

Applications

- CATV Transmission
- Optical Node Amplifier
- Line Extender
- Trunk Amplifier

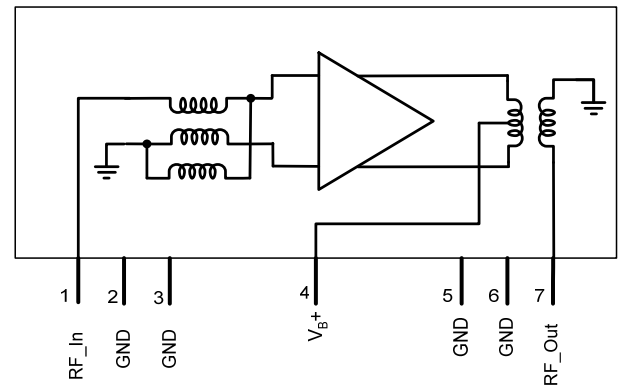


SOT115J Package

Product Features

- 50-1000 MHz Broadband Performance
- 26 dB Gain at 1000 MHz
- Stable gain over temperature
- Excellent Linearity
- Differential Output Stage for superior CSO
- +24 V Supply Voltage
- 440 mA Operating Current
- Industry Standard SOT-115J Package

Functional Block Diagram



General Description

The TAT8884HO is a 75 Ohm hybrid amplifier with a broadband frequency range of 50 to 1000 MHz. The TAT8884HO features high linearity and low noise.

The input and output of the amplifier module are 75 ohms DC coupled to ground. This module operates from a single +24V supply.

The TAT8884HO is packaged in a RoHS-compliant, industry standard SOT115J Package.

The TAT8884HO is targeted for use in CATV transmission and distribution applications.

Pin Configuration

Pin No.	Label
1	RF_In
2, 3, 5, 6, Flange	GND (Ground)
4	V _{B+}
7	RF_Out

Ordering Information

Part No.	Description
TAT8884HO	Hybrid Amplifier

Standard box size = 25 pieces

Absolute Maximum Ratings

Parameter	Rating
Storage Temperature	–40 to +105°C
RF Overload (single tone - 1 minute)	75 dBmV
Supply Voltage (V_B) 5 minutes max	30 V

Operation of this device outside the parameter ranges given above may cause permanent damage.

Recommended Operating Conditions

Parameter	Min	Typ	Max	Units
Supply Voltage (V_{B+})		+24		V
Supply Current	430	440	480	mA
Operating Temp. Range	–30		+100	°C

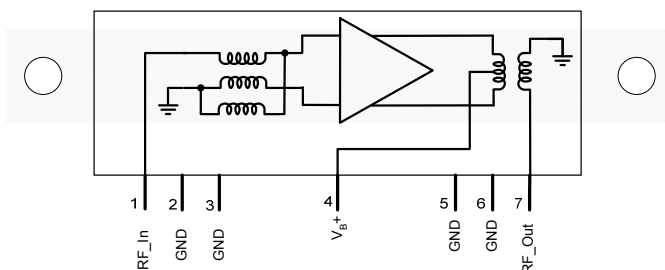
Electrical specifications are measured at specified test conditions. Specifications are not guaranteed over all recommended operating conditions. Temperature referenced at topside flange.

Electrical Specifications

Test conditions unless otherwise noted: $V_{B+} = +24$ V, Flange Temp. = +35°C, $Z_0 = 75$ ohms

Parameter	Conditions	Min	Typ	Max	Units
Operational Frequency Range		50		1000	MHz
Gain	$f = 1000$ MHz		25.7		dB
Gain Tilt			0.8		dB
Gain Flatness	Straight Line Reference		0.5		dB
Input Return Loss	50 to 1000 MHz		18		dB
Output Return Loss			20		dB
Noise Figure			5		dB
CSO	79 Ch. NTSC + 80 Ch. QAM -6 dB offset EQ Vout = +55 dBmV at 1 GHz with 18 dB tilt		-75		dBc
CTB			-78	-74	dBc
XMOD			-70	-62	dBc
CCN		59	62		dB
CSO	79 Ch. NTSC + 80 Ch. QAM -6 dB offset EQ Vout = +50 dBmV at 547.25 MHz with 13.5 dB tilt		-75		dBc
CTB			-74		dBc
XMOD			-64		dBc
CCN			62		dB
Supply Current			440		mA

