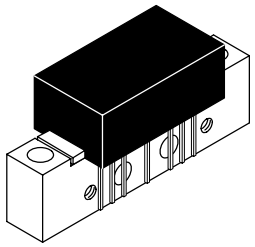
Document Number: MHW7185C
Rev. 9, 5/2006

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

CATV Amplifier Module

MHW7185C

750 MHz
19.4 dB GAIN
110-CHANNEL
CATV AMPLIFIER MODULE



CASE 714Y-04, STYLE 1

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°C, 75 Ω system unless otherwise noted)

Characteristic		Symbol	Min	Typ	Max	Unit
Frequency Range		BW	40	—	750	MHz
Power Gain	50 MHz 750 MHz	G_p	18.3 19	18.8 19.4	19.3 20	dB
Slope	40 - 750 MHz	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)	@ 40 MHz @ f > 40 MHz (Derate)	IRL/ORL	19 —	— —	— 0.006	dB dB/MHz
Composite Second Order (V_{out} = +44 dBmV/ch., Worst Case)	110-Channel FLAT 77-Channel FLAT	CSO_{110} CSO_{77}	— —	-72 -80	-64 -68	dBc
Cross Modulation Distortion @ Ch 2 (V_{out} = +44 dBmV/ch., FM = 55 MHz)	110-Channel FLAT 77-Channel FLAT	XMD_{110} XMD_{77}	— —	-66 -70	-63 -68	dBc

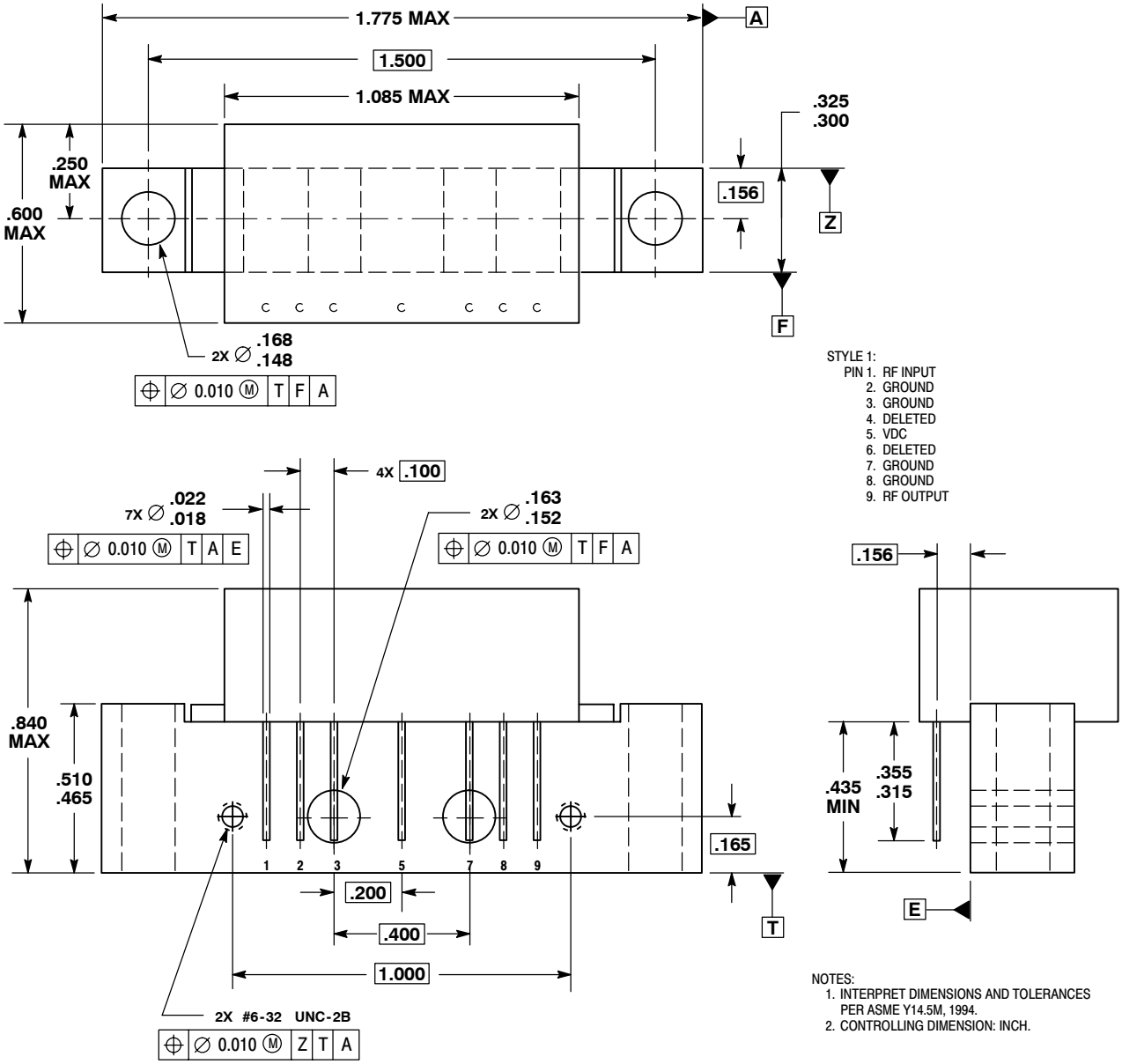
ARCHIVE INFORMATION

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 77-Channel FLAT	CTB_{110} CTB_{77}	— —	-64 -71	-62 -69	dBc
Noise Figure	50 MHz 550 MHz 750 MHz	NF	— — —	5.0 5.8 6.2	6.0 — 7.5	dB
DC Current (V_{DC} = 24 V, T_C = 30°C)		I_{DC}	365	400	435	mA

ARCHIVE INFORMATION

PACKAGE DIMENSIONS



CASE 714Y-04
ISSUE E

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