

**Features**

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

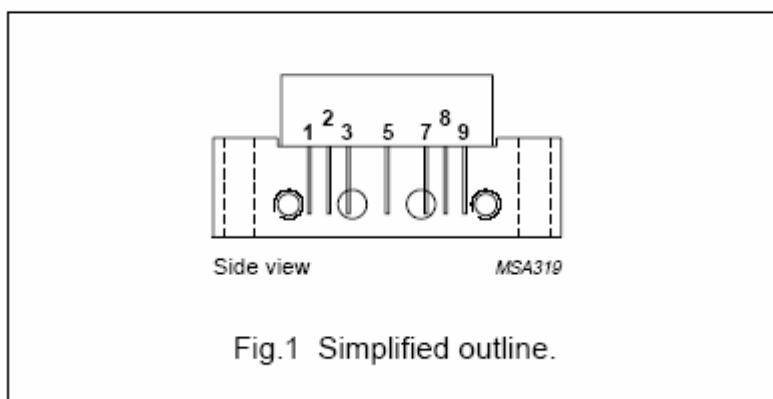
**Application**

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
$V_i$	RF input voltage	--	55	dBmV
Tstg	Storage temperature	-40	+100	°C
Tmb	Mounting base operating temperature	-20	+100	°C
$V_B$	DC supply voltage	--	+25	V

**Characteristics**

Bandwidth 40 to 550MHz;  $V_B=24V$ ;  $T_{case}=35^{\circ}C$ ;  $Z_S=Z_L=75$

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
Gp	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	-	-	$\pm 0.35$	dB
S11	Input return losses	f=5 to 200MHz	18	-	-	dB
S22	Output return losses	f=5 to 200MHz	16			dB
CTB	Composite triple beat	4 channels flat; $V_o=50dBmV$ ; measured at 77.25MHz	-	-	-65	dB
Xmod	Cross modulation	4 channels flat; $V_o=50dBmV$ ; measured at 49.75MHz	-	-	-60	dB
CSO	Composite second order distortion	4 channels flat; $V_o=50dBmV$ ; measured at 77.25MHz	-	-	-65	dB
D2	Second order distortion		-	-	-65	dB
$V_o$	Output voltage	Dim=-60dB,note 1	62	-	-	dBm V
F	Noise figure	f=75MHz	-	-	5.5	dB
I <sub>tot</sub>	Total current consumption(DC)	Value; $V_B=24V$ ; note 2	110	--	135	mA

**Note:**

1.Measured according to DIN45004B;

$f_p=65.75MHz$ ;  $V_p=V_o$ ;

$f_q=77.25MHz$ ;  $V_q=V_o-6dB$ ;

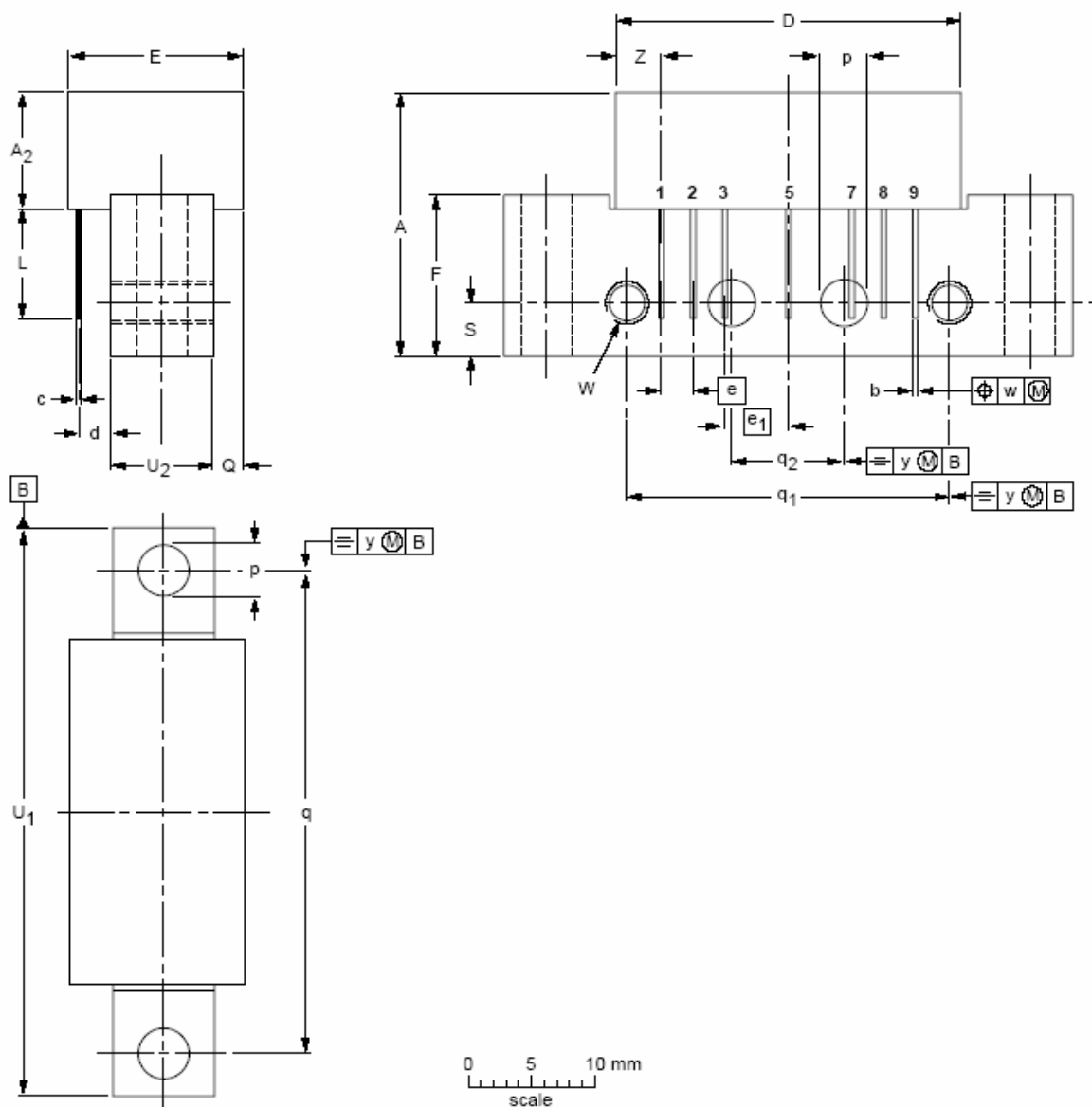
$f_r=79.25MHz$ ;  $V_r=V_o-6dB$ ;

measured at  $f_p+f_r-f_q=67.75MHz$ .

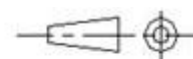
2.The module normally operates at  $V_B=24V$ ,but is able to withstand supply transients up to 28 V.

**PACKAGE OUTLINE**

Rectangular single-ended package; 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