



FEATURES

- Excellent linearity
- Extremely low noise
- Excellent return loss properties

APPLICATIONS

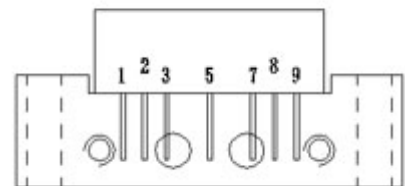
- Single module line extender in CATV systems operating in the 5 to 200 MHz frequency range.

DESCRIPTION

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

PINNING - SOT115U

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



Side view

Fig.1 Simplified outline

QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
G_p	power gain	$f=10\text{MHz}$	21.5	22.9	dB
I_{tot}	total current consumption (DC)	$V_B=24\text{V}$	145	195	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_{stg}	storage temperature	-20	+100	
T_{mb}	mounting base operating temperature	-20	+100	

 **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	$f=10MHz$	21.5	22.9	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	-	± 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	17 channels flat; $V_o=50dBmV$; measured at 200.25 MHz	-	-61	dB
X_{mod}	cross modulation	17 channels flat; $V_o=50dBmV$; measured at 49.75 MHz	-	-65	dB
CSO	composite second order distortion	17 channels flat; $V_o=50dBmV$; measured at 201.25 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	145	195	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; 2×6-32 UNC AND 2 extra horizontal mounting holes; 7 gold-plated in-line leads

