

CATV Amplifier Module

Features

- Excellent linearity
- Extremely low noise
- Silicon nitride passivation
- Rugged construction
- TiPtAu metallized crystals ensure optimal reliability.

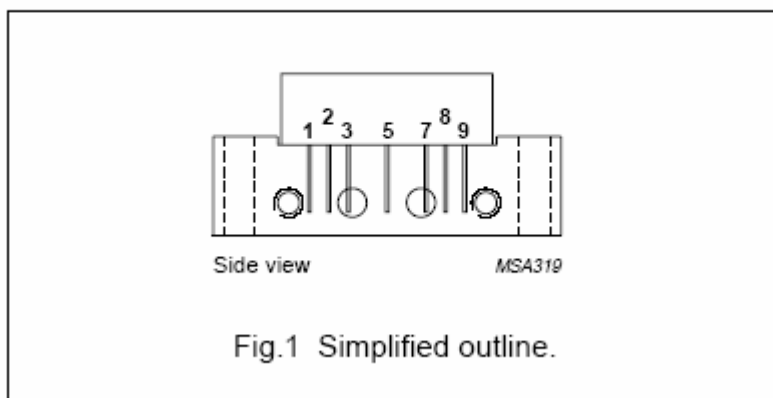
Application

CATV systems in the 40 to 550MHz frequency range and intended for use as a line-extender.

DESCRIPTION

Hybrid amplifier module in a SOT115J package operating with a voltage supply of +24V (DC).

PIN CONFIGURATION



Description	
1.	Input
2.	Common
3.	Common
4.	-
5.	+V _B
6.	-
7.	Common
8.	Common
9.	Output

Quick Reference Data

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
G _p	Power gain	F=50MHZ	26.2	--	27.8	dB
		F=550MHZ	27.5	--	--	dB
I _{tot}	Total current consumption(DC)	V _B =24V	--	--	340	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
T _{stg}	Storage temperature	-40	+100	°C
T _{mb}	Mounting base operating temperature	-20	+100	°C
V _B	DC supply voltage	--	+28	V

CharacteristicsBandwidth 40 to 550MHz; V_B=24V; T_{case}=35°C; Z_S=Z_L=75

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
G _p	Power gain	f=50MHz	26.2	--	27.8	dB
		f=550MHz	27.5	--	--	dB
SL	Slope cable equivalent	f=40 to 550MHz	0.5	--	2.5	dB
FL	Flatness of frequency response	f=40 to 550MHz	-	-	±0.4	dB
S ₁₁	Input return losses	f=40 to 80MHz	20	-	-	dB
		f=80to160MHz	19	-	-	dB
		f=160to550MHz	18	-	-	dB
S ₂₂	Output return losses	f=40 to 80MHz	20			dB
		f=80 to160MHz	19			dB
		f=160 to 550MHz	18			dB
CTB	Composite triple beat	77 channels flat; V _o =44dBmV; measured at 547.25MHz	-	-	-57	dB
X _{mod}	Cross modulation	77channels flat; V _o =44dBmV; measured at 55.25MHz	-	-	-60	dB
CSO	Composite second order distortion	77 channels flat; V _o =44dBmV; measured at 548.5MHz	-	-	-57	dB
D ₂	Second order distortion	Note 1	-	-	-68	dB
V _o	Output voltage	Dim=-60dB,note 2	61	-	-	dBm V
F	Noise figure	f=550MHz	-	-	6.5	dB
I _{tot}	Total current consumption(DC)	Value; V _B =24V; note 3	--	--	340	mA

