. reescale Semiconductor Technical Data

Document Number: MHW1304L

Rev. 3, 1/2001

Low Distortion Wideband Reverse Amplifier Module

Designed specifically for broadband applications requiring low distortion characteristics. Specified for use as return amplifiers for low-split 2-way cable TV systems. Features all gold metallization system.

- Guaranteed Broadband Power Gain
- Guaranteed Broadband Noise Figure
- Superior Gain, Return Loss and DC Current Stability with Temperature
- All Gold Metallization
- Circuit Design Optimized for Good RF Stability Under High VSWR Load
- Transformers Designed to Ensure Good Low Frequency Gain Stability versus Temperature

MHW1304L

30 dB 50 MHz 24 Vdc **CATV LOW CURRENT AMPLIFIER**

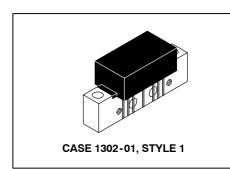


Table 1. Maximum Ratings*

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

Table 2. Electrical Characteristics (V_{CC} = 24 Vdc, T_C = 30°C, 75 ohm system, unless otherwise noted)

	Characteristic	Symbol	Min	Max	Unit
Bandwidth	All	BW	5.0	50	MHz
Power Gain	(f = 5.0 MHz)	Gp	29.2	30.8	dB
Slope	(f = 50-65 MHz)	S	-0.2	_	dB
Return Loss	(@ f = 5.0-50 MHz) (@ f = 65 MHz)	RL	18 16		dB
Second Order Distortion	(V _{out} = +50 dBmV/ch)	IMD	=	-70	dBc
Cross Modulation	(V _{out} = +50 dBmV/ch)	XMD ₄	_	-57	dBc
Triple Beat Distortion	$(V_{out} = +50 \text{ dBmV/ch})$	TB ₃	_	-66	dBc
Noise Figure	(f = 50 MHz)	NF	_	4.5	dB
DC Current		I _{DC}	100	135	mA



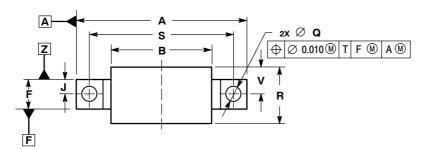
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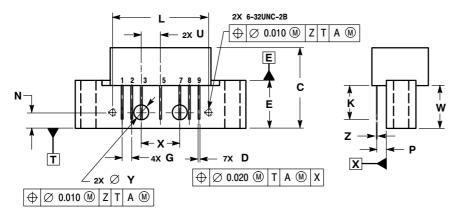
ARCHIVE INFORMATION



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PACKAGE DIMENSIONS





CASE 1302-01 ISSUE B

- NOTES:
 1. DIMENSIONS ARE IN INCHES.
 2. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M, 1994.

	INCHES		MILLIMETERS		
DIM	MIN	MAX	MIN	MAX	
Α		1.775		45.085	
В		1.085		27.559	
С		0.840		21.336	
D	0.015	0.021	0.381	0.533	
Ε	0.465	0.510	11.811	12.954	
F	0.300	0.325	7.62	8.255	
G	0.100 BSC		2.540 BSC		
J	0.156 BSC		3.962 BSC		
K	0.315	0.355	8.001	9.017	
L	1.000 BSC		25.400 BSC		
N	0.165 BSC		4.191 BSC		
P	0.100 BSC		2.540 BSC		
Q	0.148	0.168	3.759	4.267	
R		0.600		15.24	
S	1.500 BSC		38.100 BSC		
U	0.200 BSC		5.080 BSC		
٧		0.250		6.350	
W	0.435		11.049		
Х	0.400	BSC	10.160 BSC		
Υ	0.152	0.163	3.861	4.140	
Z	0.009	0.011	0.229	0.279	

- STYLE 1:
 PIN 1. RF INPUT
 2. GROUND
 3. GROUND
 4. DELETED
 5. VDC
 6. DELETED
 7. GROUND
 8. GROUND
 9. RF OUTPUT

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