

**Features**

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

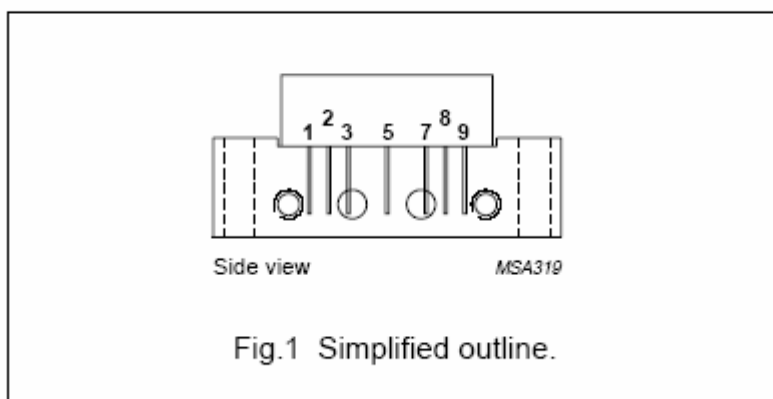
**Application**

Single module line extender in CATV systems operating in the 5 to 750 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.	Input
2.	Common
3.	Common
4.	-
5.	+V <sub>B</sub>
6.	-
7.	Common
8.	Common
9.	Output

**Quick Reference Data**

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
G <sub>p</sub>	Power gain	F=10MHZ	25	--	26.4	dB
		F=200MHZ	25	--	--	dB
I <sub>tot</sub>	Total current consumption(DC)	V <sub>B</sub> =24V	110	--	135	mA

**Limiting Values**

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

Symbol	Parameter	Min.	Max.	Unit
V <sub>i</sub>	RF input voltage	--	55	dBmV
T <sub>stg</sub>	Storage temperature	-40	+100	°C
T <sub>mb</sub>	Mounting base operating temperature	-20	+100	°C
V <sub>B</sub>	DC supply voltage	--	+25	V

**Characteristics**Bandwidth 40 to 550MHz; V<sub>B</sub>=24V; T<sub>case</sub>=35°C; Z<sub>S</sub>=Z<sub>L</sub>=75

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
G <sub>p</sub>	Power gain	f=10MHZ	25	--	26.4	dB
		f=200MHZ	25	--	--	dB
SL	Slope cable equivalent	f=10 to 200MHZ	-0.2	--	1.0	dB
FL	Flatness of frequency response	f=10 to 200MHZ	-	-	± 0.35	dB
S <sub>11</sub>	Input return losses	f=5 to 200MHz	18	-	-	dB
S <sub>22</sub>	Output return losses	f=5 to 200MHz	16	-	-	dB
CTB	Composite triple beat	4 channels flat; V <sub>o</sub> =50dBmV; measured at 77.25MHz	-	-	-65	dB
X <sub>mod</sub>	Cross modulation	4 channels flat; V <sub>o</sub> =50dBmV; measured at 49.75MHz	-	-	-60	dB
CSO	Composite second order distortion	4 channels flat; V <sub>o</sub> =50dBmV; measured at 77.25MHz	-	-	-65	dB
D <sub>2</sub>	Second order distortion		-	-	-65	dB
V <sub>o</sub>	Output voltage	Dim=-60dB,note 1	62	-	-	dBmV
F	Noise figure	f=75MHz	-	-	5.5	dB
I <sub>tot</sub>	Total current consumption(DC)	Value; V <sub>B</sub> =24V; note 2	110	--	135	mA

