

FEATURES

- 21 dB Gain
- 40 MHz to 1 GHz Operating Range
- 0.4 dB Gain Flatness
- 24V Supply
- Supply Current: 250 mA (Typ.)
- Very Low Distortion & Noise
- Robust Design and Insensitive to Voltage Transients
- GaAs Monolithic IC-Based
- Standard SOT115J Package

APPLICATIONS

- Distribution Nodes, System Amplifiers, and Line Extenders in CATV Systems

PRODUCT DESCRIPTION

The ACA2764 is a GaAs Hybrid Amplifier for CATV HFC distribution systems. It consists of two pairs of parallel amplifiers that are optimized for exceptionally low distortion and noise figure. The ACA2764 is offered in a standard SOT115J package.

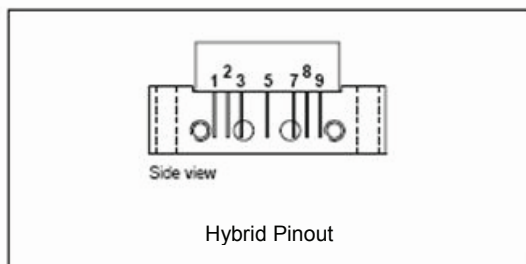
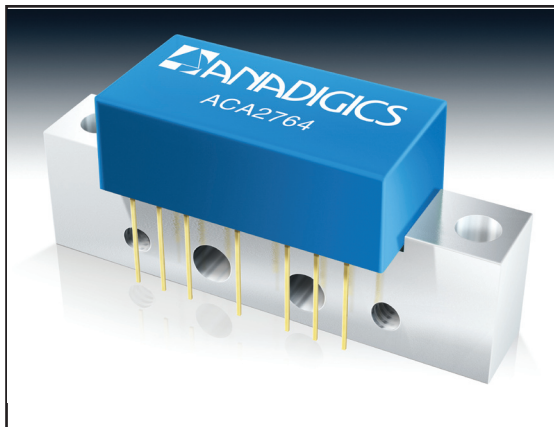


Figure 2: Hybrid Pinout

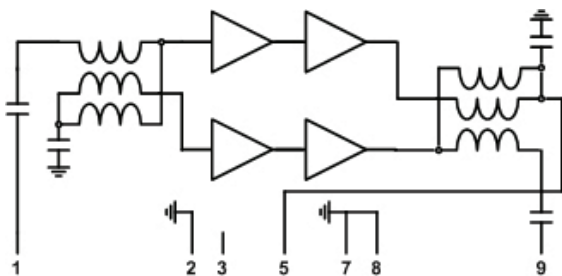


Figure 1: Simplified Hybrid Internal Arrangement

Table 1: SOJ115J Pinning

PIN	Description
1	RF Input
2	GND
3	GND or No Connection
5	24 V
7, 8	GND
9	RF Output

Table 2: Absolute Minimum and Maximum Ratings

	Symbol	Min	Typ	Max	Unit	Conditions
Supply Voltage	V _{DD}	-	+24	+28	V _{DC}	
RF Power at inputs	-	-	-	+70	dBmV	single tone
Operating mounting Base temperature	T _{MB}	-20	-	+100	°C	
Storage Temperature	T _{STG}	-40		+100	°C	

Table 3: Operating Ranges

	Symbol	Min	Typ	Max	Unit	Conditions
RF Frequency	-	40	-	1000	MHz	

Table 4: Electrical Characteristics(Test condition: 40 to 870 MHz, T_{MB} = 30°C, 75 Ω loading, see note 1)

	Symbol	Min	Typ	Max	Unit	Conditions
Power Gain	G _P	-	21	-	dB	
Slope cable equivalent	SL	-	0.4	-	dB	
Gain Flatness	FL	-	0.4	-	dB	
Input Return Loss	S ₁₁	-	-	-18	dB	
Output Return Loss	S ₂₂	-	-	-18	dB	
CTB	-	-	-70	-	dBc	See note 1
CSO	-	-	-69	-	dBc	See note 1
XMOD	-	-	-62	-	dBc	See note 1
Noise Figure	-	-	3.0	4.0	dB	
Supply Current	-	-	250	-	mA	

Note:

1. 128 flat NTSC Analog Channels; +40 dBmV/ch output power.

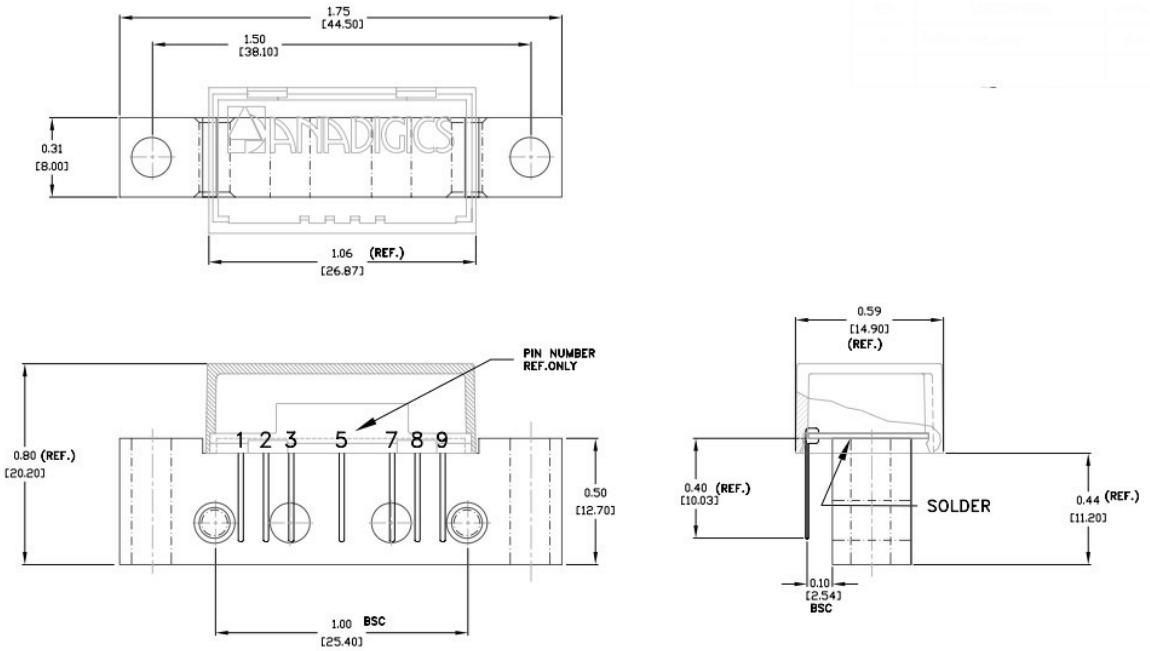


Figure 3: Hybrid Line Amp Physical Outline



ANADIGICS, Inc.
 141 Mount Bethel Road
 Warren, New Jersey 07059, U.S.A.
 Tel: +1 (908) 668-5000
 Fax: +1 (908) 668-5132

URL: <http://www.anadigics.com>

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