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# 2SC2545, 2SC2546, 2SC2547

Silicon NPN Epitaxial

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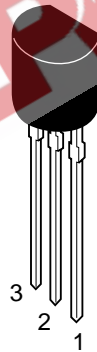
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## Application

- Low frequency low noise amplifier
- Complementary pair with 2SA1083, 2SA1084 and 2SA1085

## Outline

TO-92 (1)



1. Emitter
2. Collector
3. Base

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**2SC2545, 2SC2546, 2SC2547**

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**Absolute Maximum Ratings (Ta = 25°C)**

Item	Symbol	2SC2545	2SC2546	2SC2547	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

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## 2SC2545, 2SC2546, 2SC2547

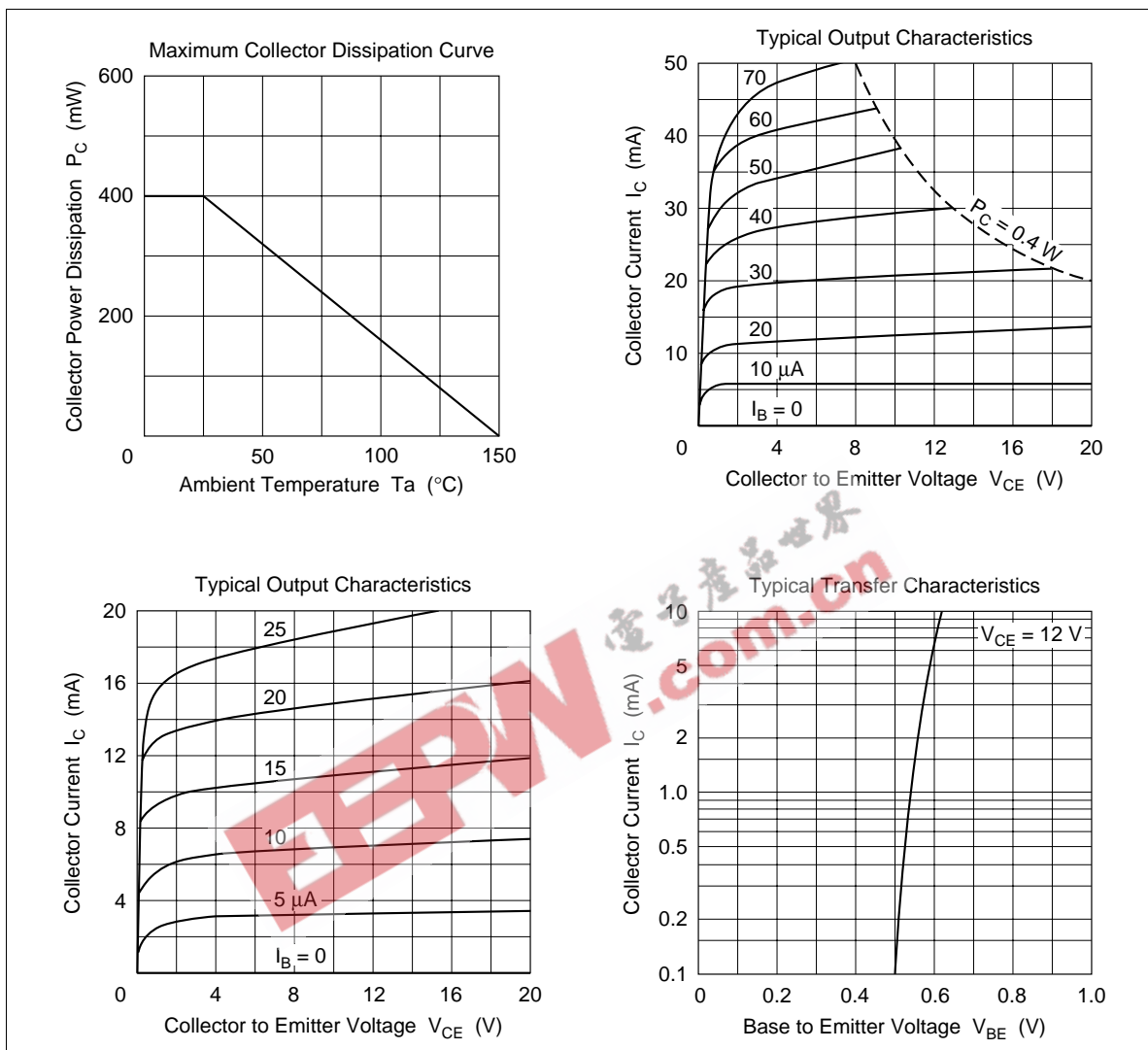
### Electrical Characteristics (T<sub>a</sub> = 25°C)

