

## Features

Excellent linearity  
Extremely low noise  
Excellent return loss properties

## Applications

Single module line extender in CATV systems operating in the 5 to 200 MHz frequency range.

## Description

Hybrid high dynamic range amplifier module operating at a supply voltage of 24V(DC) in a SOT115J package. The Module consists of two cascaded stages both in cascade Configuration

## PIN CONFIGURATION

PIN	DESCRIPTION
1	input
2	common
3	common
5	+VB
7	common
8	common
9	output

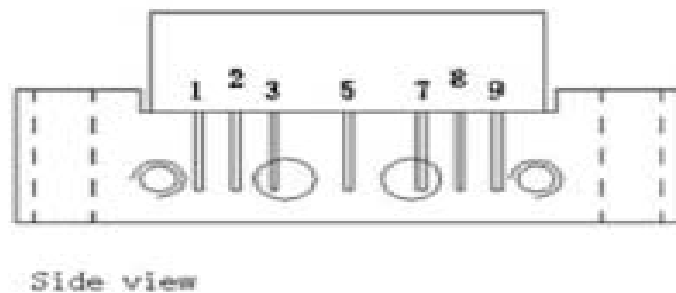


Fig.1 Simplified outline

## Quick Reference Data

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$G_p$	power gain	$f=10\text{MHz}$	23.0	24.5	dB
$I_{\text{tot}}$	total current consumption (DC)	$V_B=24\text{V}$	0	240	mA

## Limiting Values

In accordance with the Absolute Maximum Rating System (IEC 134).

SYMBOL	PARAMETER	MIN.	MAX.	UNIT
$V_B$	supply voltage	-	25	V
$V_i$	RF input voltage	-	55	dBmV
$T_{\text{stg}}$	storage temperature	-20	+100	°C
$T_{\text{mb}}$	mounting base operating temperature	-20	+100	°C

## Characteristics

Bandwidth 5 to 200 MHz;  $V_B=24V$ ;  $T_{case}=30^\circ C$  ;  $Z_s=Z_L=75\Omega$

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$G_p$	power gain	f=10MHz	23.0	24.5	dB
SL	slope cable equivalent	f=5 to 200 MHz	-0.2	1.0	dB
FL	flatness of frequency response	f=5 to 200 MHz	-	$\pm$ 0.35	dB
$S_{11}$	input return losses	f=5 to 200 MHz	18	-	dB
$S_{22}$	output return losses	f=5 to 200 MHz	16	-	dB
CTB	composite triple beat	16 channels flat; $V_o=50dBmV$ ;measured at 192.25 MHz	-	-65	dB
$X_{mod}$	cross modulation	16 channels flat; $V_o=50dBmV$ ;measured at 49.75 MHz	-	-60	dB
CSO	composite second order distortion	16 channels flat; $V_o=50dBmV$ ;measured at 193.25 MHz	-	-65	dB
$V_o$	output voltage	Dim= -60 dB; note 1	60	-	dBmV
F	noise figure	f =200MHZ	-	5.5	dB
$I_{tot}$	total current consumption (DC)	Note 2	0	240	mA

### Note:

1. Measured according to DIN45004B;  
 $f_p=184.25MHz$ ;  $V_p=V_o$ ;  $f_q=192.25MHz$ ;  
 $V_q=V_o-6dB$ ;  $f_r=194.25MHz$ ;  $V_r=V_o-6dB$ ;  
measured at  $f_p+f_r-f_q=186.25MHz$ .
2. The module normally operates at  $V_B=24V$ , but is able to withstand supply transients up to 28 V.

### Package Outline

Rectangular single-ended package; aluminum flange; 2 vertical mounting holes; 2  $\times$ 6-32 UNC AND 2 extra horizontal mounting holes; 7 gold-plated in-line leads

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