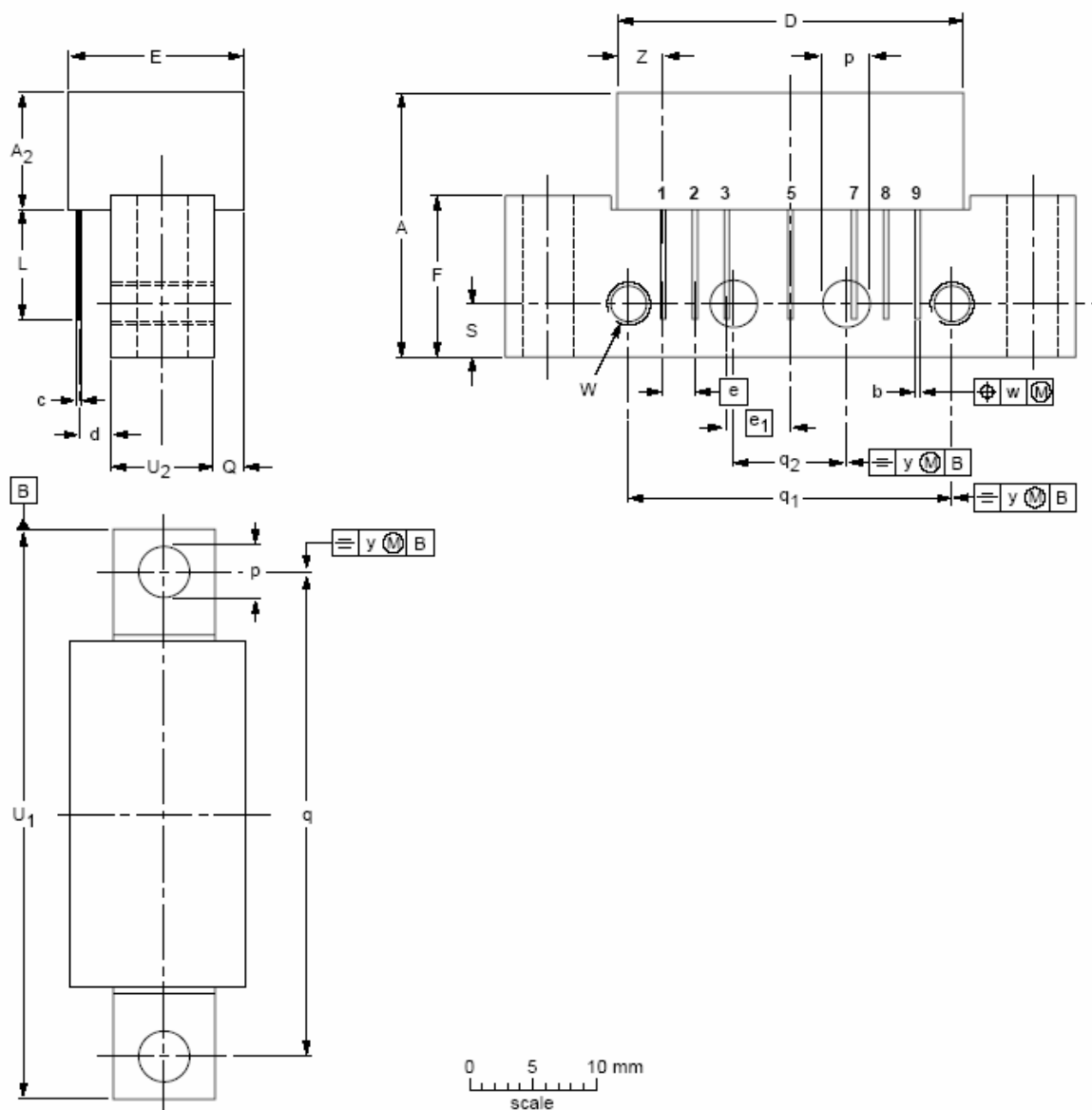
**Note:**

1. Measured according to DIN45004B;

f<sub>p</sub>=65.75MHz; V<sub>p</sub>=V<sub>o</sub>;f<sub>q</sub>=77.25MHz; V<sub>q</sub>=V<sub>o</sub>-6dB;f<sub>r</sub>=79.25MHz; V<sub>r</sub>=V<sub>o</sub>-6dB;measured at f<sub>p</sub>+f<sub>r</sub>-f<sub>q</sub>=67.75MHz.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; 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 dimension)



UNIT	A MAX.	A2 MAX.	b	c	D MAX.	d MAX.	E MAX.	e	e1	F	L MIN.	φP	Q MAX.	q	q1	q2	S	U1 MAX.	U2	W	w	y	Z MAX.
mm	21.0	9.1	0.55 0.45	0.25	27.2	3.5	13.75	2.54	5.08	12.7	8.2	4.2 3.8	2.4	38.1	25.4	10.2	4.2	45.2	8	6-32UNC OR: M4	0.25	0.1	4.0