

The RF Line CATV Amplifier Module

MHW9182B

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

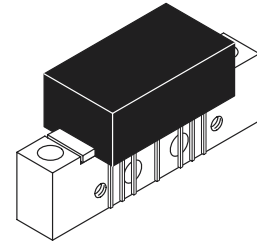
Applications

- 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

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



CASE 714Y-04, STYLE 1

MAXIMUM RATINGS

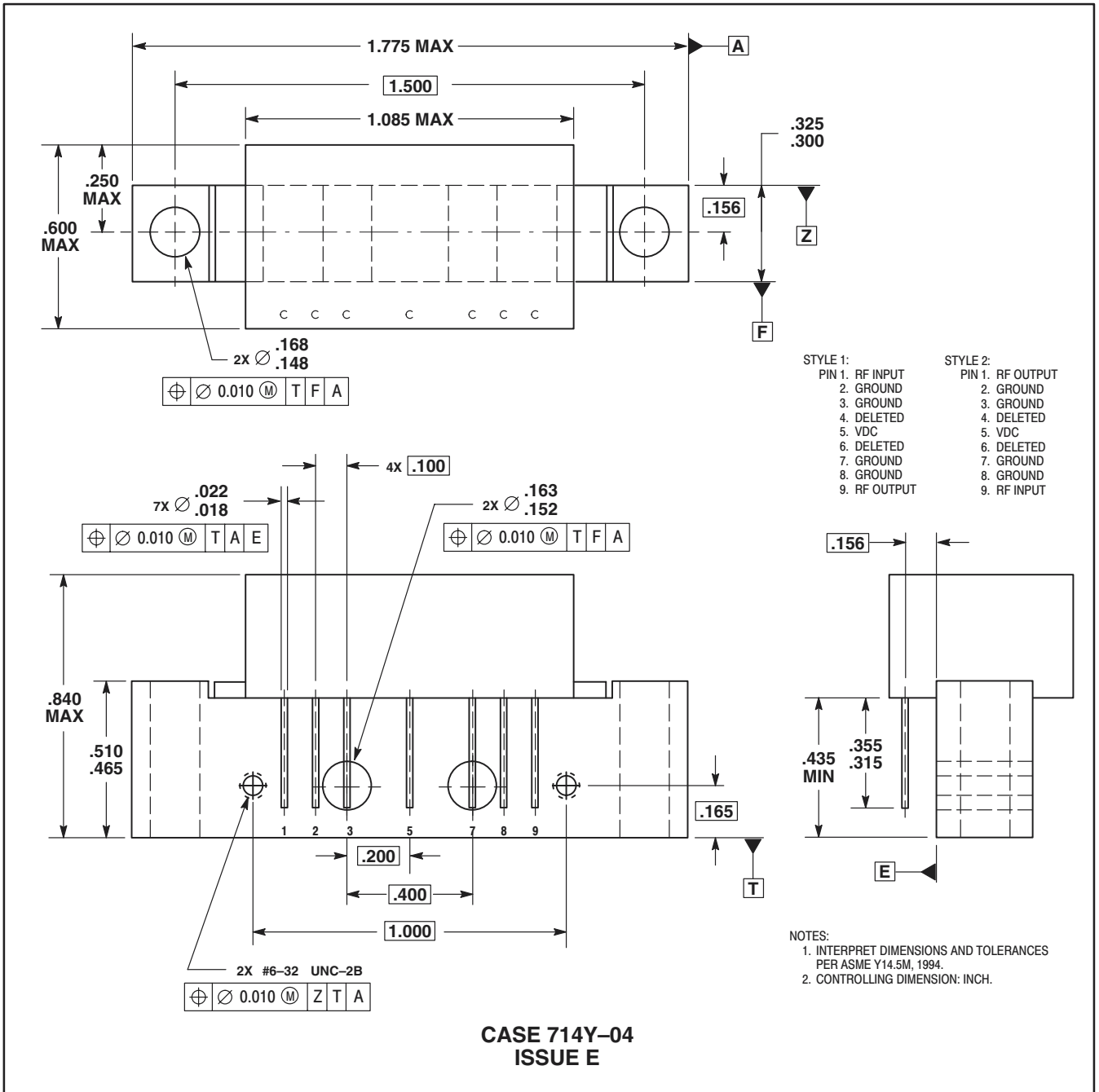
Rating	Symbol	Value	Unit
RF Voltage Input (Single Tone)	V_{in}	+70	dBmV
DC Supply Voltage	V_{CC}	+28	Vdc
Operating Case Temperature Range	T_C	-20 to +100	°C
Storage Temperature Range	T_{stg}	-40 to +100	°C

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	—	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 ($Z_0 = 75$ 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)	CSO_{110} CSO_{152}	— —	70 -69	-63 -63	dBc
Cross Modulation Distortion @ Ch 2 ($V_{out} = +40$ dBmV/ch., FM = 55 MHz) ($V_{out} = +38$ dBmV/ch., FM = 55 MHz)	XMD_{110} XMD_{152}	— —	-66 -65	-64 -61	dBc
Composite Triple Beat ($V_{out} = +40$ dBmV/ch., Worst Case) ($V_{out} = +38$ dBmV/ch., Worst Case)	CTB_{110} CTB_{152}	— —	-68 -64	-66 -61	dBc
Noise Figure 50 MHz 550 MHz 860 MHz 1000 MHz	NF	— — — —	4.0 4.5 5.5 6.0	5.0 — — 7.5	dB
DC Current ($V_{DC} = 24$ V, $T_C = 30$ °C)	I_{DC}	180	210	240	mA

NOTES

PACKAGE DIMENSIONS



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