Item	Symbol	2SC2545			2SC2546			2SC2547			Unit	Test conditions
		Min	Typ	Max	Min	Typ	Max	Min	Typ	Max		
Collector to base breakdown voltage	V <sub>(BR)CBO</sub>	60	—	—	90	—	—	120	—	—	V	I <sub>C</sub> = 10 μA, I <sub>E</sub> = 0
Collector to emitter breakdown voltage	V <sub>(BR)CEO</sub>	60	—	—	90	—	—	120	—	—	V	I <sub>C</sub> = 1 mA, R <sub>BE</sub> = ∞
Emitter to base breakdown voltage	V <sub>(BR)EBO</sub>	5	—	—	5	—	—	5	—	—	V	I <sub>E</sub> = 10 μA, I <sub>C</sub> = 0
Collector cutoff current	I <sub>CBO</sub>	—	—	0.1	—	—	0.1	—	—	0.1	μA	V <sub>CB</sub> = 50 V, I <sub>E</sub> = 0
Emitter cutoff current	I <sub>EBO</sub>	—	—	0.1	—	—	0.1	—	—	0.1	μA	V <sub>EB</sub> = 2 V, I <sub>C</sub> = 0
DC current transfer ratio	h <sub>FE</sub> <sup>*1</sup>	250	—	1200	250	—	1200	250	—	800		V <sub>CE</sub> = 12 V, I <sub>C</sub> = 2 mA
Collector to emitter saturation voltage	V <sub>CE(sat)</sub>	—	—	0.2	—	—	0.2	—	—	0.2	V	I <sub>C</sub> = 10 mA, I <sub>B</sub> = 1 mA
Base to emitter voltage	V <sub>BE</sub>	—	0.6	—	—	0.6	—	—	0.6	—	V	V <sub>CE</sub> = 12 V, I <sub>C</sub> = 2 mA
Gain bandwidth product	f <sub>T</sub>	—	90	—	—	90	—	—	90	—	MHz	V <sub>CE</sub> = 12 V, I <sub>C</sub> = 2 mA
Collector output capacitance	C <sub>ob</sub>	—	3.0	—	—	3.0	—	—	3.0	—	pF	V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0, f = 1 MHz
Noise voltage referred input	e <sub>n</sub>	—	0.5	—	—	0.5	—	—	0.5	—	nV/ √Hz	V <sub>CE</sub> = 6V, I <sub>C</sub> = 10 mA, f = 1 kHz, R <sub>g</sub> = 0, Δf = 1Hz

Note: 1. The 2SC2545, 2SC2546 and 2SC2547 are grouped by h<sub>FE</sub> as follows.