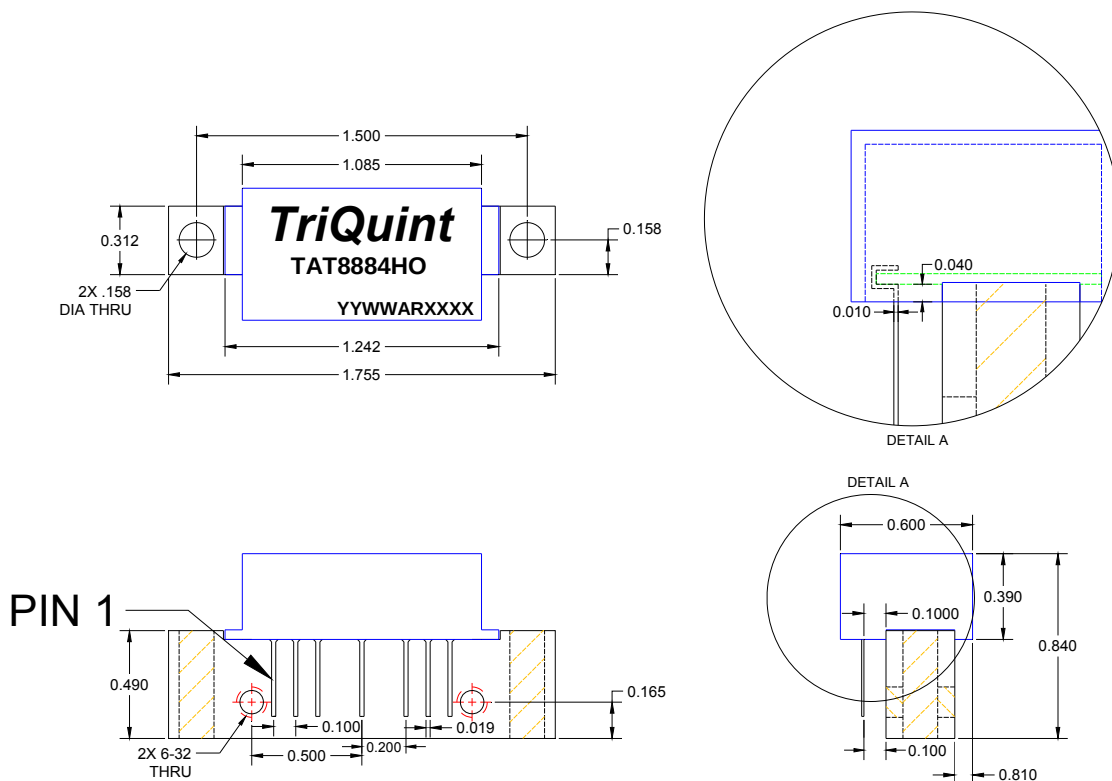
Pin Configuration and Description



Pin No.	Symbol	Description
1	RF_In	RF input. 75 Ohm
2, 3, 5, 6, Flange	GND (Ground)	RF/DC ground
4	V _B +	DC Supply
7	RF_Out	RF output. 75 Ohm .

Package Marking and Dimensions

Marking: Part number – TAT8884HO
 Assembly code – YYWWARXXXX (“Date code”, AR, “Lot code”)



Notes:

1. All dimensions are in mils. Angles are in degrees.
2. Flange material is aluminum with nickel plating

Product Compliance Information

ESD Sensitivity Ratings



Caution! ESD-Sensitive Device

ESD Rating: Class 2
Value: Passes $\geq 2,000$ V to $<4,000$ V
Test: Human Body Model (HBM)
Standard: JEDEC Standard JESD22-A114

ESD Rating: Class IV
Value: Passes $> 1,000$ V
Test: Charged Device Model (CDM)
Standard: JEDEC Standard JESD22-C101

Solderability

Convection or Infrared Reflow IPC/JEDEC J-STD-020

Non-hermetic package, wave flow soldering is not recommended

RoHS Compliance

This part is compliant with EU 2002/95/EC RoHS directive (Restrictions on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment).

This product also has the following attributes:

- Lead Free
- Halogen Free (Chlorine, Bromine)
- Antimony Free

Contact Information

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