

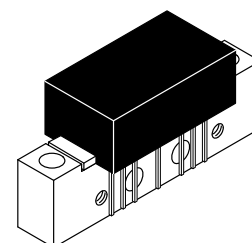
The RF Line

128-Channel 860 MHz CATV Amplifier

- Specified for 77 and 128-Channel Performance
- Broadband Power Gain — @ $f = 860$ MHz
 $G_p = 18.9$ dB (Typ)
- Broadband Noise Figure
NF = 5.5 dB (Typ) @ 860 MHz
- All Gold Metallization
- 7 GHz f_T Ion-Implanted Transistors
- Improved Ruggedness

MHW8182A

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



CASE 714Y-03, STYLE 1

MAXIMUM RATINGS

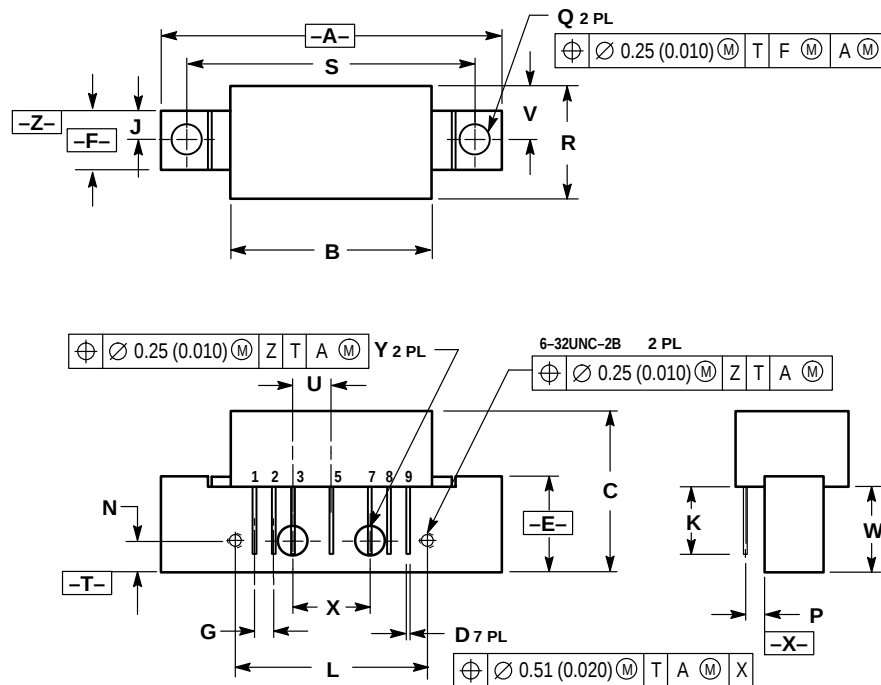
Rating	Symbol	Value	Unit
RF Voltage Input (Single Tone)	V_{in}	+70	dBmV
DC Supply Voltage	V_{CC}	+28	Vdc
Operating Case Temperature Range	T_C	-20 to +100	°C
Storage Temperature Range	T_{stg}	-40 to +100	°C

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	—	860	MHz
Power Gain 50 MHz 860 MHz	G_p	17.6 18.2	18.3 18.9	18.8 20.5	dB
Slope 40–860 MHz	S	0	0.7	2.5	dB
Gain Flatness (40–860 MHz, Peak to Valley)	—	—	0.3	0.6	dB
Return Loss — Input/Output ($Z_0 = 75$ Ohms) @ 40 MHz @ $f > 40$ MHz (Derate)	IRL/ORL	20 —	— —	— 0.007	dB dB/MHz
Composite Second Order ($V_{out} = +38$ dBmV/ch., Worst Case) 128-Channel FLAT ($V_{out} = +44$ dBmV/ch., Worst Case) 77-Channel FLAT	CSO_{128} CSO_{77}	— —	-73 -70	-63 —	dBc
Cross Modulation Distortion @ Ch 2 ($V_{out} = +38$ dBmV/ch., FM = 55 MHz) 128-Channel FLAT ($V_{out} = +44$ dBmV/ch., FM = 55 MHz) 77-Channel FLAT	XMD_{128} XMD_{77}	— —	-68 -61	-64 —	dBc
Composite Triple Beat ($V_{out} = +38$ dBmV/ch., Worst Case) 128-Channel FLAT ($V_{out} = +44$ dBmV/ch., Worst Case) 77-Channel FLAT	CTB_{128} CTB_{77}	— —	-66 -63	-62 —	dBc
Noise Figure 50 MHz 550 MHz 750 MHz 860 MHz	NF	— — — —	4.0 4.5 5.0 5.5	5.0 — — 8.0	dB
DC Current ($V_{DC} = 24$ V, $T_C = 30^\circ\text{C}$)	I_{DC}	180	235	240	mA



PACKAGE DIMENSIONS



- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
 2. CONTROLLING DIMENSION: INCH.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	—	1.775	—	45.08
B	—	1.085	—	27.56
C	—	0.840	—	21.34
D	0.018	0.022	0.46	0.56
E	0.465	0.510	11.81	12.95
F	0.300	0.325	7.62	8.25
G	0.100 BSC	—	2.54 BSC	—
J	0.156 BSC	—	3.96 BSC	—
K	0.315	0.355	8.00	8.50
L	1.00 BSC	—	25.40 BSC	—
N	0.165 BSC	—	4.19 BSC	—
P	0.100 BSC	—	2.54 BSC	—
Q	0.148	0.168	3.76	4.27
R	—	0.600	—	15.24
S	1.500 BSC	—	38.10 BSC	—
U	0.200 BSC	—	5.08 BSC	—
V	—	0.250	—	6.35
W	0.435	0.450	11.05	11.43
X	0.400 BSC	—	10.16 BSC	—
Y	0.152	0.163	3.85	4.15

- STYLE 1:
- PIN 1. RF INPUT
 - GROUND
 - GROUND
 - DELETED
 - VDC
 - DELETED
 - GROUND
 - GROUND
 - RF OUTPUT

**CASE 714Y-03
ISSUE D**

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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

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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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