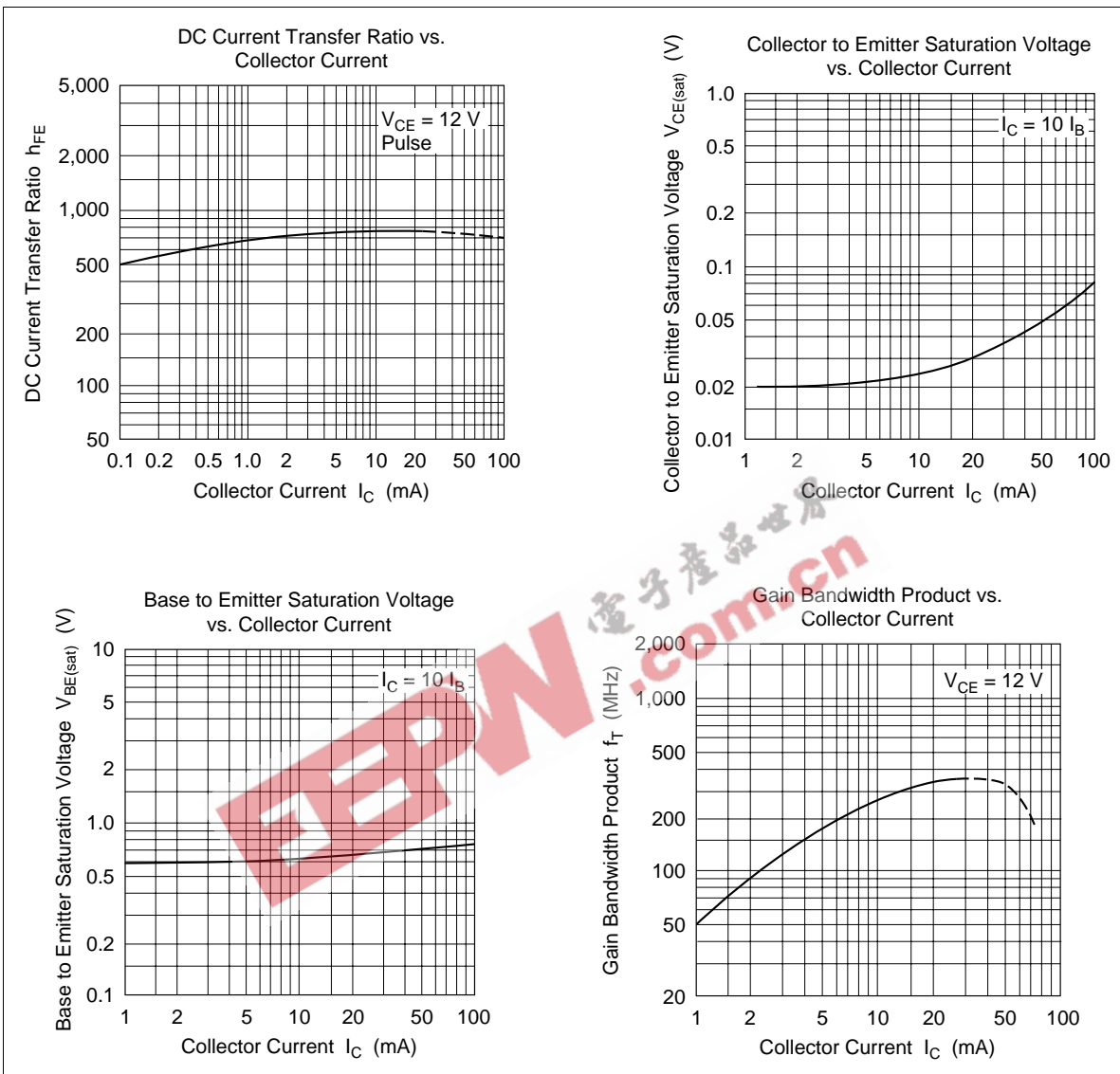
	D	E	F
2SC2545, 2SC2546	250 to 500	400 to 800	600 to 1200
2SC2547	250 to 500	400 to 800	—

