

# CATV Amplifier Module

## Features

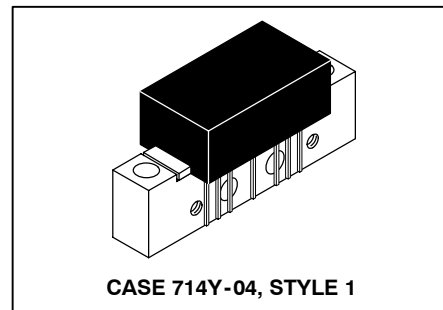
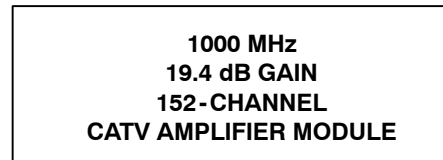
- Specified for 110- and 152-Channel Loading
- Excellent Distortion Performance
- Superior Gain, Return Loss and DC Current Stability over Temperature
- Silicon Bipolar Transistor Technology
- Unconditionally Stable Under All Load Conditions

## 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

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**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

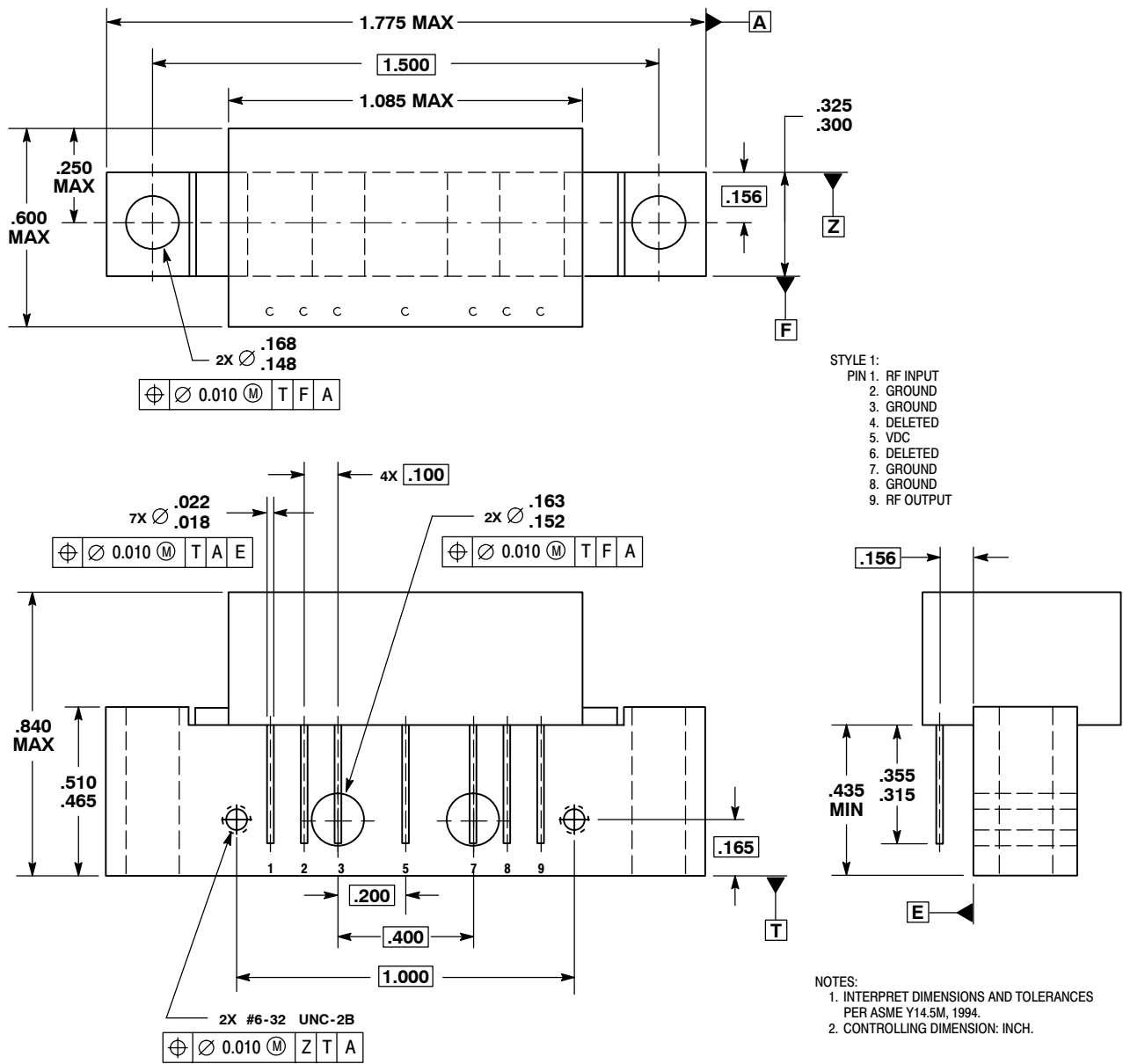
**Table 2. Electrical Characteristics** ( $V_{CC} = 24$  Vdc,  $T_C = +30^\circ\text{C}$ , 75  $\Omega$  system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	1000	MHz
Power Gain	$G_p$	18	18.5	19	dB
		18.7	19.4	20.7	
Slope	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)	IRL/ORL				
@ 40 MHz		20	—	—	dB
@ $f > 40$ MHz (Derate)		—	—	0.006	dB/MHz
Composite Second Order					dBc
( $V_{out} = +40$ dBmV/ch., Worst Case)	$CSO_{110}$	—	70	-63	
( $V_{out} = +38$ dBmV/ch., Worst Case)	$CSO_{152}$	—	-69	-63	

**Table 2. Electrical Characteristics** ( $V_{CC} = 24$  Vdc,  $T_C = +30^\circ\text{C}$ ,  $75\ \Omega$  system unless otherwise noted) **(continued)**

Characteristic		Symbol	Min	Typ	Max	Unit
Cross Modulation Distortion @ Ch 2 ( $V_{out} = +40$ dBmV/ch., FM = 55 MHz)	110-Channel FLAT	$XMD_{110}$	—	-66	-64	dBc
	152-Channel FLAT	$XMD_{152}$	—	-65	-61	
Composite Triple Beat ( $V_{out} = +40$ dBmV/ch., Worst Case)	110-Channel FLAT	$CTB_{110}$	—	-68	-66	dBc
	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, $T_C = 30^\circ\text{C}$ )		$I_{DC}$	180	210	240	mA

### PACKAGE DIMENSIONS



**CASE 714Y-04  
ISSUE E**

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