

Features

Excellent linearity
Extremely low noise
High gain
Excellent return loss properties

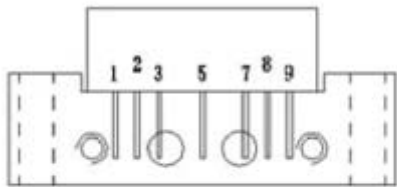
Applications

Single module line extender in CATV systems operating in the 5 to 75 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



Side view

Fig.1 Simplified outline

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

Quick Reference Data

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
G _p	power gain	f=10MHz	28.5	30	dB

I_{tot}	total current consumption (DC)	$V_B=24V$	110	135	mA
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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_{stg}	storage temperature	-20	+100	°C
T_{mb}	mounting base operating temperature	-20	+100	°C

Characteristics

Bandwidth 5 to 75 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	28.5	30	dB
		f=200MHz	31	-	dB
SL	slope cable equivalent	f=10 to 200 MHz	-0.2	1.0	dB
FL	flatness of frequency response	f=10 to 200 MHz	-	± 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	4 channels flat; $V_o=50dBmV$; measured at 77.25 MHz	-	-65	dB
X_{mod}	cross modulation	4 channels flat; $V_o=50dBmV$; measured at 49.75 MHz	-	-60	dB
CSO	composite second order distortion	4 channels flat; $V_o=50dBmV$; measured at 77.25 MHz	-	-65	dB
V_o	output voltage	Dim= -60 dB; note 1	62	-	dBmV
F	noise figure	f =75MHZ	-	5.5	dB
I_{tot}	total current consumption (DC)	Note 2	110	135	mA

Note:

1. Measured according to DIN45004B;
fp=65.75MHz; Vp=Vo; fq=77.25MHz;
Vq=Vo-6dB; fr=79.25MHz; Vr=Vo-6dB;
measured at fp+fr-fq=67.75MHz.
2. The module normally operates at VB=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 ×6-32 UNC AND 2 extra horizontal mounting holes; 7 gold-plated in-line leads