## 2SC2545, 2SC2546, 2SC2547

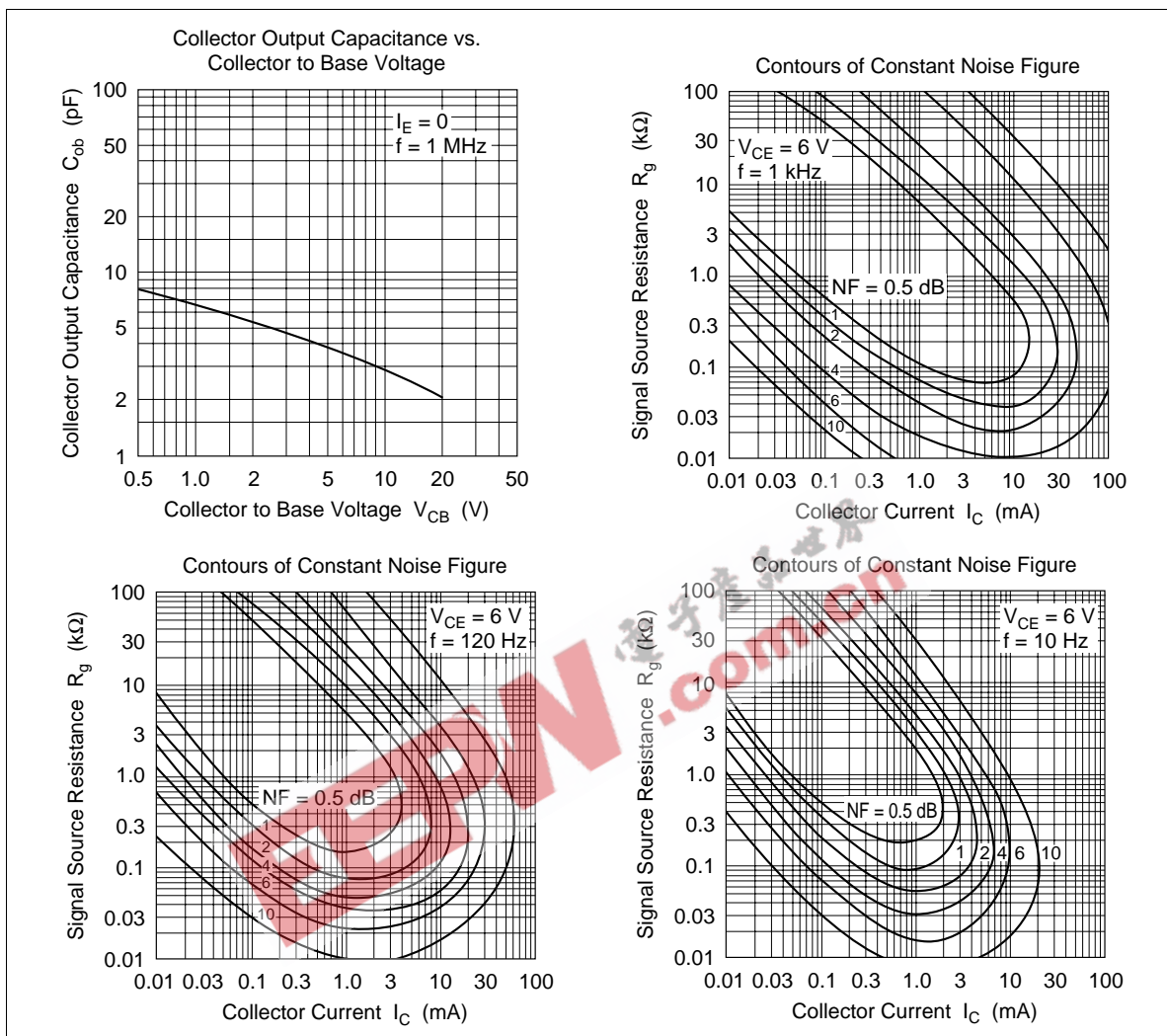


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**2SC2545, 2SC2546, 2SC2547**

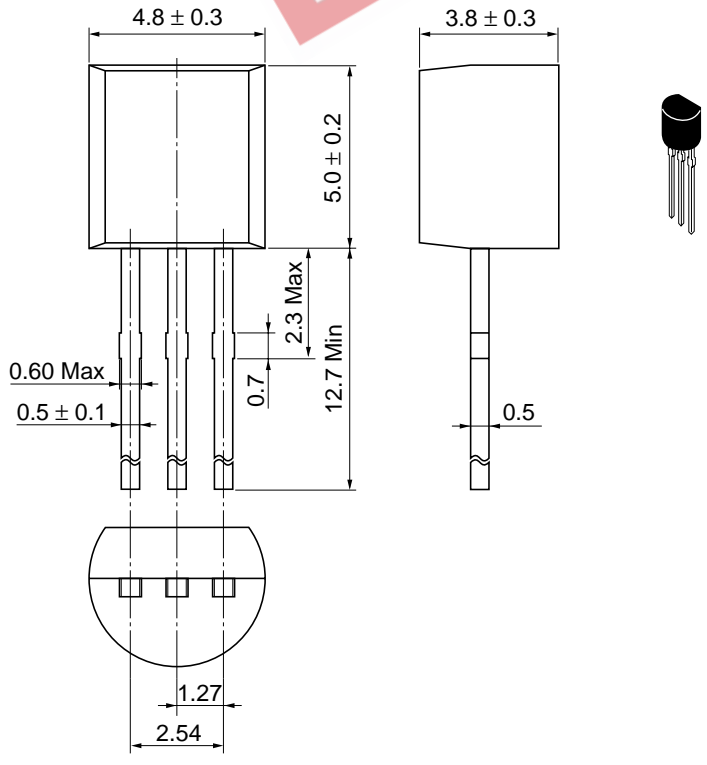


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Unit: mm



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

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