
2SC2853, 2SC2854

Silicon NPN Epitaxial

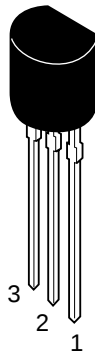
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Application

- Low frequency amplifier
- Complementary pair with 2SA1188 and 2SA1189

Outline

TO-92 (1)



1. Emitter
2. Collector
3. Base

2SC2853, 2SC2854

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	2SC2853	2SC2854	Unit
Collector to base voltage	V_{CBO}	90	120	V
Collector to emitter voltage	V_{CEO}	90	120	V
Emitter to base voltage	V_{EBO}	5	5	V
Collector current	I_C	100	100	mA
Emitter current	I_E	−100	−100	mA
Collector power dissipation	P_C	400	400	mW
Junction temperature	T_j	150	150	°C
Storage temperature	T_{stg}	−55 to +150	−55 to +150	°C

Electrical Characteristics (Ta = 25°C)

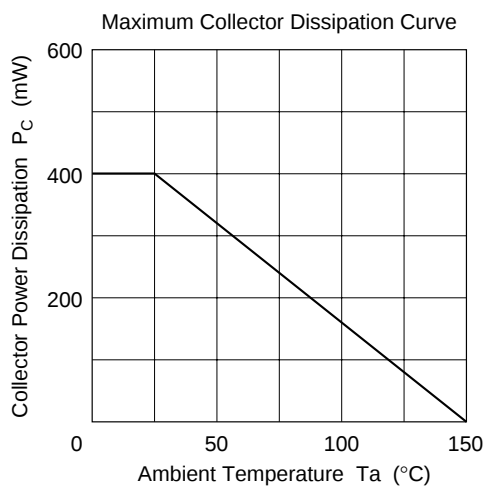
Item	Symbol	2SC2853			2SC2854			Unit	Test conditions
		Min	Typ	Max	Min	Typ	Max		
Collector to base breakdown voltage	$V_{(BR)CBO}$	90	—	—	120	—	—	V	$I_C = 10\text{ }\mu\text{A}$, $I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	90	—	—	120	—	—	V	$I_C = 1\text{ mA}$, $R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	5	—	—	5	—	—	V	$I_E = 10\text{ }\mu\text{A}$, $I_C = 0$
Collector cutoff current	I_{CBO}	—	—	0.1	—	—	0.1	μA	$V_{CB} = 70\text{ V}$, $I_E = 0$
Emitter cutoff current	I_{EBO}	—	—	0.1	—	—	0.1	μA	$V_{EB} = 2\text{ V}$, $I_C = 0$
DC current transfer ratio	h_{FE}^{*1}	250	—	800	250	—	800		$V_{CE} = 12\text{ V}$, $I_C = 2\text{ mA}^{*2}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	0.05	0.10	—	0.05	0.10	V	$I_C = 10\text{ mA}$, $I_B = 1\text{ mA}^{*2}$
Base to emitter saturation voltage	$V_{BE(sat)}$	—	0.7	1.0	—	0.7	1.0	V	
Gain bandwidth product	f_T	—	310	—	—	310	—	MHz	$V_{CE} = 6\text{ V}$, $I_C = 10\text{ mA}$
Collector output capacitance	C_{ob}	—	3	—	—	3	—	pF	$V_{CB} = 10\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$

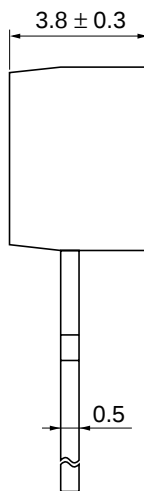
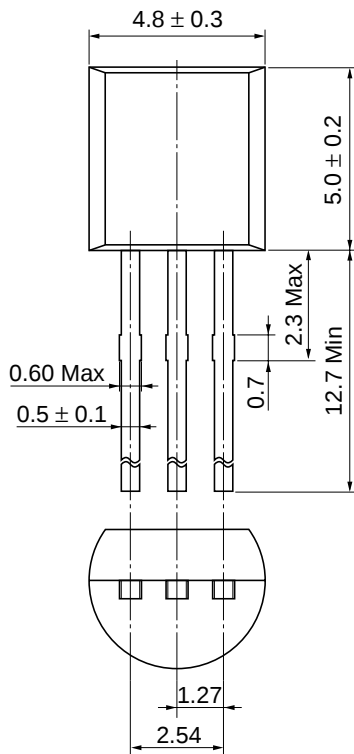
Notes: 1. The 2SC2853 and 2SC2854 are grouped by h_{FE} as follows.

2. Pulse test

D	E
250 to 500	400 to 800

See characteristic curves of 2SC2855 and 2SC2856.





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

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