

**Feature**

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

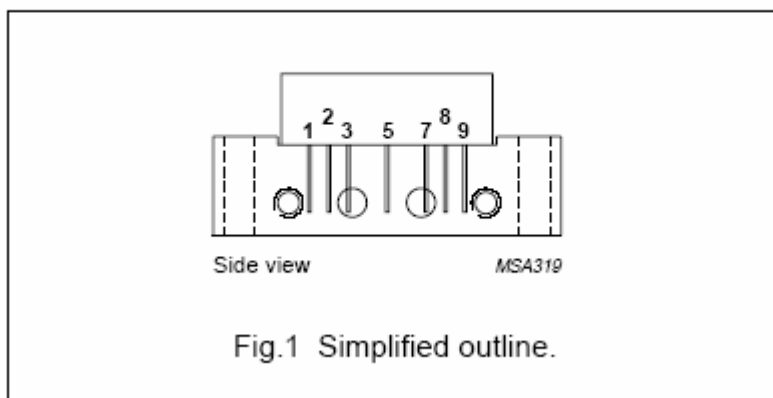
**Application**

Single module line extender in CATV systems operating in the 40 to 550 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.

**PIN CONFIGURATION**



Description	
1.	Monitor current
2.	Common
3.	Common
4.	-
5.	DC24V
6.	-
7.	Common
8.	Common
9.	Output

**Quick Reference Data**

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
G <sub>p</sub>	Power gain	F=50MHZ	33.5	-	35	dB
		F=550MHZ	35			dB
I <sub>tot</sub>	Total current consumption(DC)	V <sub>B</sub> =24V	290		320	mA

**Limiting Values**

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

Symbol	Parameter	Min.	Max.	Unit
Vi	RF input voltage	--	55	dBmV
Tstg	Storage temperature	-40	+100	°C
Tmb	Mounting base operating temperature	-20	+100	°C

**Characteristics**

Bandwidth 40 to 550MHz; VB=24V; Tcase=35°C; ZS=ZL=75

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
Gp	Power gain	f=50MHZ	33.5		35	dB
		f=550MHZ	35			dB
SL	Slope cable equivalent	f=40 to 550MHZ	0.5		2.5	dB
FL	Flatness of frequency response	f=40 to 550MHZ	-	-	±0.35	dB
S11	Input return losses	f=40 to 80MHz	20	-	-	dB
		f=80 to 160MHz	18	-	-	dB
		f=160 to 550MHz	18	-	-	dB
S22	Output return losses	f=40 to 80MHz	20			dB
		f=80 to 160MHz	18			dB
		f=160 to 550MHz	18			dB
CTB	Composite triple beat	60 channels flat; Vo=44dBmV; measured at 543.25MHz	-	-	-65	dB
Xmod	Cross modulation	60 channels flat; Vo=44dBmV; measured at 49.725MHz	-	-	-59	dB
CSO	Composite second order distortion	60 channels flat; Vo=44dBmV; measured at 544.5MHz	-	-	-65	dB
D2	Second order distortion	Note 1	-	-	-68	dB
Vo	Output voltage	Dim=-60dB, note 2	60	-	-	dBmV
F	Noise figure	f=50MHz	-	-	5	dB
		f=550MHz	-	-	6	dB
Itot	Total current consumption(DC)	Value; VB=24V; note 3	290		320	dB

