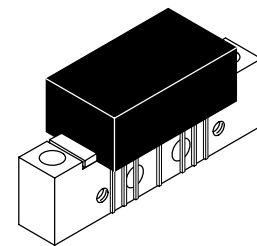


Replaced by MHW7185CN. There are no form, fit or function changes with this part replacement. N suffix indicates RoHS compliant part.

MHW7185C

750 MHz
19.4 dB GAIN
110-CHANNEL
CATV AMPLIFIER MODULE



CASE 714Y-04, STYLE 1

CATV Amplifier Module

Features

- Specified for 77- and 110-Channel Loading
- Excellent Distortion Performance
- 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

Description

- 24 Vdc Supply, 40 to 750 MHz, CATV Forward Power Doubler Amplifier Module

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	18.3	18.8	19.3	dB
		19	19.4	20	
Slope	S	0	0.4	1.0	dB
Gain Flatness (40 - 750 MHz, Peak to Valley)	G_F	—	0.3	0.6	dB
Return Loss — Input/Output ($Z_o = 75$ Ohms)	IRL/ORL				
@ 40 MHz		19	—	—	dB
@ $f > 40$ MHz (Derate)		—	—	0.006	dB/MHz
Composite Second Order					dBc
($V_{out} = +44$ dBmV/ch., Worst Case)	CSO_{110}	—	-72	-64	
110-Channel FLAT	CSO_{77}	—	-80	-68	
77-Channel FLAT					
Cross Modulation Distortion @ Ch 2					dBc
($V_{out} = +44$ dBmV/ch., FM = 55 MHz)	XMD_{110}	—	-66	-63	
110-Channel FLAT	XMD_{77}	—	-70	-68	
77-Channel FLAT					

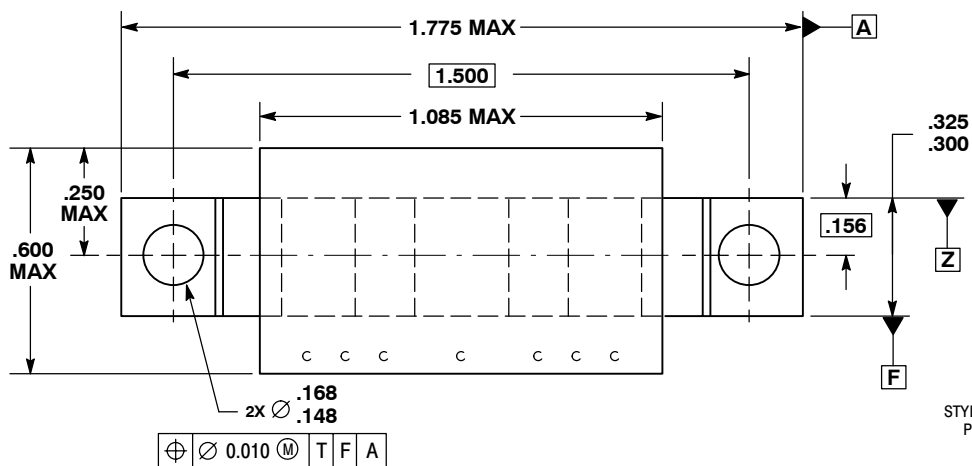
ARCHIVE INFORMATION

ARCHIVE INFORMATION

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
Composite Triple Beat ($V_{out} = +44$ dBmV/ch., Worst Case)	110-Channel FLAT	CTB_{110}	—	-64	-62	dBc
	77-Channel FLAT	CTB_{77}	—	-71	-69	
Noise Figure	50 MHz	NF	—	5.0	6.0	dB
	550 MHz		—	5.8	—	
	750 MHz		—	6.2	7.5	
DC Current ($V_{DC} = 24$ V, $T_C = 30^\circ\text{C}$)		I_{DC}	365	400	435	mA

