

75 MHz CATV 26 dB Reverse Amplifier Module

1. Product profile

1.1 General description

Hybrid high dynamic range amplifier module designed for applications in CATV systems. with a bandwidth of 5 MHz to 75 MHz operating at a voltage supply of 24 V (DC) in a SOT115J package.

CAUTION



This device is sensitive to Electro Static Discharge (ESD). Therefore care should be taken during transport and handling.

1.2 Features and benefits

- Excellent linearity
- Low noise
- Low return loss
- Rugged construction

1.3 Applications

- Reverse amplifier in two-way CATV systems.

1.4 Quick reference data

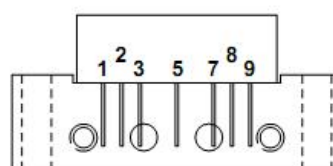
Bandwidth 5 MHz to 75 MHz; $V_B = 24\text{ V}$; $T_{mb} = 30\text{ }^\circ\text{C}$; $Z_S = Z_L = 75\ \Omega$

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
G_p	power gain	$f = 10\text{ MHz}$	25.5	26.0	27.0	dB
I_{tot}	total current	$V_B = 24\text{ V}$	110	120	135	mA

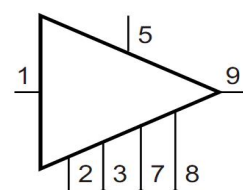
2. Pin information

Pin	Description
1	input
2	common
3	common
5	+ V_B
7	common
8	common
9	output

Simplified Outline



Graphic Symbol



3. Operating conditions

3.1 Limiting values

In accordance with the Absolute Maximum Rating System (IEC 60134) (TA = +25°C)

Parameter	Symbol	Min	Max	Unit
Supply Voltage	V _B	-	25	V
Input Voltage [1]	V _i	-	65	dBmV
Operating Case Temperature	T _c	-20	+100	°C
Storage Temperature	T _{stg}	-40	+100	°C

[1] In case of single tone

3.2 Recommended operating conditions (Z_s = Z_L = 75 Ω)

Parameter	Symbol	Test Conditions	MIN.	TYP.	MAX.	Unit
Supply Voltage	V _B		23.5	24.0	24.5	V
Operating Case Temperature	T _c		-20	+25	+85	°C

