

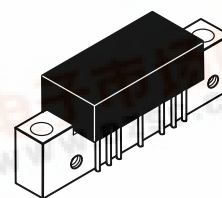
The RF Line 750 MHz CATV Conventional Hybrid Amplifier

Designed specifically for 750 MHz CATV applications. Features ion-implanted arsenic emitter transistors with an all gold metallization system.

- Supply Voltage = 24 Vdc
- 5th Generation Die Technology
- Specified for 110 Channel Performance
- Power Gain = 14.5 dB max @ $f = 50$ MHz
- Superior Gain, Return Loss and DC Current Stability
- All Gold Metallization

MHW7142

24 Vdc
750 MHz
110 – CHANNEL
CATV AMPLIFIER



CASE 714-06, Style 1

MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
DC Supply Voltage	V_{CC}	+28	Vdc
RF Input Voltage (Single Tone)	V_{IN}	+70	dBmV
Operating Case Temperature Range	T_C	– 20 to +100	°C
Storage Temperature Range	T_{stg}	– 40 to +100	°C

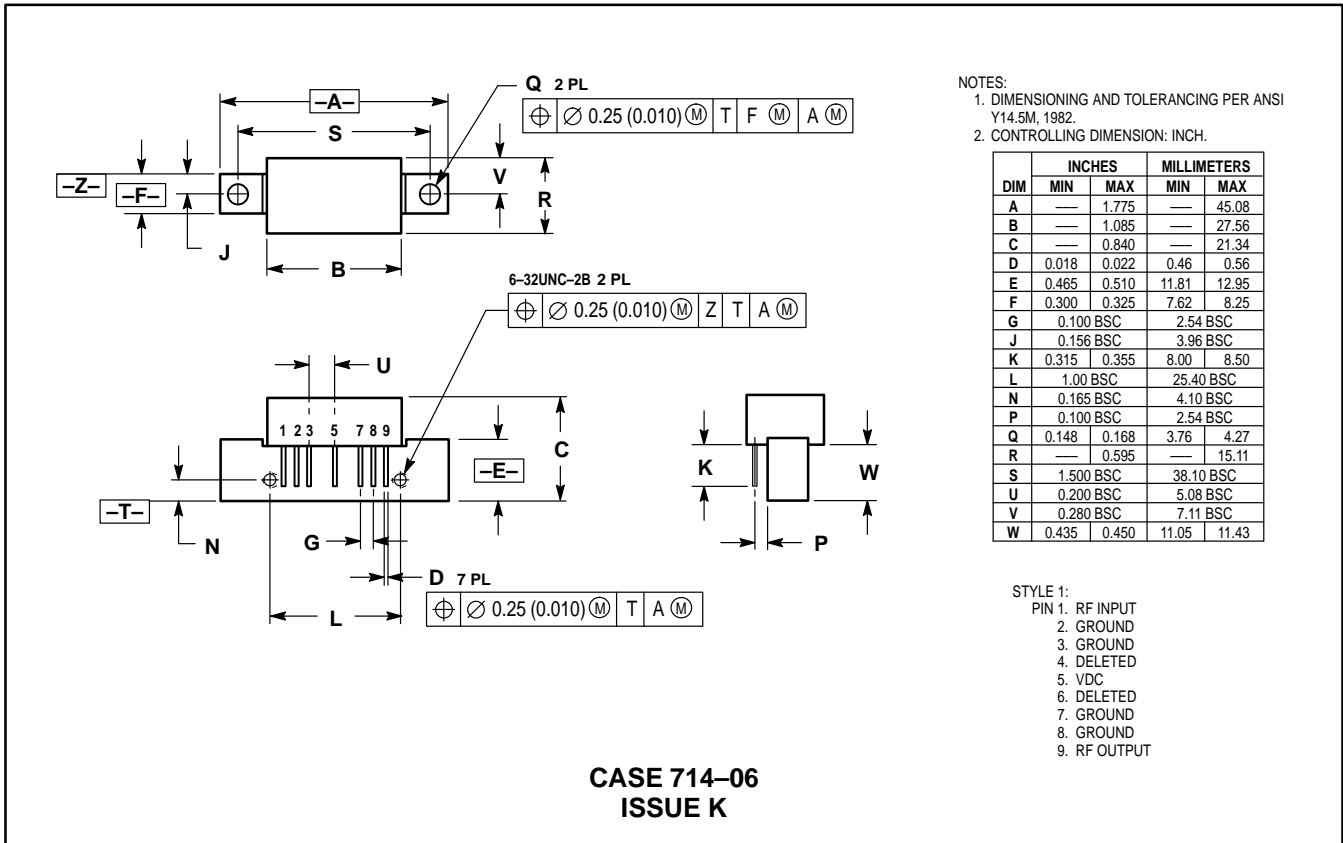
ELECTRICAL CHARACTERISTICS ($V_{CC} = 24$ Vdc, $T_C = 25^\circ\text{C}$, 75 ohm system, unless otherwise noted)


Characteristic	Symbol	Min	Max	Unit
Frequency	BW	40	750	MHz
Power Gain (f = 50 MHz)	Gp1	13.5	14.5	dB
Power Gain (f = 750 MHz)	Gp2	14.2	15.2	dB
Slope (f = 40 – 750 MHz)	S	0.3	1.5	dB
Gain Flatness (f = 40 – 750 MHz, Peak to Valley)	G_f	—	0.6	dB
Return Loss (@ f = 40 MHz)	RL	20	—	dB
Return Loss Derate (@ f > 40 MHz)	RLD	—	.006	dB/MHz
Composite Second Order ($V_{out} = +40$ dBmV/ch)	CSO ₁₁₀	—	–60	dBc

(continued)

ELECTRICAL CHARACTERISTICS — continued ($V_{CC} = 24\text{Vdc}$, $T_C = 25^\circ\text{C}$, 75 ohm system, unless otherwise noted)

Characteristic		Symbol	Min	Max	Unit
Cross Modulation	($V_{out} = +40\text{ dBmV/ch}$, FM = 55.25 MHz)	XMD ₁₁₀	—	−66	dBc
Composite Triple Beat	($V_{out} = +40\text{ dBmV/ch}$)	CTB ₁₁₀	—	−62	dBc
Noise Figure	(f = 50 MHz)	NF ₁	—	6.0	dB
Noise Figure	(f = 750 MHz)	NF ₂	—	7.5	dB
DC Current		IDC	180	240	mA

PACKAGE DIMENSIONS

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