

# 65MHz CATV 25dB 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 65 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 65 MHz; V\_B = 24 V; T\_mb = 30 °C; Z\_S = Z\_L = 75  $\Omega$  .

Symbol	Parameter	Conditions	Min	Тур	Мах	Unit
Gp	power gain	f = 10 MHz	24.5	25.0	26.0	dB
I <sub>tot</sub>	total current	VB = 24 V	130	145	160	mA

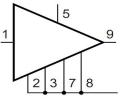
# 2. Pin information

Pin	Description
1	input
2	common
3	common
5	+V <sub>B</sub>
7	common
8	common
9	output

Simplified Outline

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Graphic Symbol





### **Operating conditions** 3.

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

Parameter	Symbol	Min	Max	Unit	
Supply Voltage	Vв	-	25	V	
Input Voltage <sup>[1]</sup>	Vi	-	65	dBmV 🗖	
Operating Case Temperature	Тс	-20	+90	°C	
Storage Temperature	Tstg	-40	+100	°C	

[1] In case of single tone

#### 3.2 **Recommended operating conditions** (Zs = ZL = 75 $\Omega$ )

Parameter	Symbol	Test Conditions	MIN.	TYP.	MAX.	Unit
Supply Voltage	Vв		23.5	24.0	24.5	V
Operating Case Temperature	Тс		-20	+25	+80	°C

#### 4. **Electrical characteristics**

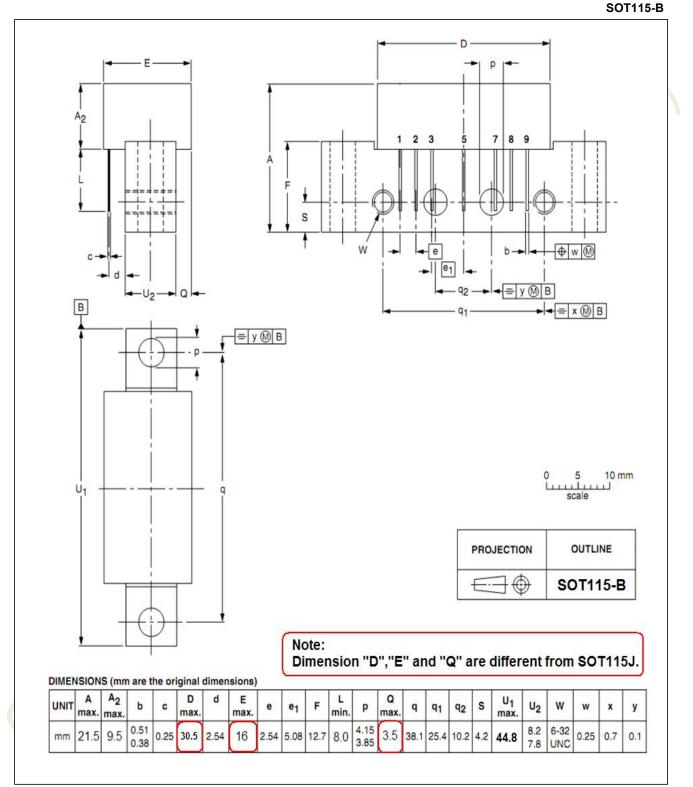
# $(Tc = 30\pm5^{\circ}C, V_B = 24 V, Z_S = Z_L = 75 \Omega) 0$

Parameter	Symbol	Test Conditions	MIN.	TYP.	MAX.	Unit
Power Gain	Gp	f = 10 MHz	24.5	25.0	26.0	dB
Gain Slope	SL	f = 5 to 65MHz	-0.2	0.2	0.8	dB
Gain Flatness	FL	f = 5 to 65 MHz	-	-	±0.3	dB
Noise Figure	NF	f = 65 MHz	-	5.0	5.5	dB
Operating Current	IB	VB=24VDC, RF OFF	130	145	160	mA
Composite Triple Beat	СТВ	4 channels, flat output level across the band VO = 50dBmV at 57.75 MHz,	_	-70	_	dB
Cross Modulation	ХМ		_	-68	-	dB
Composite 2nd Order Beat	CSO		-	-72	-	dB
Input Return Loss	S11	f = 5 to 65 MHz	17	_	_	dB
Output Return Loss	S22	f = 5 to 65 MHz	17	_	-	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.



### UNIT: mm

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