4. Electrical characteristics

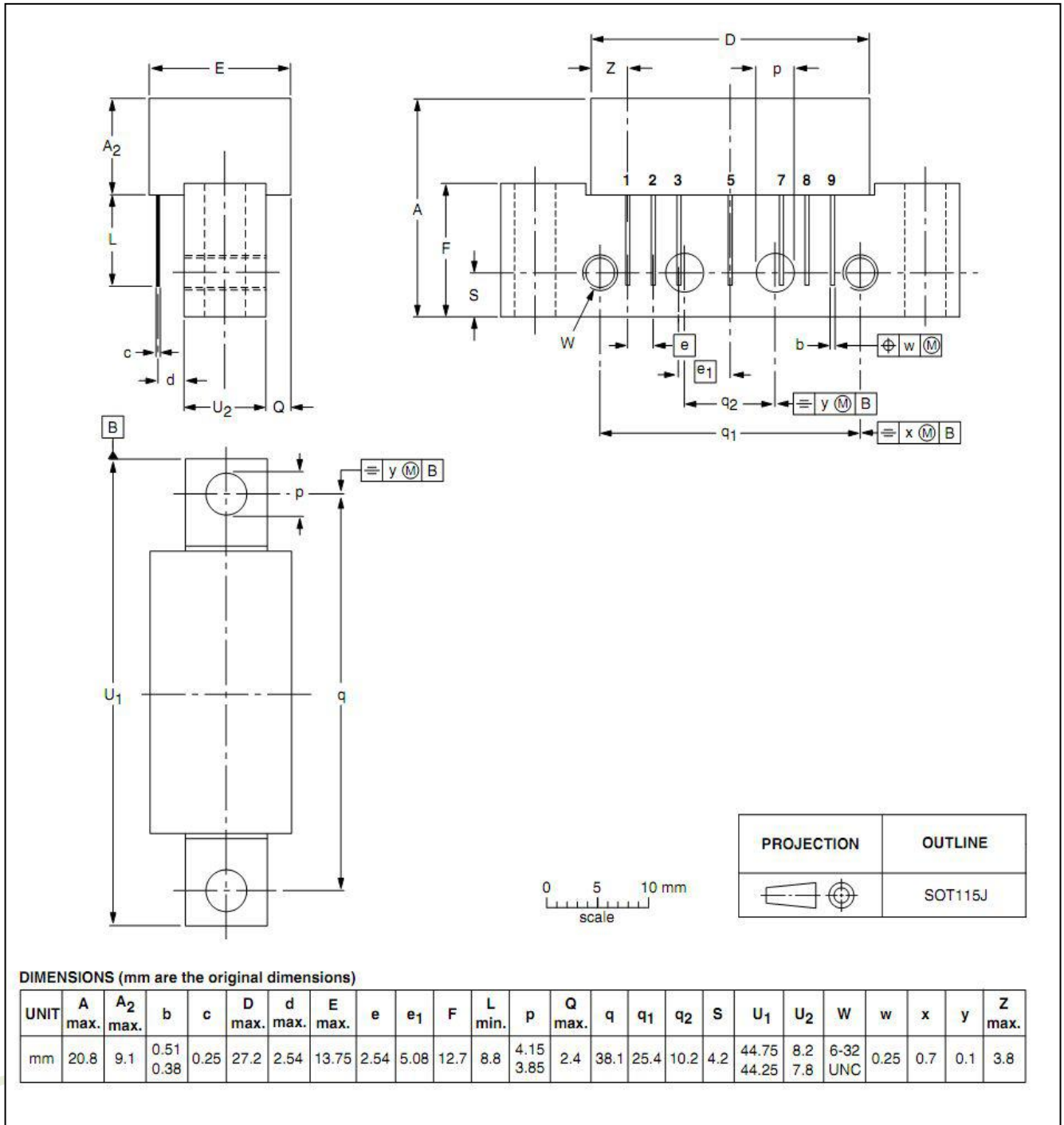
(T_c = 30±5°C, V_B = 24 V, Z_s = Z_L = 75 Ω)

Parameter	Symbol	Test Conditions	MIN.	TYP.	MAX.	Unit
Power Gain	G _p	f = 10 MHz	25.5	26.0	27.0	dB
Gain Slope	S _L	f = 5 to 75 MHz	-0.2	0.2	0.8	dB
Gain Flatness	FL	f = 5 to 75MHz	-	-	±0.3	dB
Noise Figure	NF	f = 75MHz	-	-	5.5	dB
Operating Current	I _B	V _B =24VDC, RF OFF	110	120	135	mA
Composite Triple Beat	CTB	4 channels, flat output level across the band V _o = 50dBmV at 77.25 MHz,	-	-66	-	dB
Cross Modulation	XM		-	-65	-	dB
Composite 2nd Order Beat	CSO		-	-70	-	dB
Input Return Loss	S ₁₁	f = 5 to 75 MHz	16	-	-	dB
Output Return Loss	S ₂₂	f = 5 to 75 MHz	16	-	-	dB

5. Package outline

Rectangular single-ended package; aluminum flange; 2 vertical mounting holes; 2 x 6-32 UNC and 2 extra horizontal mounting holes; 7 gold-plated in-line leads.

SOT115J



UNIT: mm

Comm Devices MFG Inc. 917 Westridge Dr. Milpitas, CA 95035

For sales or technical support, contact CDM at +1 408 809 6208 or customerservice@lineardevicesinc.com

The information in this publication is believed to be accurate. However, no responsibility is assumed by Comm Devices MFG Inc. ("CDM") for its use, nor for any infringement of patents or other rights of third parties resulting from its use. No license is granted by implication or otherwise under any patent or patent rights of CDM. CDM reserves the right to change component circuitry, recommended application circuitry and specifications at any time without prior notice.