

The RF Line

High Output Power Doubler

750 MHz CATV Amplifier

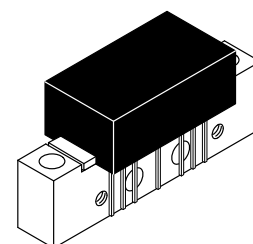
MHW7185C

- Specified for 77 and 110-Channel Performance
- Broadband Power Gain — @ $f = 40\text{--}750\text{ MHz}$
 $G_p = 19.4\text{ dB (Typ)}$
- Broadband Noise Figure
 $NF = 6.2\text{ dB (Typ) @ }750\text{ MHz}$
- Superior Gain, Return Loss and DC Current Stability with Temperature
- All Gold Metallization
- 7 GHz f_T Ion-Implanted Transistors

19.4 dB GAIN
750 MHz
110-CHANNEL
CATV AMPLIFIER

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

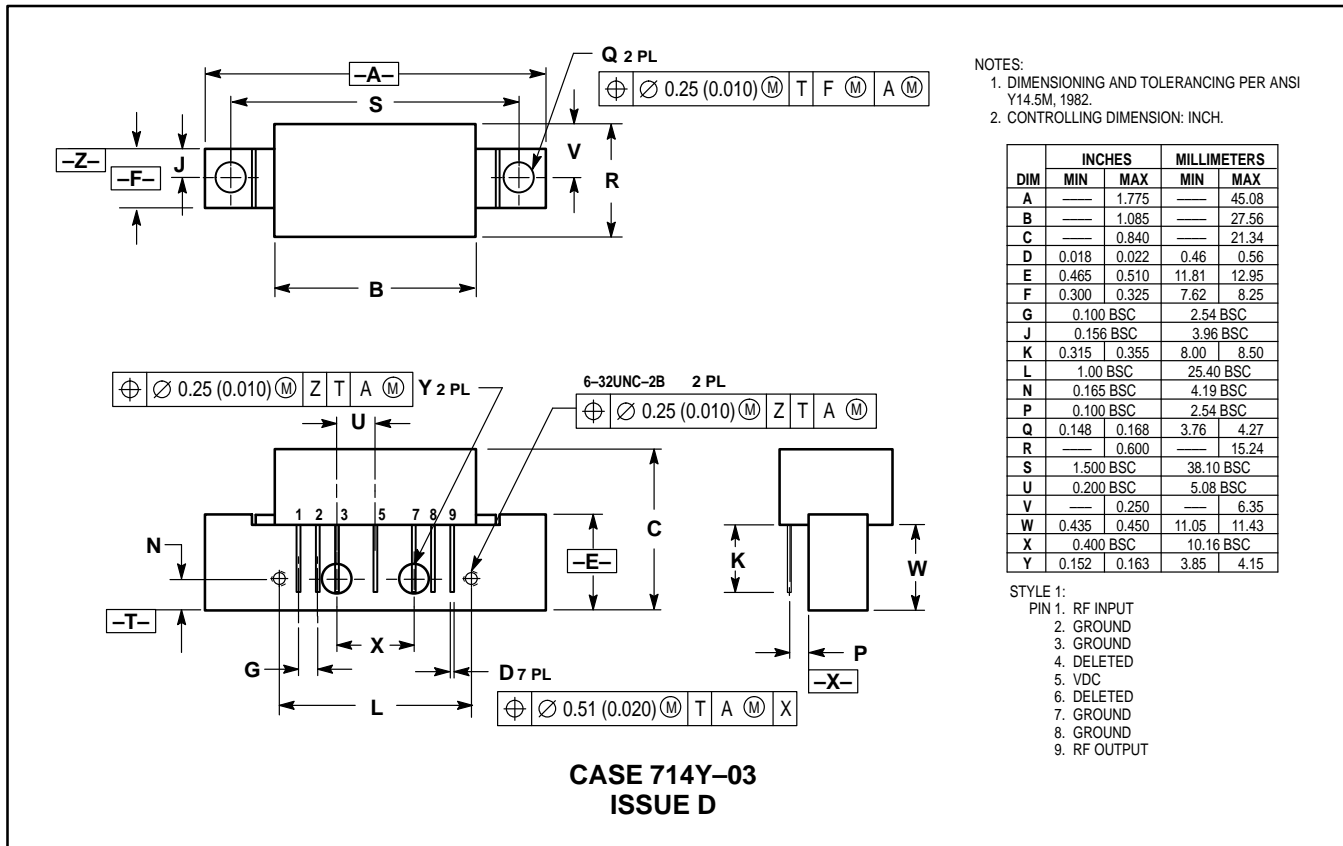


CASE 714Y-03, STYLE 1

ELECTRICAL CHARACTERISTICS ($V_{CC} = 24\text{ Vdc}$, $T_C = +30^\circ\text{C}$, 75 Ω system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	750	MHz
Power Gain	G_p	18.3 19	18.8 19.4	19.3 20	dB
Slope	S	0	0.4	1.0	dB
Gain Flatness (40-750 MHz, Peak to Valley)	—	—	0.3	0.6	dB
Return Loss — Input/Output ($Z_0 = 75\text{ Ohms}$)	IRL/ORL	19	—	—	dB
	@ 40 MHz	—	—	0.006	dB/MHz
	@ $f > 40\text{ MHz}$ (Derate)	—	—	—	—
Composite Second Order					dBc
($V_{out} = +44\text{ dBmV/ch.}$, Worst Case)					
110-Channel FLAT	CSO_{110}	—	-72	-64	
77-Channel FLAT	CSO_{77}	—	-80	—	
Cross Modulation Distortion @ Ch 2					dBc
($V_{out} = +44\text{ dBmV/ch.}$, FM = 55 MHz)					
110-Channel FLAT	XMD_{110}	—	-66	-63	
77-Channel FLAT	XMD_{77}	—	-69	—	
Composite Triple Beat					dBc
($V_{out} = +44\text{ dBmV/ch.}$, Worst Case)					
110-Channel FLAT	CTB_{110}	—	-64	-62	
77-Channel FLAT	CTB_{77}	—	-70	—	
Noise Figure	NF	—	5.0 5.8 6.2	6.0 — 7.5	dB
			50 MHz		
			550 MHz		
			750 MHz		
DC Current ($V_{DC} = 24\text{ V}$, $T_C = 30^\circ\text{C}$)	I_{DC}	365	400	435	mA

PACKAGE DIMENSIONS



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