

860MHz 34dB Gain CATV forward Integrated Circuit

★ FEATURES

- Excellent linearity
- Excellent distortion performance
- Extremely low noise
- Extremely low Power
- Excellent return loss properties

★ APPLICATIONS

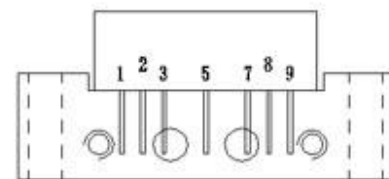
For CATV systems operating over a frequency range of 40 to 860MHz.

PINNING — SOT115J

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

★ DESCRIPTION

KB834-3.5 in a SOT115J package, operating at a supply voltage of 3.5V (DC), and intended for use as a line-extender.



Side view

Fig.1 Simplified outline

★ QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
G _p	power gain	f=50MHz	33.5	34.0	35.0	dB
		f=860MHz	34.5	-	-	dB
I _{tot}	total current consumption (DC))	VB= +3.5V	95	110	125	mA

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★ LIMITING VALUES

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

SYMBOL	PARAMETER	MIN.	MAX.	UNIT
VB	supply voltage	-	3.8	V
V _i	RF input voltage	-	45	dBmV
T _{stg}	storage temperature	-20	+100	°C
T _{mb}	operating mounting base temperature	-20	+80	°C

★ CHARACTERISTICS

Bandwidth 40 to 860MHz; VB = 3.5 V; T_{mb} = 25 °C; Z_S = Z_L = 75 Ω .

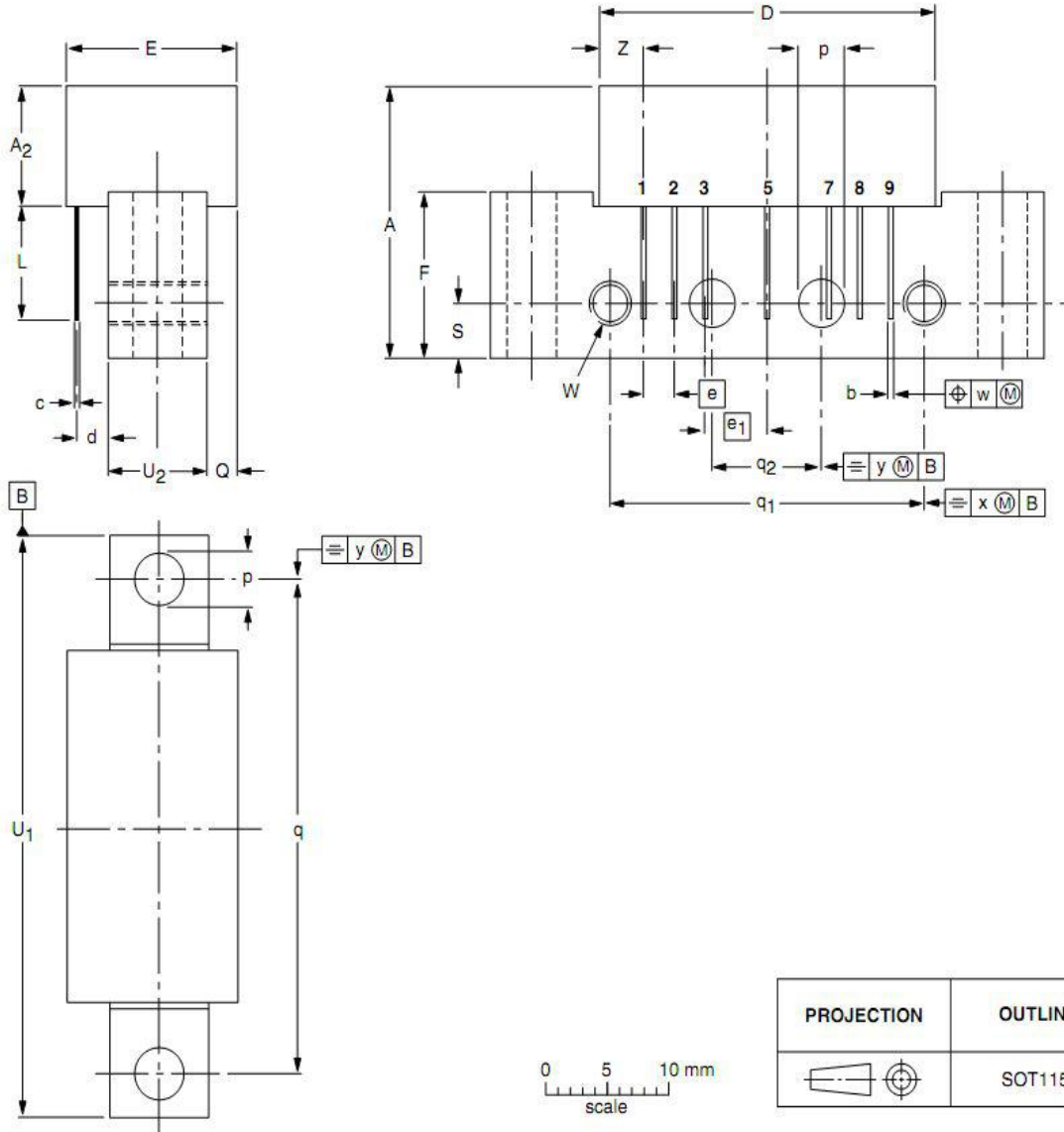
SYMBOL	PARAMETER	CONDITIONS	MIN	Typ	MAX	UNIT
G _p	power gain	f=50MHz	33.5	34.0	35.0	dB
SL	slope cable equivalent	f=50 to 860MHz	0.5	1.0	2.0	dB
FL	flatness of frequency response	f=50 to 860MHz	-	-	±0.5	dB
S ₁₁	input return losses	f=50 to 700MHz	16	-	-	dB
		f=700 to 860MHz	16	-	-	
S ₂₂	output return losses	f=40 to 700 MHz	16	-	-	dB
		f=700 to 860MHz	16	-	-	
CTB	composite triple beat	60 channels, V _O = 40dBmV at 543.25 MHz, flat output level across the band	-	-60	-	dB
CSO	composite second order distortion		-	-58	-	dB
X _{mod}	cross modulation		-	-58	-	dB
F	noise figure		-	-	6.5	dB
I _{tot}	total current consumption (DC)	VB=+3.5V	95	110	125	mA

★ PACKAGE OUTLINE

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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	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

UNIT: mm