



**FEATURES**

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

**PINNING - SOT115U**

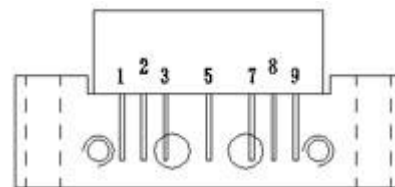
PIN	DESCRIPTION
1	input
2	common
3	common
5	+VB
7	common
8	common
9	output

**APPLICATIONS**

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

**DESCRIPTION**

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



Side view

Fig.1 Simplified outline

**QUICK REFERENCE DATA**

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$G_p$	power gain	$f=10\text{MHz}$	33.5	34.9	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 <sub>B</sub>	supply voltage	-	25	V
V <sub>i</sub>	RF input voltage	-	45	dBmV
T <sub>stg</sub>	storage temperature	-20	+100	°C
T <sub>mb</sub>	mounting base operating temperature	-20	+100	°C

 **CHARACTERISTICS**

Bandwidth 5 to 200 MHz; V<sub>B</sub>=24V; T<sub>case</sub>=30°C ; Z<sub>s</sub>=Z<sub>L</sub>=75Ω

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
G <sub>p</sub>	power gain	f=10MHz	33.5	34.9	dB
		f=200MHz	34	-	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 <sub>11</sub>	input return losses	f=5 to 200 MHz	18	-	dB
S <sub>22</sub>	output return losses	f=5 to 200 MHz	16	-	dB
CTB	composite triple beat	17 channels flat; V <sub>o</sub> =50dBmV; measured at 200.25 MHz	-	-62	dB
X <sub>mod</sub>	cross modulation	17 channels flat; V <sub>o</sub> =50dBmV; measured at 49.75 MHz	-	-64	dB
CSO	composite second order distortion	17 channels flat; V <sub>o</sub> =50dBmV; measured at 201.25 MHz	-	-63	dB
V <sub>o</sub>	output voltage	Dim= -60 dB; note 1	60	-	dBmV
F	noise figure	f =200MHZ	-	6.5	dB
I <sub>tot</sub>	total current consumption (DC)	Note 2	145	195	mA

**Note :**

1. Measured according to DIN45004B;

fp=184.25MHz; Vp=V<sub>o</sub>;

fq=192.25MHz; Vq=V<sub>o</sub>-6dB;

fr=194.25MHz; Vr=V<sub>o</sub>-6dB;

measured at fp+fr-fq=186.25MHz.

2. The module normally operates at V<sub>B</sub>=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