Notes

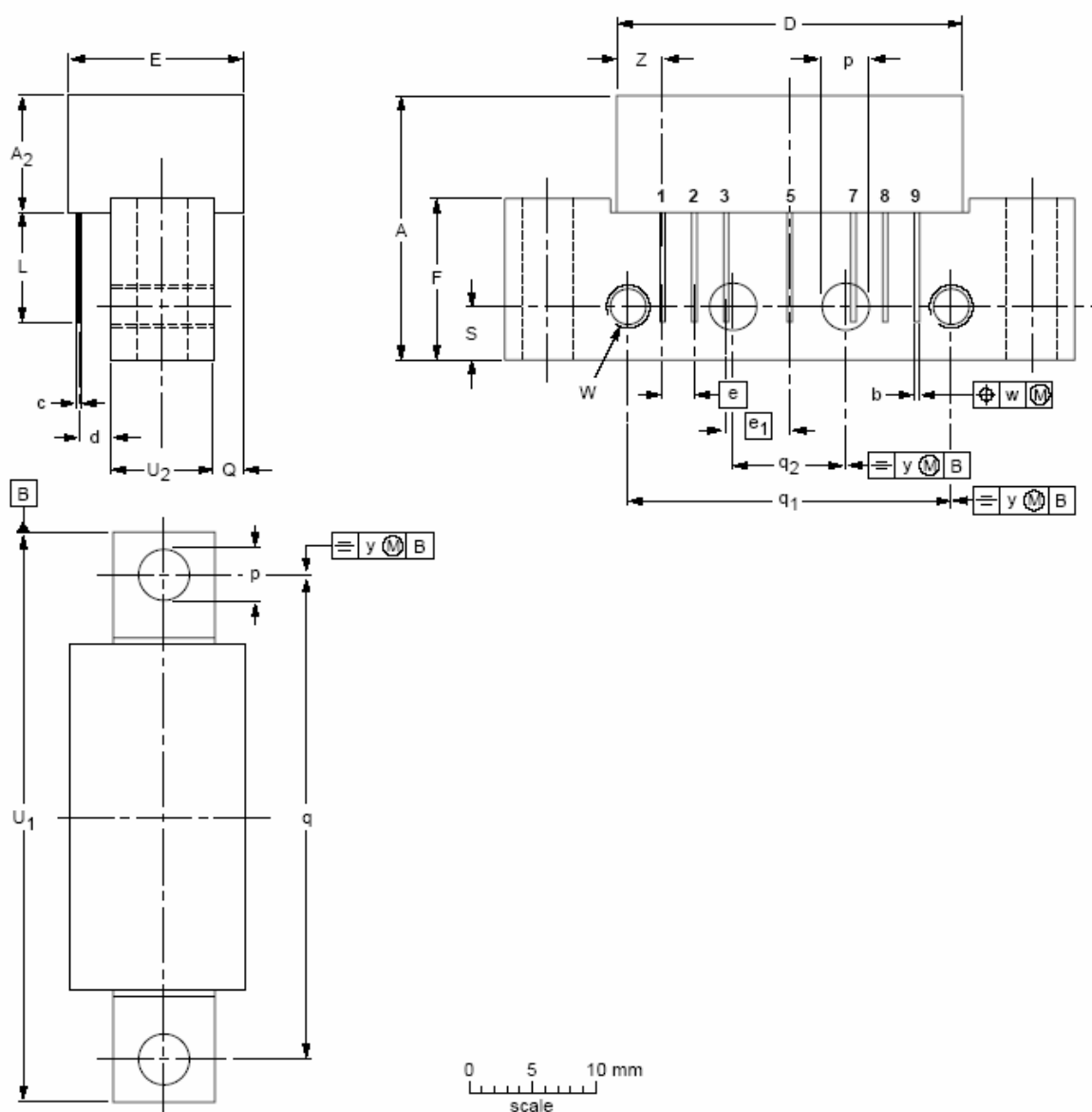
- f_p=55.25MHz; V_p=44dBmV;
f_q=493.25MHz; V_q=44dBmV;
measured at f_p+f_q=548.5MHz.
- Measured according to DIN45004B;

$f_p=540.25\text{MHz}$; $V_p=V_o=66.5\text{dBmV}$;
 $f_q=547.25\text{MHz}$; $V_q=V_o-6\text{dB}$;
 $f_r=549.25\text{MHz}$; $V_r=V_o-6\text{dB}$;
 measured at $f_p+f_q-f_r=538.25\text{MHz}$.

3.The module normally operates at $V_B=+24\text{V}$, but is able to withstand supply transients up to 30V.

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 ₂ max.	b	c	D max.	d max.	E max.	e	e ₁	F	L min.	p	Q max.	q	q ₁	q ₂	S	U ₁ max.	U ₂	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 3.85	2.4	38.1	25.4	10.2	4.2	44.75	8	6-32 UNC	0.25	0.1	3.8