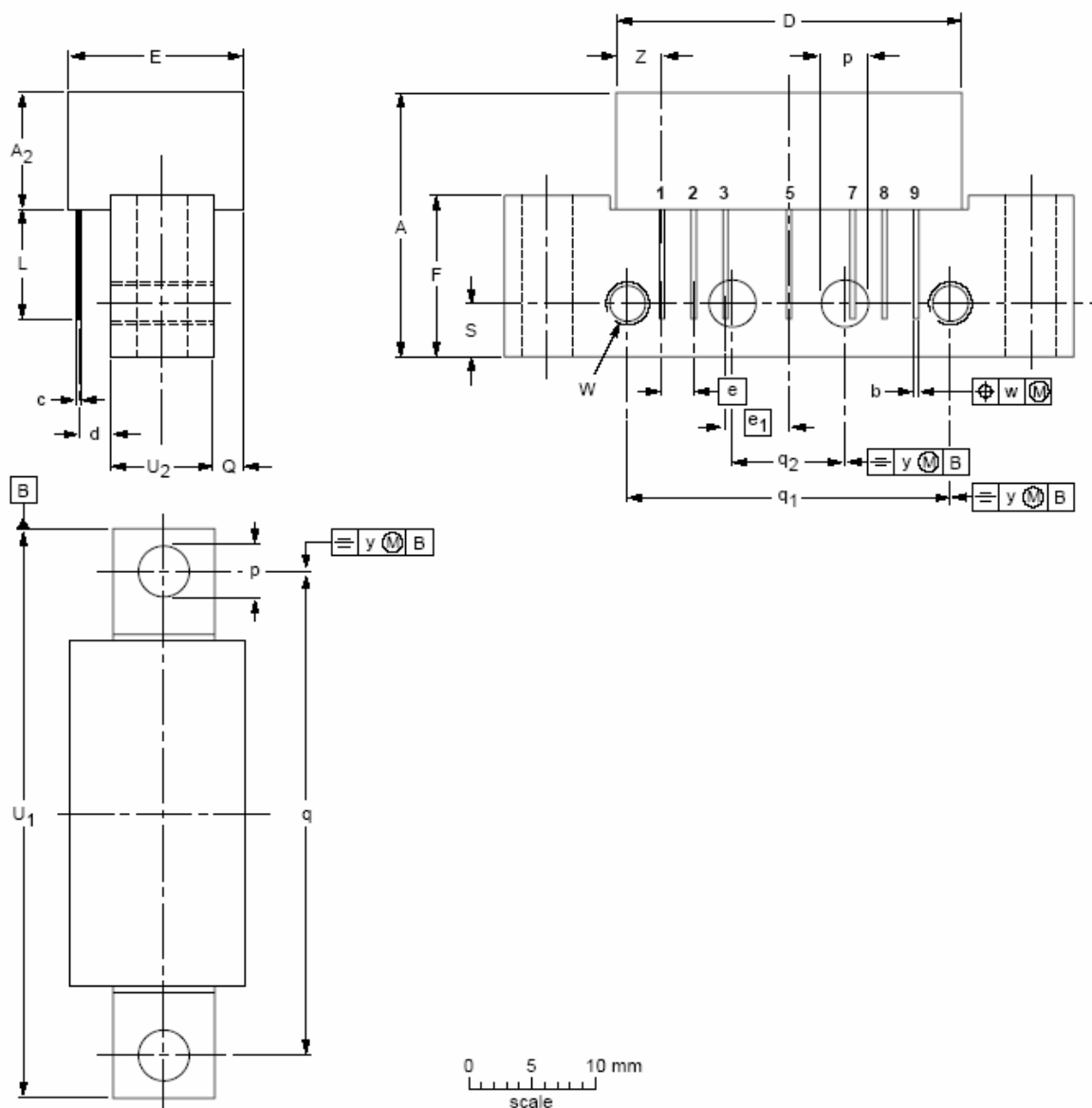
**Note:**

- fp=49.75MHz; Vp=44dBmV;  
fq=495.25MHz; Vq=44dBmV;  
measured at fp+fq=545MHz.
- Measured according to DIN45004B;  
fp=535.25MHz; Vp=Vo;  
fq=543.25MHz; Vq=Vo-6dB;  
fr=545.25MHz; Vr=Vo-6dB;  
measured at fp+fr-fq=537.25MHz.

3.The module normally operates at VB=24V,but is able to withstand supply transients up to 28 V.

**PACKAGE OUTLINE**

Rectangular single-ended package; aluminium flange; 2 vertical mounting holes; 2 x 6-32 UNC and 2 extra horizontal mounting holes; 7 gold-plated in-line leads SOT115J



DIMENSIONS (mm are the original dimensions)

UNIT	A max.	A <sub>2</sub> max.	b	c	D max.	d max.	E max.	e	e <sub>1</sub>	F	L min.	p	Q max.	q	q <sub>1</sub>	q <sub>2</sub>	s	U <sub>1</sub> max.	U <sub>2</sub>	W	w	y	Z max.
mm	20.8	9.1	0.51 0.38	0.25	27.2	2.54	13.75	2.54	5.08	12.7	8.8	4.15 3.65	2.4	38.1	25.4	10.2	4.2	44.75	8	6-32 UNC	0.25	0.1	3.8