

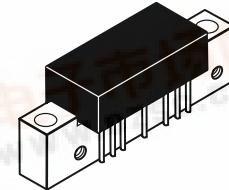
The RF Line 750 MHz CATV Conventional Hybrid Amplifier

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} = 24Vdc, T_C = 25°C, 75 ohm system, unless otherwise noted)

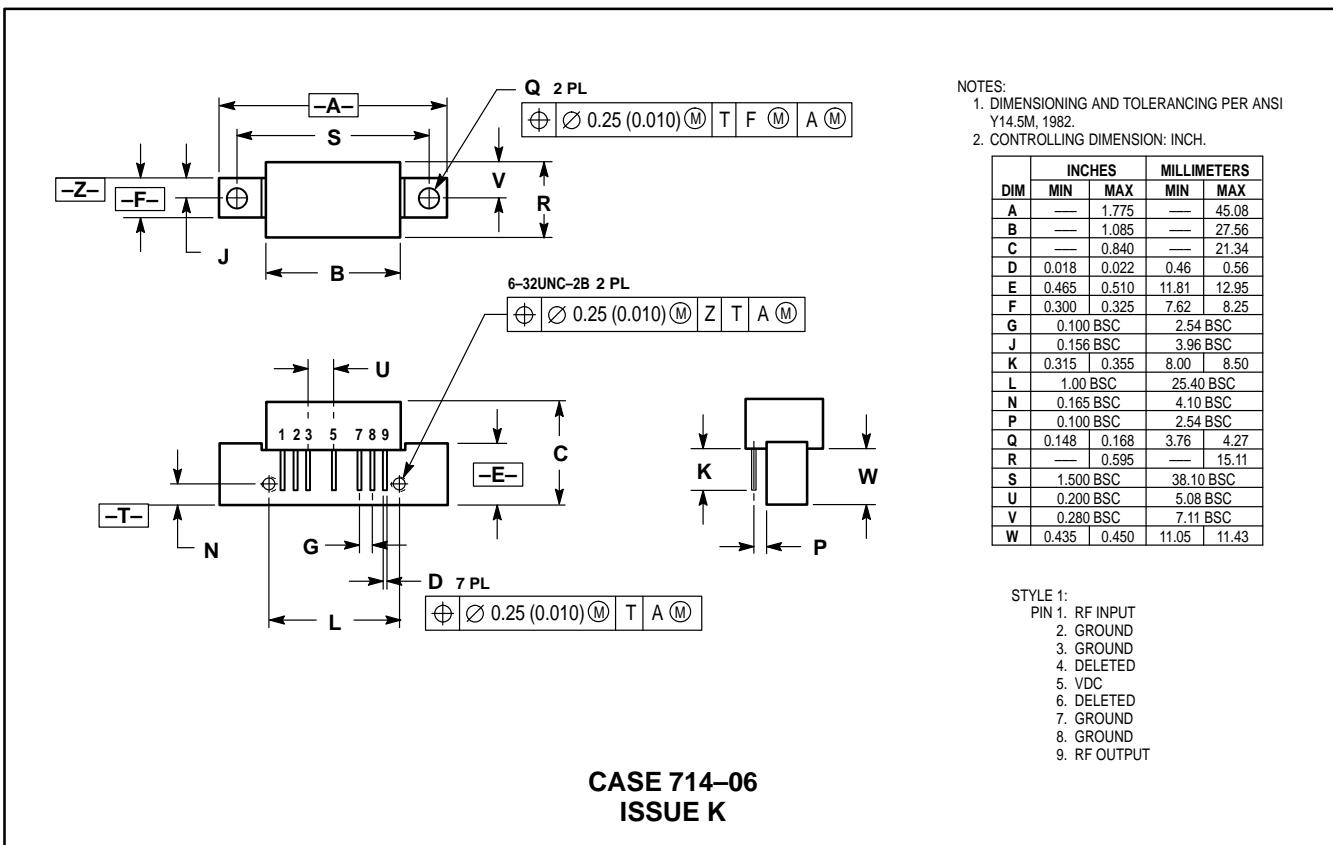
Characteristic	Symbol	Min	Max	Unit
Frequency	BW	40	750	MHz
Power Gain (f = 50 MHz)	G _{p1}	13.5	14.5	dB
Power Gain (f = 750 MHz)	G _{p2}	14.2	15.2	dB
Slope (f = 40 - 750 MHz)	S	0.3	1.5	dB
Gain Flatness (f = 40 - 750 MHz, Peak to Valley)	G _f	—	0.6	dB
Return Loss (@ f = 40 MHz)	RL	20	—	dB
Return Loss Derate (@ f > 40 MHz)	RLD	—	.006	dB/MHz
Composite Second Order (V _{out} = +40 dBmV/ch)	CSO110	—	-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)	XMD110	—	-66	dBc
Composite Triple Beat ($V_{out} = +40\text{ dBmV/ch}$)	CTB110	—	-62	dBc
Noise Figure ($f = 50\text{ MHz}$)	NF1	—	6.0	dB
Noise Figure ($f = 750\text{ MHz}$)	NF2	—	7.5	dB
DC Current	IDC	180	240	mA

PACKAGE DIMENSIONS



Motorola reserves the right to make changes without further notice to any products herein. Motorola makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Motorola assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation consequential or incidental damages. "Typical" parameters which may be provided in Motorola data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. Motorola does not convey any license under its patent rights nor the rights of others. Motorola products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the Motorola product could create a situation where personal injury or death may occur. Should Buyer purchase or use Motorola products for any such unintended or unauthorized application, Buyer shall indemnify and hold Motorola and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that Motorola was negligent regarding the design or manufacture of the part. Motorola and  are registered trademarks of Motorola, Inc. Motorola, Inc. is an Equal Opportunity/Affirmative Action Employer.

Mfax is a trademark of Motorola, Inc.

How to reach us:

USA/EUROPE/Locations Not Listed: Motorola Literature Distribution;
P.O. Box 5405, Denver, Colorado 80217. 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

Mfax™: RMFAX0@email.sps.mot.com – TOUCHTONE 602-244-6609
– US & Canada ONLY 1-800-774-1848

ASIA/PACIFIC: Motorola Semiconductors H.K. Ltd.; 8B Tai Ping Industrial Park,
51 Ting Kok Road, Tai Po, N.T., Hong Kong. 852-26629298

INTERNET: <http://motorola.com/sps>