

5VDC, 860 MHz 34dB gain, CATV push-pull integrated circuit

★ **FEATURES**

- Excellent linearity
- Excellent distortion performance
- High gain
- Extremely low noise
- Excellent return loss properties
- High reliability
- Low power consumption

PINNING — SOT115J

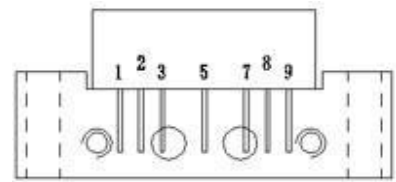
PIN	DESCRIPTION
1	Input
2	Common
3	Common
5	+VB
7	Common
8	Common
9	Output

★ **APPLICATIONS**

For CATV systems operating over a frequency range of 40 to 860 MHz, Supply voltage is 5VDC.

★ **DESCRIPTION**

KF834T-5 in a SOT115J package, operating at a supply voltage of 5V (DC), and intended for use as a line-extender or terminal integrated circuit.



Side view

Fig.1 Simplified outline

★ **QUICK REFERENCE DATA**

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
G_p	power gain	f=50MHz	33.5	35.0	dB
		f=860MHz	34.0	-	dB
I_{tot}	total current consumption (DC)	VB= +5VDC	300	360	mA

5VDC, 860 MHz 34dB gain, CATV push-pull integrated circuit

★ **LIMITING VALUES**

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

SYMBOL	PARAMETER	MIN.	MAX.	UNIT
VB	supply voltage		5.2	V
V_i	RF input voltage [1]	-	40	dBmV
T_{stg}	storage temperature	-20	+100	°C
T_{mb}	operating mounting base temperature	-20	+80	°C

[1] In case of single tone

★ **CHARACTERISTICS**

Bandwidth 40 to 860 MHz; VB = +5VDC; Tmb =25 °C; Zs =ZL =75 Ω 。

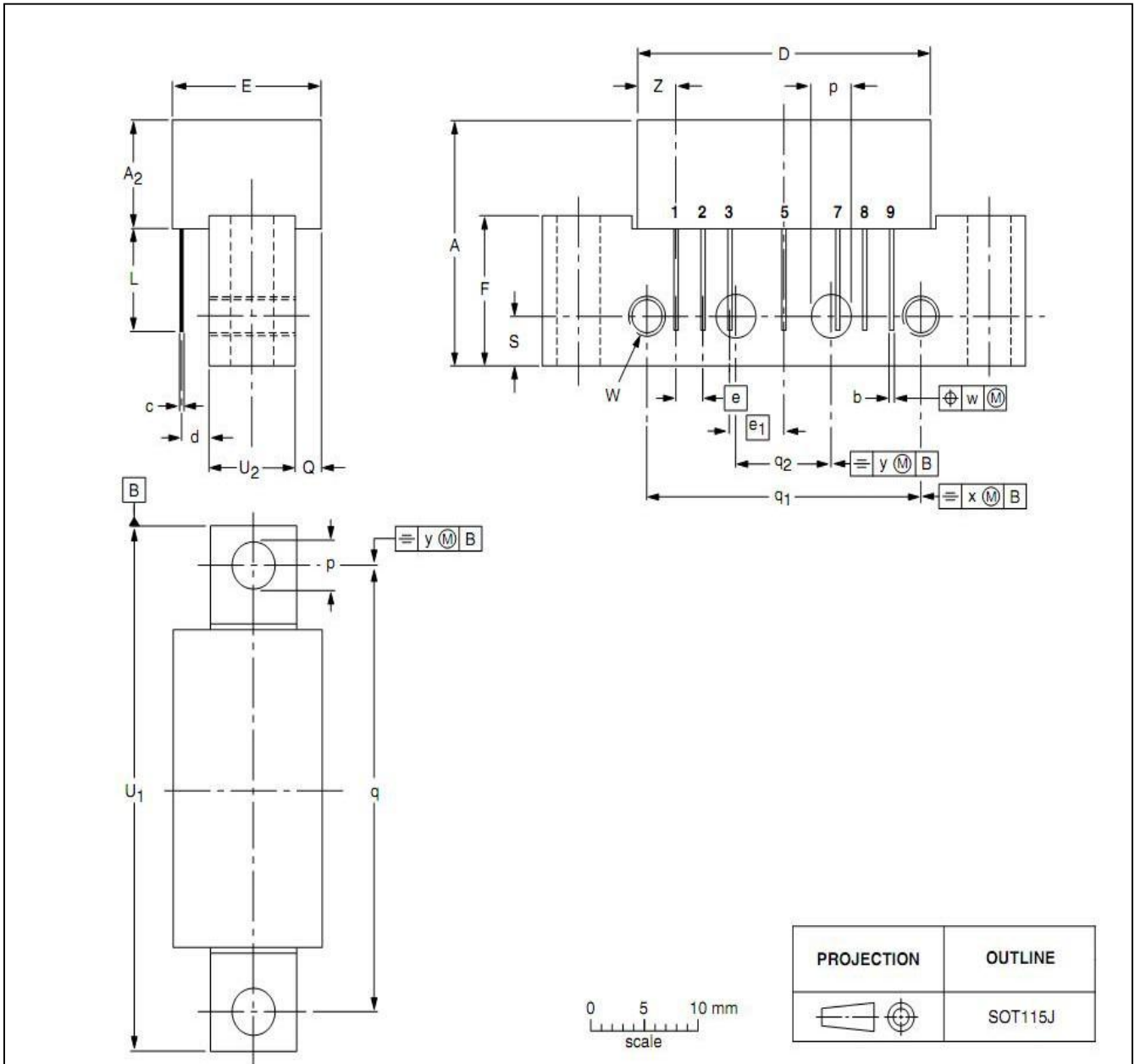
SYMBOL	PARAMETER	CONDITIONS	Typ.	MIN.	MAX.	UNIT
Gp	power gain	f=50MHz	34.2	33.5	35.0	dB
		f=860MHz		34.0		dB
SL	slope cable equivalent	f=40 to 860 MHz	1.0	0.5	2.0	dB
FL	flatness of frequency response	f=40 to 860 MHz			±0.50	dB
S11	input return losses	f=40 to 860 MHz		16		dB
S22	output return losses	f=40 to 860 MHz		14		dB
CTB	Composite Triple Beat	PAL-D, 60 channels flat; Vo = 44 dBmV; measured at 543.25 MHz	-55	-53		dB
CSO	Composite 2nd Order Beat		-57	-55		dB
F	Noise figure				7.0	dB
I _{tot}	total current consumption (DC)	VB=+5VDC,RF OFF	330	300	360	mA

5VDC, 860 MHz 34dB gain, CATV push-pull integrated circuit

★ **PACKAGE OUTLINE**

Rectangular single-ended package; aluminum 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	U ₂	W	w	x	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 44.25	8.2 7.8	6-32 UNC	0.25	0.7	0.1	3.8