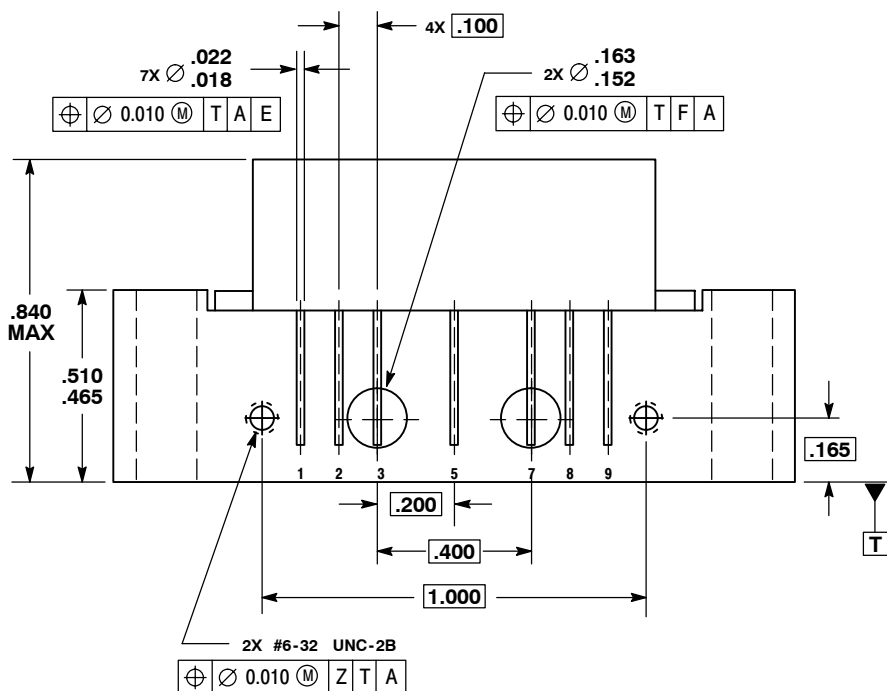
PACKAGE DIMENSIONS



2X Ø .168
2X Ø .148

⊕ Ø 0.010 (M) 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



7X Ø .022
7X Ø .018

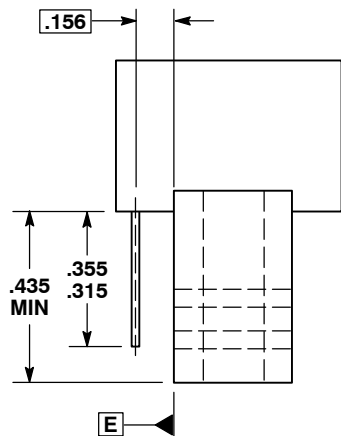
⊕ Ø 0.010 (M) T A E

2X Ø .163
2X Ø .152

⊕ Ø 0.010 (M) T F A

2X #6-32 UNC-2B

⊕ Ø 0.010 (M) Z T A



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

CASE 714Y-04
 ISSUE E

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How to Reach Us:

Home Page:
www.freescale.com

E-mail:
support@freescale.com

USA/Europe or Locations Not Listed:
Freescale Semiconductor
Technical Information Center, CH370
1300 N. Alma School Road
Chandler, Arizona 85224
+1-800-521-6274 or +1-480-768-2130
support@freescale.com

Europe, Middle East, and Africa:
Freescale Halbleiter Deutschland GmbH
Technical Information Center
Schatzbogen 7
81829 Muenchen, Germany
+44 1296 380 456 (English)
+46 8 52200080 (English)
+49 89 92103 559 (German)
+33 1 69 35 48 48 (French)
support@freescale.com

Japan:
Freescale Semiconductor Japan Ltd.
Headquarters
ARCO Tower 15F
1-8-1, Shimo-Meguro, Meguro-ku,
Tokyo 153-0064
Japan
0120 191014 or +81 3 5437 9125
support.japan@freescale.com

Asia/Pacific:
Freescale Semiconductor Hong Kong Ltd.
Technical Information Center
2 Dai King Street
Tai Po Industrial Estate
Tai Po, N.T., Hong Kong
+800 2666 8080
support.asia@freescale.com

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