

2SC2396, 2SC2543, 2SC2544

Silicon NPN Epitaxial

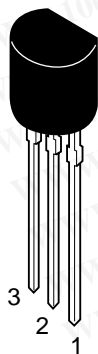
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Application

- Low frequency amplifier
- Complementary pair with 2SA1025, 2SA1081 and 2SA1082

Outline

TO-92 (1)



1. Emitter
2. Collector
3. Base

2SC2396, 2SC2543, 2SC2544

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	2SC2396	2SC2543	2SC2544	Unit
Collector to base voltage	V _{CBO}	60	90	120	V
Collector to emitter voltage	V _{CEO}	60	90	120	V
Emitter to base voltage	V _{EBO}	5	5	5	V
Collector current	I _C	100	100	100	mA
Emitter current	I _E	−100	−100	−100	mA
Collector power dissipation	P _C	400	400	400	mW
Junction temperature	T _j	150	150	150	°C
Storage temperature	T _{stg}	−55 to +150	−55 to +150	−55 to +150	°C

Electrical Characteristics (Ta = 25°C)

Item	Symbol	2SC2396			2SC2543			2SC2544			Unit	Test conditions
		Min	Typ	Max	Min	Typ	Max	Min	Typ	Max		
Collector to base breakdown voltage	V _{(BR)CBO}	60	—	—	90	—	—	120	—	—	V	I _C = 10 μA, I _E = 0
Collector to emitter breakdown voltage	V _{(BR)CEO}	60	—	—	90	—	—	120	—	—	V	I _C = 1 mA, R _{BE} = ∞
Emitter to base breakdown voltage	V _{(BR)EBO}	5	—	—	5	—	—	5	—	—	V	I _E = 10 μA, I _C = 0
Collector cutoff current	I _{CBO}	—	—	0.1	—	—	0.1	—	—	0.1	μA	V _{CB} = 50 V, I _E = 0
Emitter cutoff current	I _{EBO}	—	—	0.1	—	—	0.1	—	—	0.1	μA	V _{EB} = 2 V, I _C = 0
DC current transfer ratio	h _{FE} *1	250	—	1200	250	—	1200	250	—	800		V _{CE} = 12 V, I _C = 2 mA
Collector to emitter saturation voltage	V _{CE(sat)}	—	—	0.2	—	—	0.2	—	—	0.2	V	I _C = 10 mA, I _B = 1 mA
Base to emitter voltage	V _{BE}	—	0.6	—	—	0.6	—	—	0.6	—	V	V _{CE} = 12 V, I _C = 2 mA
Gain bandwidth product	f _T	—	90	—	—	90	—	—	90	—	MHz	V _{CE} = 12 V, I _C = 2 mA
Collector output capacitance	Cob	—	3.0	—	—	3.0	—	—	3.0	—	pF	V _{CB} = 10 V, I _E = 0, f = 1 MHz

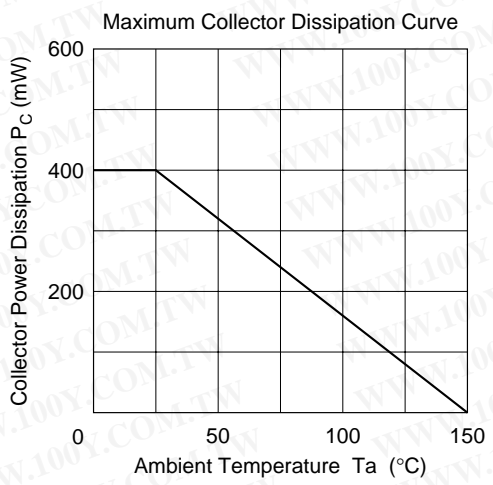
Note: 1. The 2SC2396, 2SC2543 and 2SC2544 are grouped by h_{FE1} as follows.

	D	E	F
2SC2396, 2SC2543	250 to 500	400 to 800	600 to 1200
2SC2544	250 to 500	400 to 800	—

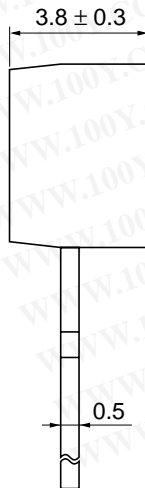
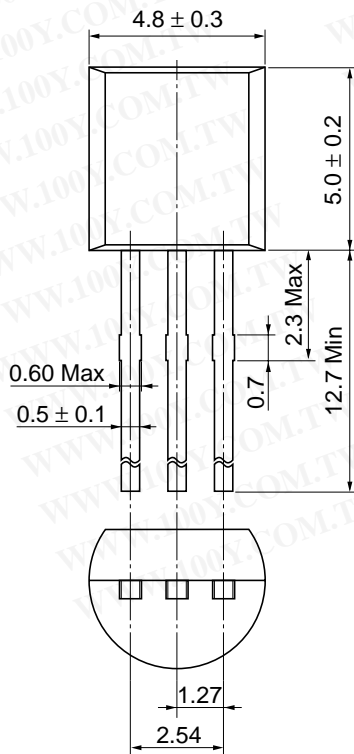
See characteristic curves of 2SC2545, 2SC2546 and 2SC2547.

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

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