

CATV Amplifier Module

Features

- Specified for 77- and 110-Channel Loading
- Lower DC Current Requirements
- Excellent Distortion Performance
- Excellent DC Current Stability over Temperature
- Silicon Bipolar Transistor Technology
- Unconditionally Stable Under All Load Conditions

Applications

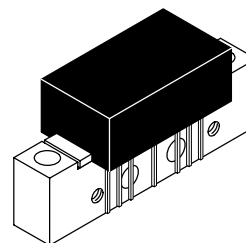
- CATV Systems Operating in the 40 to 750 MHz Frequency Range
- Output Stage Amplifier in Optical Nodes, Line Extenders and Trunk Distribution Amplifiers for CATV Systems
- Driver Amplifier in Linear General Purpose Applications
- Amplifier Requiring Lower Power Dissipation While Maintaining Excellent Output Performance

Description

- 24 Vdc Supply, 40 to 750 MHz, CATV Forward Power Doubler Amplifier Module
- Replaced MHW7205CL. There are no form, fit or function changes with this part replacement.
- RoHS Compliant

MHW7205CLN

**750 MHz
20 dB GAIN
110-CHANNEL
CATV AMPLIFIER MODULE**



CASE 714Y-04, STYLE 1

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 Ω system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	750	MHz
Power Gain	G_p	19 19.7	19.5 20	20 21.2	dB
Slope	S	0.2	0.5	1.7	dB
Gain Flatness (40 - 750 MHz, Peak to Valley)	G_F	—	0.3	0.8	dB
Return Loss — Input/Output ($Z_0 = 75$ Ohms)	IRL/ORL	20	—	—	dB
@ 40 MHz		—	—	0.007	dB/MHz
@ $f > 40$ MHz (Derate)					
Composite Second Order ($V_{out} = +44$ dBmV/ch., Worst Case)	CSO_{110} CSO_{77}	— —	-69 -80	-63 -67	dBc
Cross Modulation Distortion @ Ch 2 ($V_{out} = +44$ dBmV/ch., FM = 55 MHz)	XMD_{110} XMD_{77}	— —	-65 -69	-62 -66	dBc

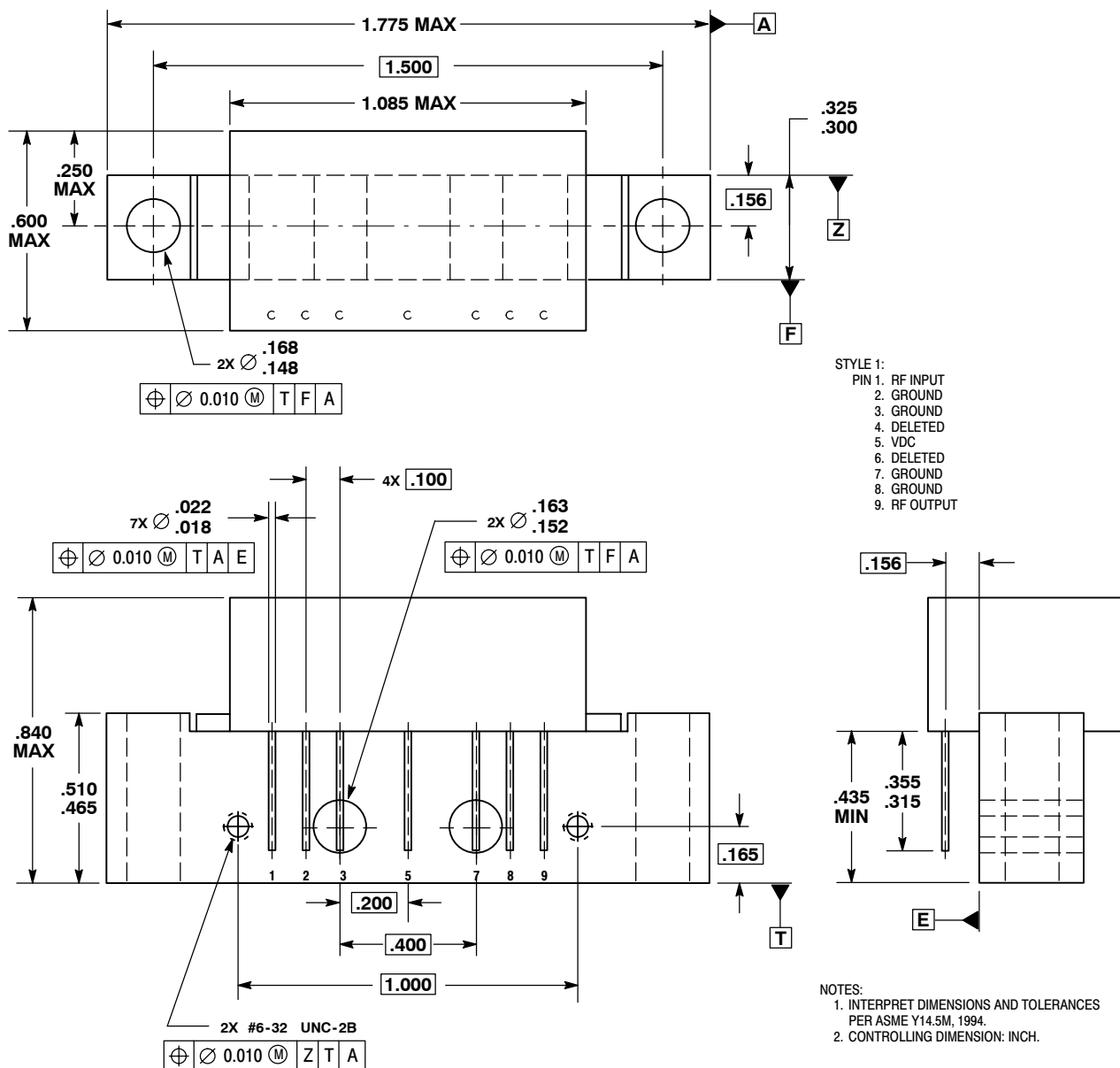
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Table 2. Electrical Characteristics ($V_{CC} = 24 \text{ Vdc}$, $T_C = +30^\circ\text{C}$, 75Ω system unless otherwise noted) (continued)

Characteristic		Symbol	Min	Typ	Max	Unit
Composite Triple Beat ($V_{out} = +44 \text{ dBmV/ch.}$, Worst Case)	110-Channel FLAT	CTB_{110}	—	-63	-61	dBc
	77-Channel FLAT	CTB_{77}	—	-70	-68	
Noise Figure	50 MHz	NF	—	5.0	6.2	dB
	550 MHz		—	5.8	—	
	750 MHz		—	6.2	7.5	
DC Current ($V_{DC} = 24 \text{ V}$, $T_C = -20 \text{ to } +100^\circ\text{C}$)		I_{DC}	345	365	385	mA

PACKAGE DIMENSIONS



STYLE 1:
 PIN 1. RF INPUT
 2. GROUND
 3. GROUND
 4. DELETED
 5. VDC
 6. DELETED
 7. GROUND
 8. GROUND
 9. RF OUTPUT

NOTES:
 1. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M, 1994.
 2. CONTROLLING DIMENSION: INCH.

CASE 714Y-04
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