

# The RF Line

## 600 MHz CATV

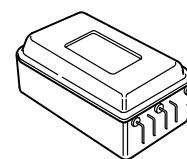
### Feedforward Amplifier

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 600 MHz CATV Applications
- Distortion Components Reduced more than 20 dB from Conventional CATV Hybrid Amplifiers
- Specified for 85-Channel Performance
- Fully Shielded Metal Package

**MFF324B**

**24 dB  
40–600 MHz  
85-CHANNEL  
CATV  
FEEDFORWARD  
AMPLIFIER**



**CASE 825A-03, STYLE 2**

#### MAXIMUM RATINGS

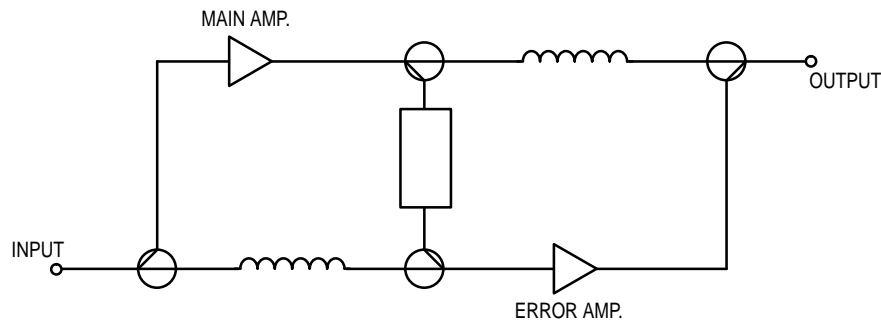
Rating	Symbol	Value	Unit
Supply Voltage	$V_{CC}$	28	V
RF Input Power	$P_{in}$	+55	dBmV
Storage Temperature Range	$T_{stg}$	–40 to +100	°C
Operating Case Temperature Range	$T_C$	–20 to +100	°C

#### 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	—	600	MHz
Power Gain — 50 MHz	$G_p$	23.4	24	24.6	dB
Slope	S	+0.4	—	+2.0	dB
Gain Flatness	—	—	—	$\pm 0.25$	dB
Return Loss — Input	IRL	18	—	—	dB
Return Loss — Output	ORL	18	—	—	dB
Cross Modulation Distortion ( $V_{out} = +44\text{ dBmV}$ per ch., ch. 2, —, H47)	XMD <sub>85</sub>	—	—	–68	dB
Composite Triple Beat ( $V_{out} = +44\text{ dBmV}$ per ch., ch. 2, —, H47)	CTB <sub>85</sub>	—	—	–73	dB
Noise Figure ( $f = 50\text{ MHz}$ ) ( $f = 600\text{ MHz}$ )	NF	— —	— —	9.0 12.5	dB
DC Current	$I_{DC}$	—	660	725	mA

#### PERFORMANCE DERATE versus TEMPERATURE (TYP)

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

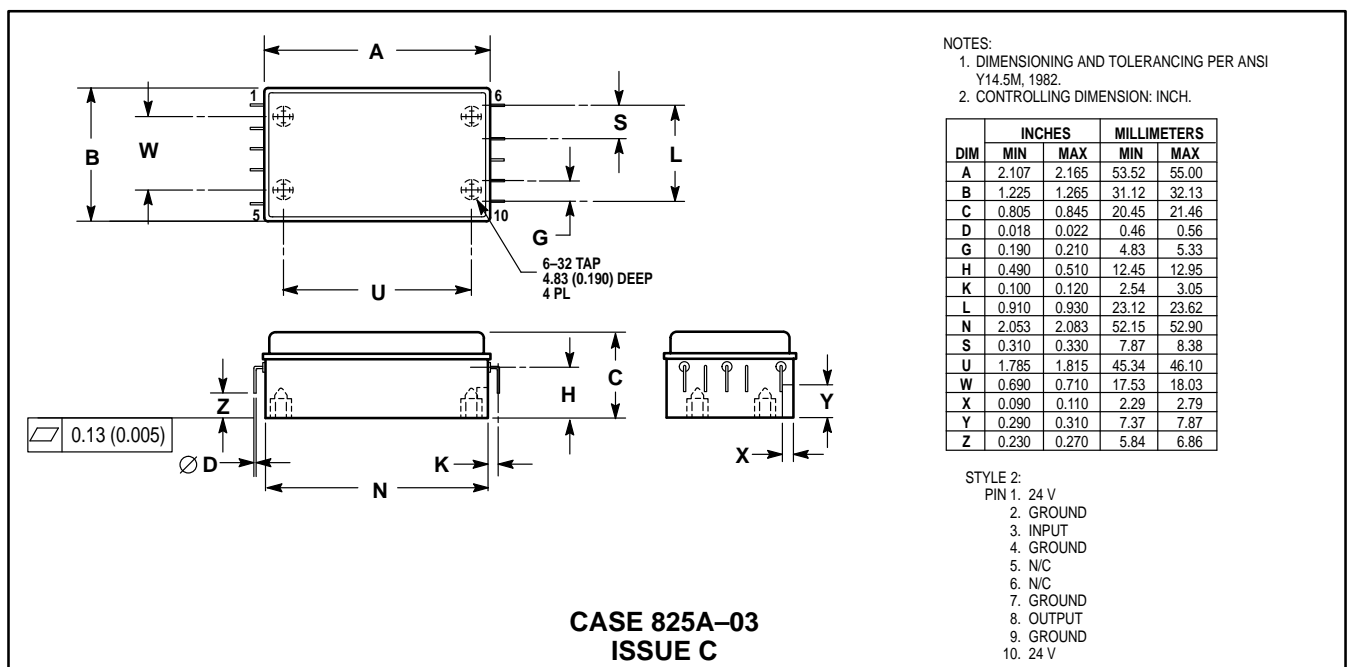


## PERFORMANCE MEASUREMENT

Motorola test fixture: P/N MFF124BTF is necessary for accurate measurement.

Figure 1. Block Diagram of Circuit

## PACKAGE DIMENSIONS



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MFF324B/D

