2SA836

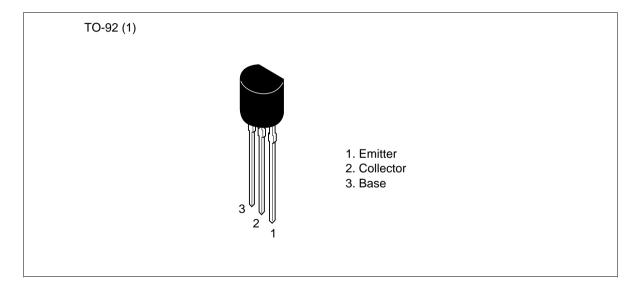
Silicon PNP Epitaxial

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Application

Low frequency low noise amplifier

Outline





2SA836

Absolute Maximum Ratings ($Ta = 25^{\circ}C$)

Item	Symbol	Ratings	Unit
Collector to base voltage	V _{CBO}	-55	V
Collector to emitter voltage	V _{CEO}	-55	V
Emitter to base voltage	V _{EBO}	-5	V
Collector current	Ι _c	-100	mA
Emitter current	Ι _Ε	100	mA
Collector power dissipation	Pc	200	mW
Junction temperature	Тј	150	°C
Storage temperature	Tstg	-55 to +150	°C

Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Тур	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	-55	_	_	V	$I_{c} = -10 \ \mu A, \ I_{E} = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-55	—	—	V	$I_c = -1$ mA, $R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	-5	—	—	V	$I_{\rm E} = -10 \ \mu A, \ I_{\rm C} = 0$
Collector cutoff current	I _{CBO}	_		-100	nA	$V_{\rm CB} = -18$ V, $I_{\rm E} = 0$
Emitter cutoff current	I _{EBO}			-50	nA	$V_{\rm EB} = -2 V, I_{\rm C} = 0$
DC current transfer ratio	h_{FE}^{*1}	160		500		$V_{ce} = -12 \text{ V}, I_c = -2 \text{ mA}$
Collector to emitter saturation voltage	$V_{\text{CE(sat)}}$	_	-0.1	-0.5	V	$I_{c} = -10 \text{ mA}, I_{B} = -1 \text{ mA}$
Base to emitter voltage	V_{BE}	_	-0.66	-0.75	V	$V_{ce} = -12 \text{ V}, \text{ I}_{c} = -2 \text{ mA}$
Gain bandwidth product	f _T		200	_	MHz	$V_{ce} = -12 \text{ V}, I_e = -2 \text{ mA}$
Collector output capacitance	Cob	—	2.0	—	pF	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$
Noise figuer	NF	_	1	5	dB	$V_{ce} = -6 V$, $f = 10 Hz$
		—	0.5	1	dB	$I_{c} = -0.1 \text{mA}, \qquad f = 1 \text{ kHz}$ $R_{g} = 10 \text{ k}\Omega$

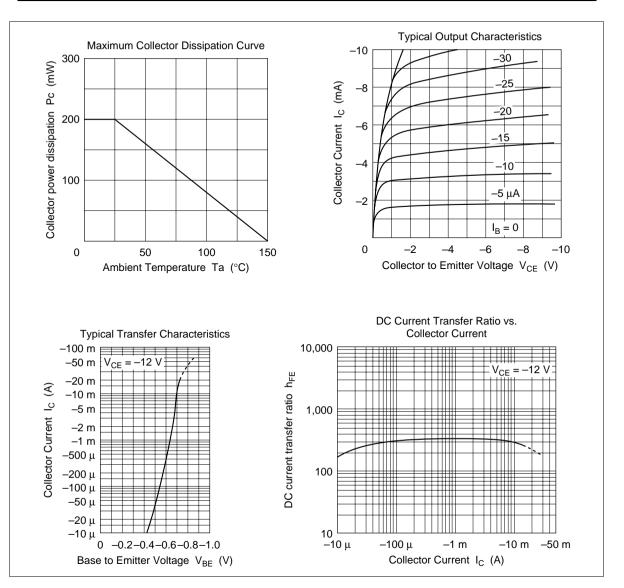
Note: 1. The 2SA836 is grouped by $h_{\mbox{\tiny FE}}$ as follows.

С

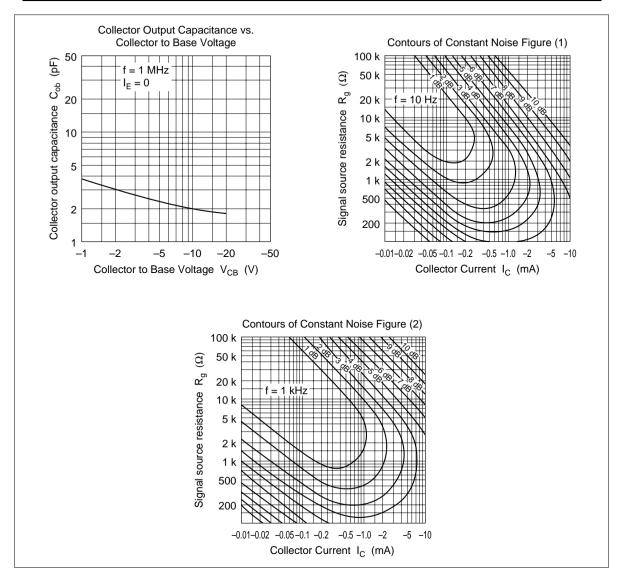
160 to 320 250 to 500

D

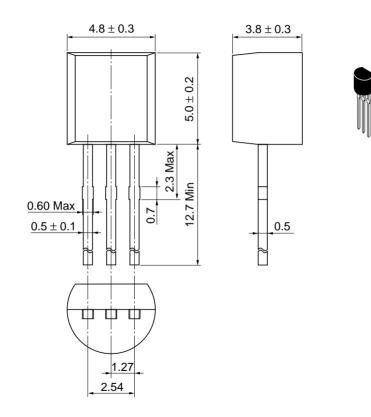
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2SA836



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Hitachi Code	TO-92 (1)
JEDEC	Conforms
EIAJ	Conforms
Weight (reference value)	0.25 g

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