The RF Line

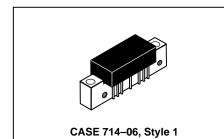
High Output Power Doubler 750 MHz CATV Amplifiers

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

- Supply Voltage = 24 Vdc
- 6th Generation Die Technology
- Specified for 110 Channel Performance
- Broadband Power Gain @ f = 50 MHz
 Gp = 18 dB Min (MHW7185A)
 Gp = 19.5 dB Min (MHW7205A)
- Broadband Noise Figure @ f = 50 MHz
 NF = 6 dB Max
- Improvement in Distortion Over Conventional Hybrids
- Allows Higher Output Level Operation

MHW7185A MHW7205A

750 MHz, 24 Vdc 110 CHANNEL CATV AMPLIFIERS



ABSOLUTE MAXIMUM RATINGS

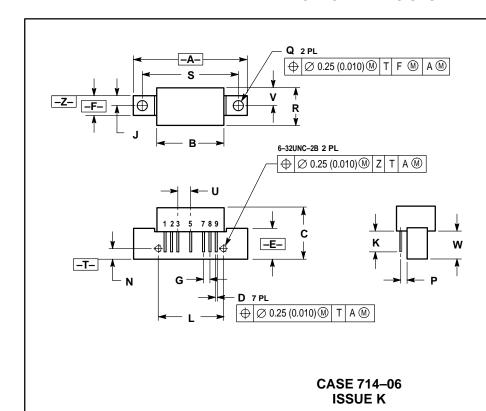
Rating	Symbol	Value	Unit
DC Supply Voltage	Vcc	+28	Vdc
RF Input Voltage (Single Tone)	V _{IN}	+70	dBmV
Operating Case Temperature Range	ТC	- 20 to +100	°C
Storage Temperature Range	T _{stg}	- 40 to +125	°C

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

Characteristic Bandwidth			Symbol	Min	Max 750	Unit MHz
			BW	40		
Power Gain	(f = 50 MHz)	MHW7185A MHW7205A	Gp1	18.0 19.5	19.0 20.5	dB
Power Gain	(f = 750 MHz)	MHW7185A MHW7205A	Gp2	18.5 20.0	20.5 21.5	dB
Slope	(f = 40 - 750 MHz)		S	0	2	dB
Gain Flatness	(f = 40 – 750 MHz, Peak to Valley)		Gf	_	1	dB
Return Loss	(f = 40 MHz)		RL	18	_	dB
Return Loss Derate	(f > 40 MHz)		RLD	_	0.007	dB/MHz
Composite Triple Beat	(V _{Out} = +44 dBmV/ch, 110 Channels, Worst Case)	MHW7185A MHW7205A	CTB ₁₁₀	_ _	–58 –57	dBc
Cross Modulation	(V _{Out} = +44 dBmV/ch, 110 Channels, FM = 55 MHz)	MHW7185A MHW7205A	XMD ₁₁₀	_	–65 –64	dBc
Composite Second Order	(V _{Out} = +44 dBmV/ch, 110 Channels, Worst Case)	MHW7185A MHW7205A	CSO ₁₁₀	_ _	–58 –56	dBc
Noise Figure	(f = 50 MHz)		NF ₁	_	6	dB
Noise Figure	(f = 750 MHz)		NF ₂	_	8.5	dB
DC Current			IDC	380	460	mA



PACKAGE DIMENSIONS



NOTES:

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

	INC	HES	MILLIMETERS		
DIM	MIN	MAX	MIN	MAX	
Α		1.775	_	45.08	
В		1.085	_	27.56	
С		0.840	_	21.34	
D	0.018	0.022	0.46	0.56	
Е	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	4.10 BSC		
Р	0.100	BSC	2.54 BSC		
Q	0.148	0.168	3.76	4.27	
R		0.595		15.11	
S	1.500 BSC		38.10 BSC		
U	0.200	BSC	5.08 BSC		
٧	0.280	BSC	7.11 BSC		
W	0.435	0.450	11.05	11.43	

STYLE 1: PIN 1. RF INPUT

2. GROUND 3. GROUND

DELETED 5. VDC

6. DELETED 7. GROUND

9. RF OUTPUT

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How to reach us:

USA/EUROPE: Motorola Literature Distribution; P.O. Box 20912; Phoenix, Arizona 85036. 1-800-441-2447

MFAX: RMFAX0@email.sps.mot.com - TOUCHTONE (602) 244-6609 INTERNET: http://Design-NET.com

JAPAN: Nippon Motorola Ltd.; Tatsumi-SPD-JLDC, Toshikatsu Otsuki, 6F Seibu-Butsuryu-Center, 3-14-2 Tatsumi Koto-Ku, Tokyo 135, Japan. 03-3521-8315

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



