✓**RoHS**

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**
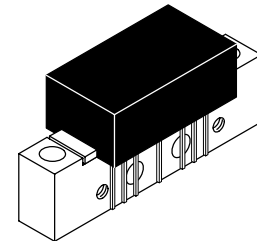
CASE 714Y-04, STYLE 1

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°C, 75 Ω system unless otherwise noted)

Characteristic		Symbol	Min	Typ	Max	Unit
Frequency Range		BW	40	—	750	MHz
Power Gain	50 MHz	G_p	19	19.5	20	dB
	750 MHz		19.7	20	21.2	
Slope	40 - 750 MHz	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_o = 75 Ohms)		IRL/ORL				
	@ 40 MHz		20	—	—	dB
	@ f > 40 MHz (Derate)		—	—	0.007	dB/MHz
Composite Second Order (V_{out} = +44 dBmV/ch., Worst Case)	110-Channel FLAT	CSO_{110}	—	-69	-63	dBc
	77-Channel FLAT	CSO_{77}	—	-80	-67	
Cross Modulation Distortion @ Ch 2 (V_{out} = +44 dBmV/ch., FM = 55 MHz)	110-Channel FLAT	XMD_{110}	—	-65	-62	dBc
	77-Channel FLAT	XMD_{77}	—	-69	-66	

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LIFETIME BUY

LAST ORDER 31 AUG 07   LAST SHIP 01 MAR 08

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
Composite Triple Beat (V_{out} = +44 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 V, T_C = -20 to +100°C)		I_{DC}	345	365	385	mA

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MHW7205CLN

RF Device Data
Freescale Semiconductor

PACKAGE DIMENSIONS

1.775 MAX

1.500

1.085 MAX

.325
.300

.250 MAX

.600 MAX

.156

Z

F

A

2X ⌀ .168 / .148
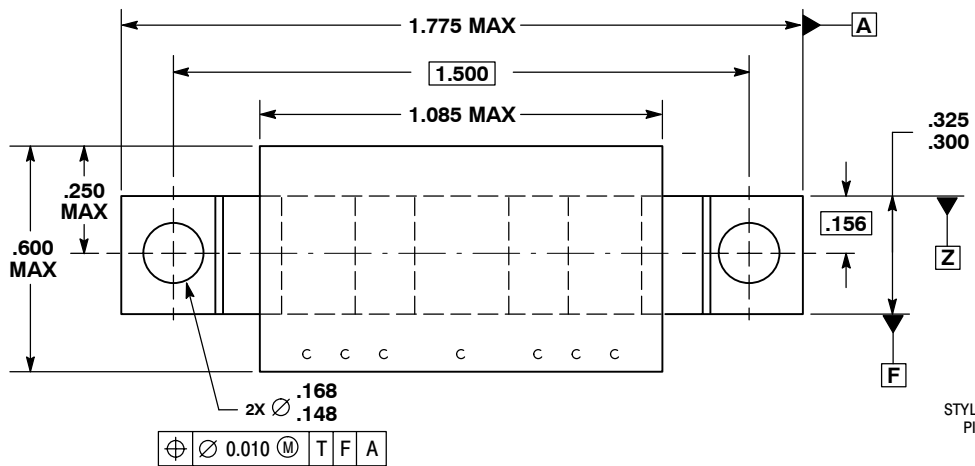
⊕ | ⌀ 0.010 Ⓜ | T | F | A

STYLE 1:
PIN 1. RF INPUT
    2. GROUND
    3. GROUND
    4. DELETED
    5. VDC
    6. DELETED
    7. GROUND
    8. GROUND
    9. RF OUTPUT
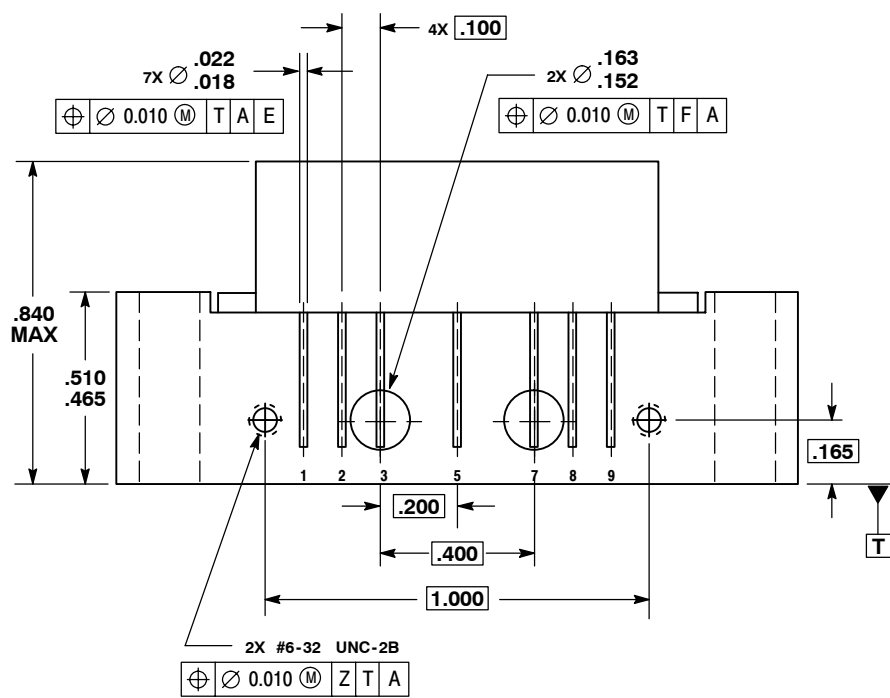
4X .100

7X ⌀ .022 / .018

2X ⌀ .163 / .152

⊕ | ⌀ 0.010 Ⓜ | T | A | E

⊕ | ⌀ 0.010 Ⓜ | T | F | A

.156

.840 MAX

.510
.465

.355
.315

.435 MIN

.165

1 2 3   5   7 8 9

.200

.400

1.000

T

E

2X #6-32 UNC-2B

⊕ | ⌀ 0.010 Ⓜ | Z | T | A
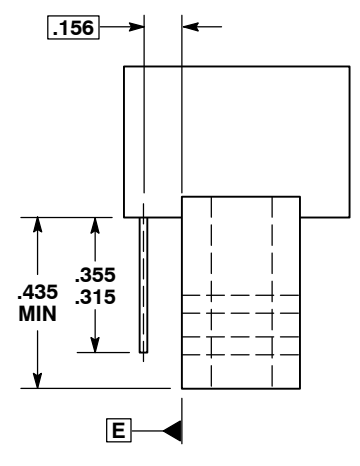
NOTES:
  1. INTERPRET DIMENSIONS AND TOLERANCES
     PER ASME Y14.5M, 1994.
  2. CONTROLLING DIMENSION: INCH.

**CASE 714Y-04
ISSUE E**

MHW7205CLN

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