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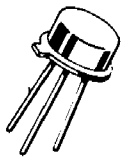
MWA110
MWA120
MWA130

WIDEBAND HYBRID AMPLIFIERS

. . . single stage amplifiers designed for broadband linear applications up to 400 MHz.

- Low-Cost TO-39 Type Package
- Gain 14 dB Typ
- 50 Ω Input and Output Impedance
- Fully Cascadable for Any Gain
- Thin Film Construction
- Hermetic Package
- Guaranteed Performance from -25°C to +125°C

DC-400 MHz WIDEBAND GENERAL-PURPOSE HYBRID AMPLIFIERS

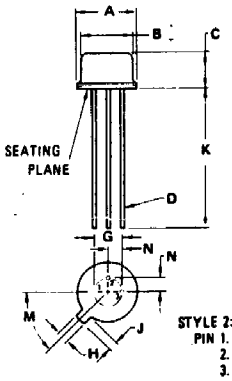


MAXIMUM RATINGS

Rating	Symbol	Value MWA110	Value MWA120	Value MWA130	Unit
RF Input Power	P_{in}	◄——100——►			mW
DC Supply Current	I_D	25	55	100	mA
Maximum Case Temperature	T_C	◄——125——►			°C
Storage Temperature Range	T_{stg}	◄——-65 to +200——►			°C

OPERATING CONDITIONS

Device Voltage	V_D	2.9	5.0	5.5	Vdc
Device Current	I_D	10	25	60	mAdc
Decoupling Impedance	Z_D	1000	1000	330	Ω



STYLE 2:
PIN 1. INPUT
2. OUTPUT
3. GROUND

DIM	MILLIMETERS MIN	MILLIMETERS MAX	INCHES MIN	INCHES MAX
A	8.51	9.40	0.335	0.370
B	7.75	8.51	0.305	0.335
C	3.81	4.57	0.150	0.180
D	0.41	0.48	0.016	0.019
G	5.08 BSC		0.200 BSC	
H	0.71	0.86	0.028	0.034
J	0.74	1.14	0.029	0.045
K	12.70	–	0.500	–
M	45° BSC		45° BSC	
N	2.54 BSC		0.100 BSC	

NOTE:
1. LEADS WITHIN 0.36 mm (0.014) DIA OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.

ELECTRICAL CHARACTERISTICS (T_C = -25 to +125°C, 50 Ω system and specified operating conditions)

Characteristic		Symbol	Min	Typ	Max	Unit
Frequency Range		BW	0.1	–	400	MHz
Power Gain		G_p	13	14	–	dB
Response Flatness		F	–	0	±1.0	dB
Input VSWR	MWA110/120	–	–	–	2.5:1	–
	MWA130	–	–	–	3:1	–
Output VSWR	MWA110/120/130	–	–	–	2.5:1	–
Output @ 1 dB Gain Compression						dBm
	MWA110		–	-2.5	–	
	MWA120		–	+8.2	–	
	MWA130		–	+18	–	
Noise Figure		NF				dB
	MWA110		–	4.0	–	
	MWA120		–	5.5	–	
	MWA130		–	7.0	–	
Reverse Isolation		P_{RI}				dB
	MWA110		–	18.8	–	
	MWA120		–	19.2	–	
	MWA130		–	16.8	–	
Harmonic Output		d_{so}				dB
	MWA110 (P_{out} = -9 dBm)		–	-24	–	
	MWA120 (P_{out} = 0 dBm)		–	-34	–	
	MWA130 (P_{out} = +10 dBm)		–	-35	–	