

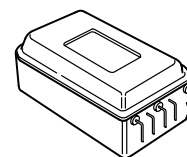
The RF Line 860 MHz CATV Feedforward Amplifier

Designed for broadband applications requiring low-distortion amplification. Specifically intended for CATV market requirements. Two hybrid amplifiers along with couplers and delay lines are packaged together to provide extremely low distortion products at conventional CATV amplifier output levels.

- Specifically Designed to Provide Improved Performance in 860 MHz CATV Applications
- Distortion Components Reduced more than 20 dB from Conventional CATV Hybrid Amplifiers
- Specified for 128 Channel Performance
- Fully Shielded Metal Package

MFF524B

**24 dB
40–860 MHz
128 CHANNEL
CATV FEEDFORWARD
AMPLIFIER**



CASE 825A-03, STYLE 2

MAXIMUM RATINGS

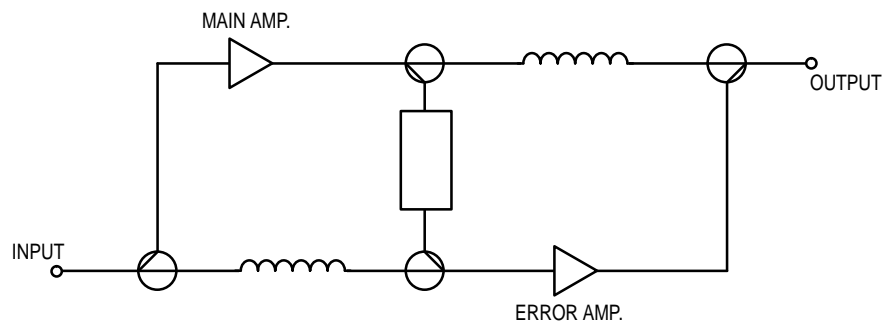
Rating	Symbol	Value	Unit
Supply Voltage	V_{CC}	28	V
RF Input Power	P_{in}	+55	dBmV
Storage Temperature Range	T_{stg}	–40 to +100	°C
Operating Case Temperature Range	T_C	–20 to +100	°C

ELECTRICAL CHARACTERISTICS ($T_C = 50^\circ\text{C}$, $V_{CC} = 24\text{ V}$, $75\ \Omega$ System)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	860	MHz
Power Gain — 50 MHz	G_p	23.4	24	24.6	dB
Slope	S	+0.4	+1	+1.6	dB
Gain Flatness	—	—	—	± 0.3	dB
Return Loss — Input f = 50 – 750 MHz f = 750 – 860 MHz	IRL	18 16	— —	— —	dB
Return Loss — Output f = 50 – 750 MHz f = 750 – 860 MHz	ORL	18 16	— —	— —	dB
Composite Triple Beat ⁽¹⁾ ($V_{out} = +44\text{ dBmV}$ at ch. 2, 55.25 MHz to ch. M90, 853.25 MHz)	CTB ₁₂₈ flat	—	–70	–66	dB
Composite Second Order Beat ⁽¹⁾ ($V_{out} = +44\text{ dBmV}$ at ch. 2, 55.25 MHz to ch. M90, 853.25 MHz)	CSO ₁₂₈ flat	—	–73	–68	dB
DIN45004B (See Figure 2)	DIN	—	130	—	dB μ V
Noise Figure (f = 50 MHz) (f = 860 MHz)	NF	—	—	9.0 13.0	dB
DC Current	I_{DC}	—	660	725	mA

PERFORMANCE DERATE versus TEMPERATURE (TYP)

Symbol	Characteristic	Test Conditions	–20 + 80°C	–20 + 100°C
ΔG_p	Change in Gain w/Temp.	50 MHz	$\pm 0.5\text{ dB}$	$\pm 0.6\text{ dB}$



PERFORMANCE MEASUREMENT

Motorola test fixture: P/N FF124BTF is necessary for accurate measurement.

Figure 1. Block Diagram of Circuit

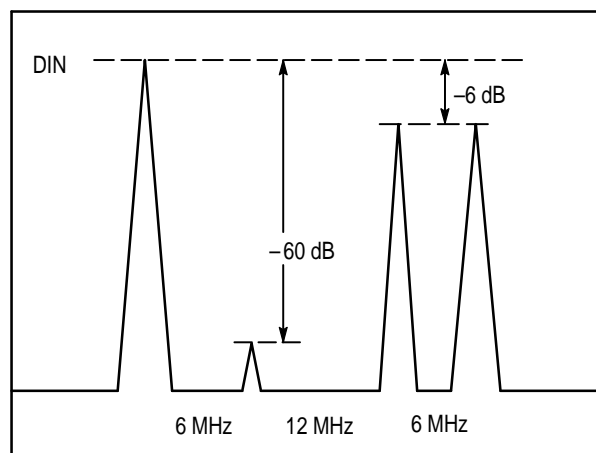
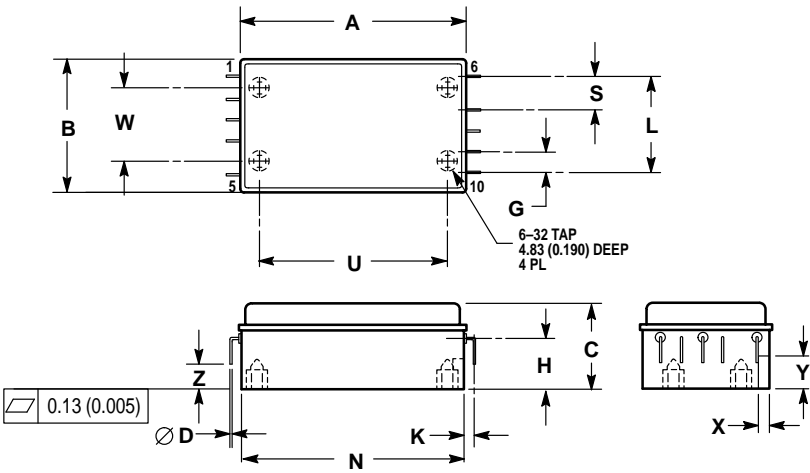


Figure 2. DIN45004B Test

PACKAGE DIMENSIONS




CASE 825A-03
ISSUE C

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

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	2.107	2.165	53.52	55.00
B	1.225	1.265	31.12	32.13
C	0.805	0.845	20.45	21.46
D	0.018	0.022	0.46	0.56
G	0.190	0.210	4.83	5.33
H	0.490	0.510	12.45	12.95
K	0.100	0.120	2.54	3.05
L	0.910	0.930	23.12	23.62
N	2.053	2.083	52.15	52.90
S	0.310	0.330	7.87	8.38
U	1.785	1.815	45.34	46.10
W	0.690	0.710	17.53	18.03
X	0.090	0.110	2.29	2.79
Y	0.290	0.310	7.37	7.87
Z	0.230	0.270	5.84	6.86

- STYLE 2:
- PIN 1. 24 V
 - GROUND
 - INPUT
 - GROUND
 - N/C
 - N/C
 - GROUND
 - OUTPUT
 - GROUND
 - 24 V

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MFF524B/D

