



FEATURES

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

APPLICATIONS

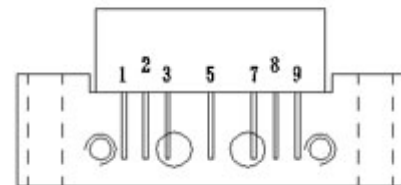
- Single module line extender in CATV systems operating in the 5 to 200 MHz frequency range.

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	$f=10\text{MHz}$	23.5	24.9	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 (1EC 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°C ; Z_s=Z_L=75Ω

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
G _p	power gain	f=10MHz	23.5	24.9	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;

fp=184.25MHz; Vp=V_o;

fq=192.25MHz; Vq=V_o-6dB;

fr=194.25MHz; Vr=V_o-6dB;

measured at fp+fr-fq=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

