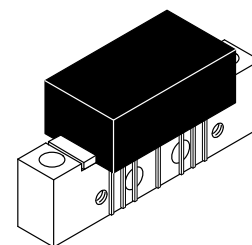


The RF Line 128-Channel (860 MHz) CATV Line Extender Amplifier

MHW8242A

- Specified for 128-Channel Performance
- Broadband Power Gain — @ $f = 40\text{--}860\text{ MHz}$
 $G_p = 24\text{ dB (Typ)}$
- Broadband Noise Figure
 $NF = 7.5\text{ dB (Max) @ } 860\text{ MHz}$
- Superior Gain, Return Loss and DC Current Stability with Temperature
- All Gold Metallization
- 7 GHz f_T Ion-Implanted Transistors
- Improved CTB Performance

**24 dB GAIN
860 MHz
128-CHANNEL
CATV AMPLIFIER**



CASE 714Y-03, STYLE 1

MAXIMUM RATINGS

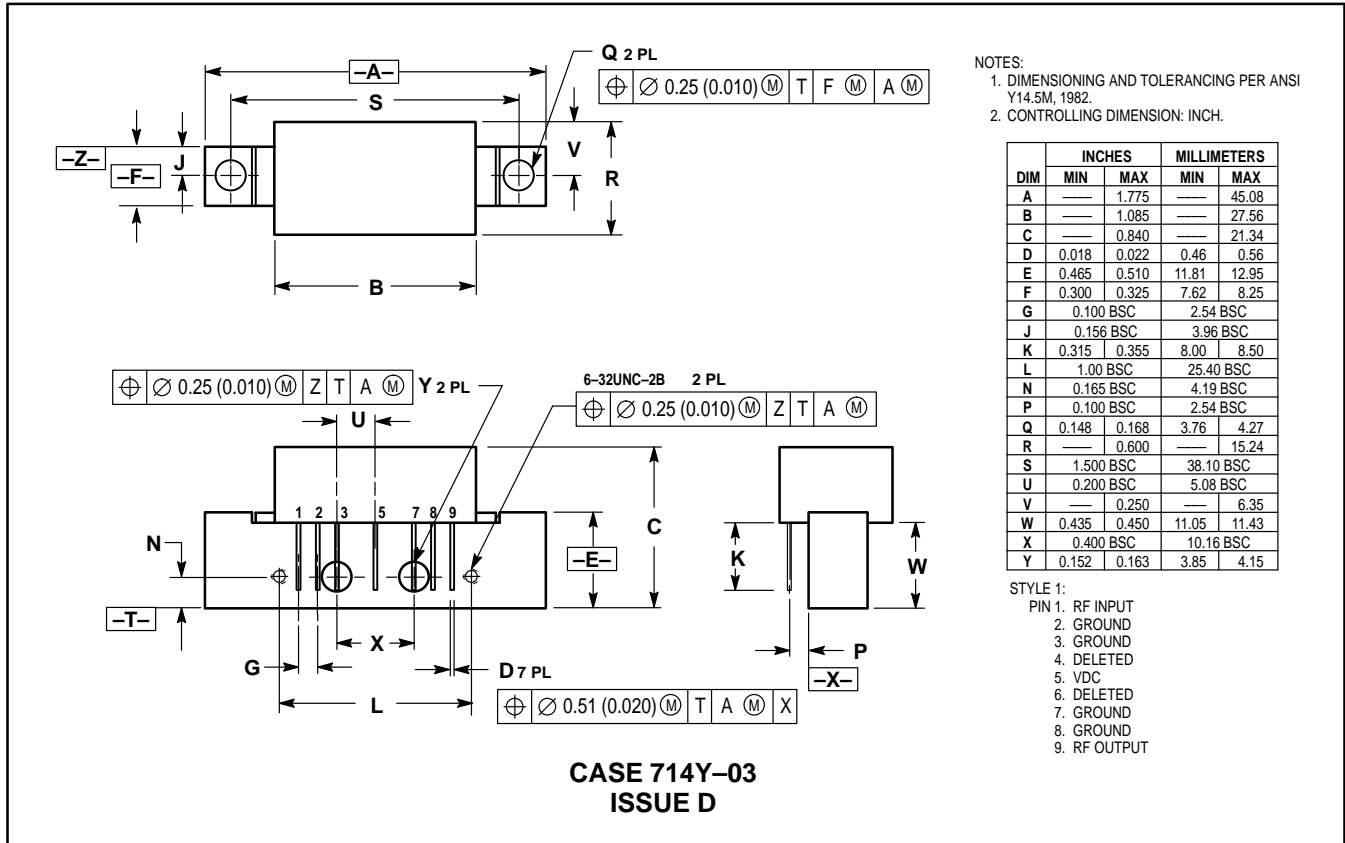
Rating	Symbol	Value	Unit
RF Voltage Input (Single Tone)	V_{in}	+55	dBmV
DC Supply Voltage	V_{CC}	+28	Vdc
Operating Case Temperature Range	T_C	-20 to +100	°C
Storage Temperature Range	T_{stg}	-40 to +100	°C

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	—	860	MHz
Power Gain	G_p	23.2 24	24 25	24.8 26	dB
Slope	S	0	0.8	1.8	dB
Gain Flatness (40-860 MHz, Peak To Valley)	—	—	0.4	0.8	dB
Return Loss — Input/Output ($Z_0 = 75\text{ Ohms}$)	IRL/ORL	20 —	— —	— 0.007	dB dB/MHz
Composite Second Order ($V_{out} = +38\text{ dBmV/ch.}$, Worst Case) ($V_{out} = +44\text{ dBmV/ch.}$, Worst Case)	CSO_{128} CSO_{77}	— —	-69 -78	-62 —	dBc
Cross Modulation Distortion @ Ch 2 ($V_{out} = +38\text{ dBmV/ch.}$, FM = 55 MHz) ($V_{out} = +44\text{ dBmV/ch.}$, FM = 55 MHz)	XMD_{128} XMD_{77}	— —	-65 -58	-62 —	dBc
Composite Triple Beat ($V_{out} = +38\text{ dBmV/ch.}$, Worst Case) ($V_{out} = +44\text{ dBmV/ch.}$, Worst Case)	CTB_{128} CTB_{77}	— —	-68 -64	-64 —	dBc
Noise Figure	NF	— —	4.8 5.8	5.5 7.5	dB
DC Current	I_{DC}	280	318	350	mA



PACKAGE DIMENSIONS



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How to reach us:

USA/EUROPE/Locations Not Listed: Motorola Literature Distribution;
 P.O. Box 5405, Denver, Colorado 80217. 1-303-675-2140 or 1-800-441-2447

JAPAN: Nippon Motorola Ltd.: SPD, Strategic Planning Office, 4-32-1,
 Nishi-Gotanda, Shinagawa-ku, Tokyo 141, Japan. 81-3-5487-8488

Customer Focus Center: 1-800-521-6274

Mfax™: RMFAX0@email.sps.mot.com – TOUCHTONE 1-602-244-6609
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ASIA/PACIFIC: Motorola Semiconductors H.K. Ltd.; 8B Tai Ping Industrial Park,
 51 Ting Kok Road, Tai Po, N.T., Hong Kong. 852-26629298

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