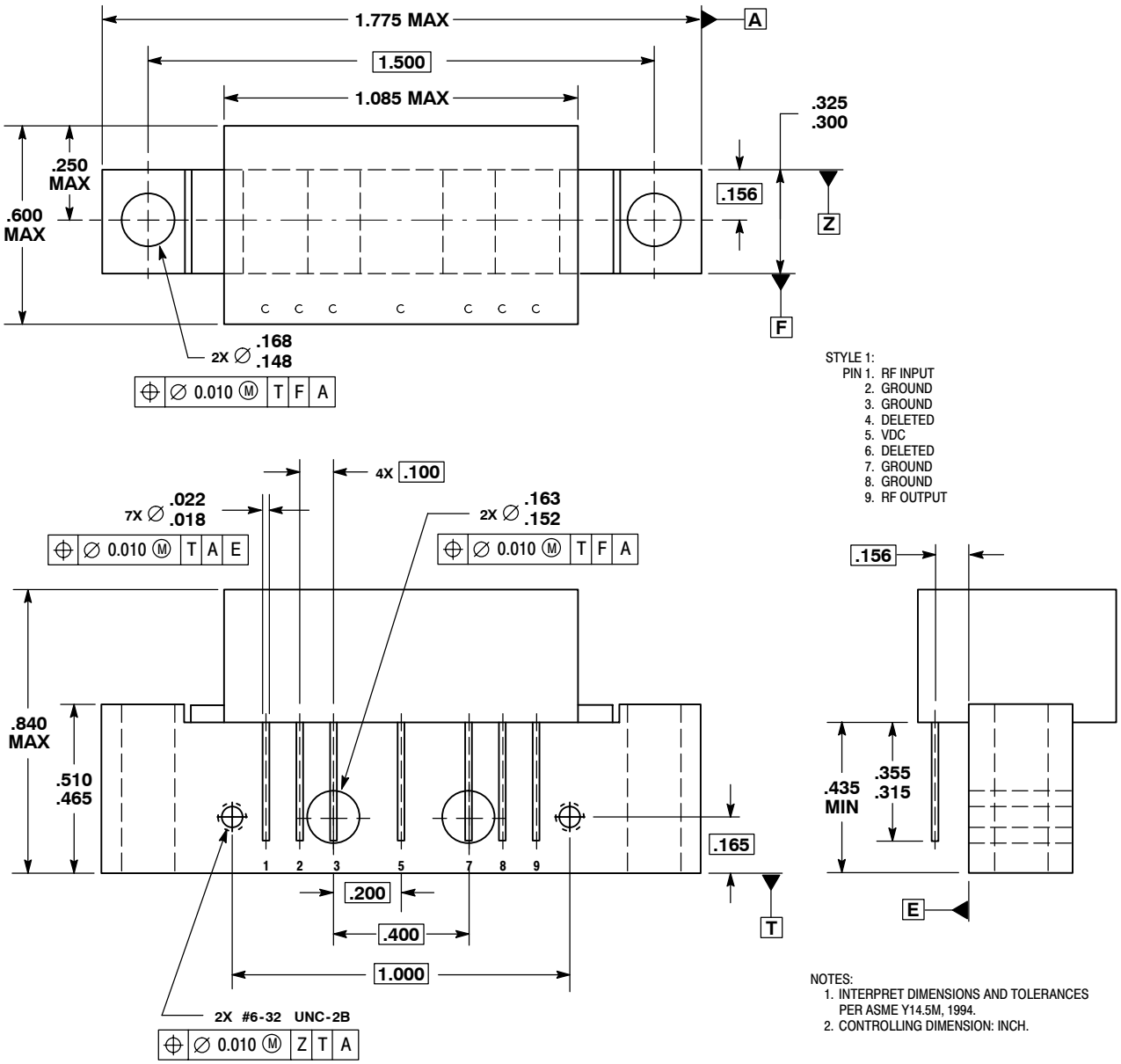
Characteristic		Symbol	Min	Typ	Max	Unit
Frequency Range		BW	40	—	1000	MHz
Power Gain	50 MHz 1000 MHz	G_p	18 18.7	18.5 19.4	19 20.7	dB
Slope	40 - 1000 MHz	S	0.4	0.9	1.4	dB
Gain Flatness (40 - 1000 MHz, Peak to Valley)		G_F	—	0.4	0.8	dB
Return Loss — Input/Output (Z_o = 75 Ohms) @ 40 MHz @ f > 40 MHz (Derate)		IRL/ORL	 20 —	 — —	 — 0.006	 dB dB/MHz
Composite Second Order (V_{out} = +40 dBmV/ch., Worst Case) (V_{out} = +38 dBmV/ch., Worst Case)	 110-Channel FLAT 152-Channel FLAT	 CSO_{110} CSO_{152}	 — —	 70 -69	 -63 -63	dBc

Table 2. Electrical Characteristics (V_{CC} = 24 Vdc, T_C = +30°C, 75 Ω system unless otherwise noted) **(continued)**

Characteristic		Symbol	Min	Typ	Max	Unit
Cross Modulation Distortion @ Ch 2						dBc
(V_{out} = +40 dBmV/ch., FM = 55 MHz)	110-Channel FLAT	XMD_{110}	—	-66	-64	
(V_{out} = +38 dBmV/ch., FM = 55 MHz)	152-Channel FLAT	XMD_{152}	—	-65	-61	
Composite Triple Beat						dBc
(V_{out} = +40 dBmV/ch., Worst Case)	110-Channel FLAT	CTB_{110}	—	-68	-66	
(V_{out} = +38 dBmV/ch., Worst Case)	152-Channel FLAT	CTB_{152}	—	-64	-61	
Noise Figure	50 MHz	NF	—	4.0	5.0	dB
	550 MHz		—	4.5	—	
	860 MHz		—	5.5	—	
	1000 MHz		—	6.0	7.5	
DC Current (V_{DC} = 24 V, T_C = 30°C)		I_{DC}	180	210	240	mA

ARCHIVE INFORMATION

PACKAGE DIMENSIONS



CASE 714Y-04
ISSUE E

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