2SD2263

Silicon NPN Epitaxial

HITACHI

Application

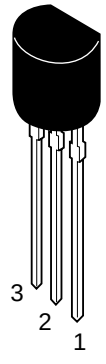
Low frequency power amplifier

Features

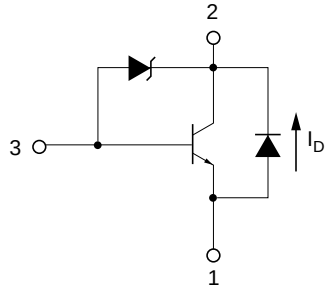
- Build in zener diode for surge absorb.
- Suitable for relay drive with small power loss.

Outline

TO-92 (1)



1. Emitter
2. Collector
3. Base



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Absolute Maximum Ratings (Ta = 25°C)

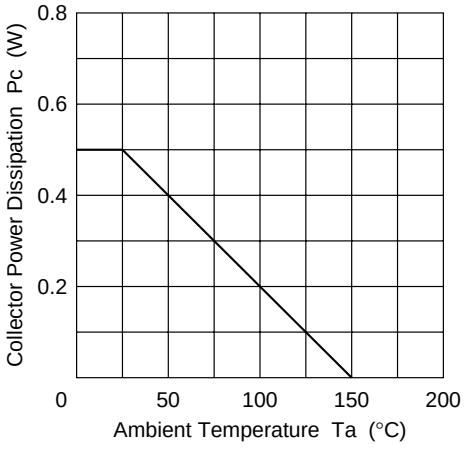
Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	25	V
Collector to emitter voltage	V_{CEO}	25	V
Emitter to base voltage	V_{EBO}	6	V
Collector current	I_C	0.5	A
Collector peak current	$i_{C(peak)}$	1.0	A
E to C diode current	I_D	0.5	A
Collector power dissipation	P_C	0.5	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

Electrical Characteristics (Ta = 25°C)

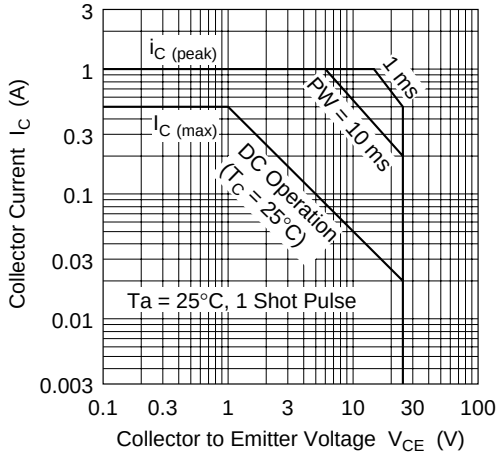
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	25	—	—	V	I_C = 10 µA, I_E = 0
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	25	—	35	V	I_C = 1 mA, R_{BE} = ∞
Collector to emitter sustaining voltage	$V_{CEO (sus)}$	26	—	36	V	I_C = 0.5 A, R_{BE} = ∞, L = 20 mH
Emitter to base breakdown voltage	$V_{(BR)EBO}$	6	—	—	V	I_E = 10 µA, I_C = 0
Collector cutoff current	I_{CBO}	—	—	0.2	µA	V_{CB} = 20 V, I_E = 0
	I_{CEO}	—	—	0.5	µA	V_{CE} = 20 V, R_{BE} = ∞
Emitter cutoff current	I_{EBO}	—	—	0.2	µA	V_{EB} = 5 V, I_C = 0
DC current transfer ratio	h_{FE1}	100	—	500		V_{CE} = 2 V, I_C = 50 mA*[1]
	h_{FE2}	50	—	—		V_{CE} = 2 V, I_C = 0.5 A*[1]
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	0.5	V	I_C = 0.5 A*[1], I_B = 50 mA
E to C diode forward voltage	V_D	—	—	1.2	V	I_E = 0.5 A*[1]

Note: 1. Pulse test

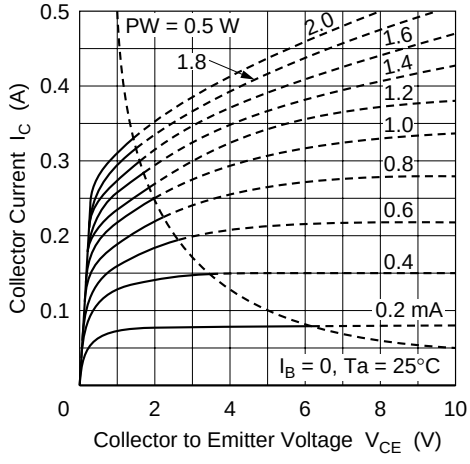
Maximum Collector Dissipation Curve



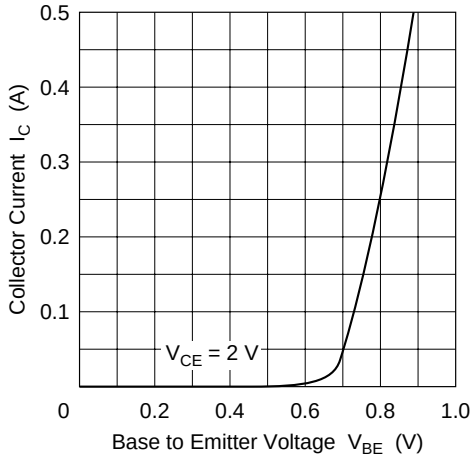
Area of Safe Operation



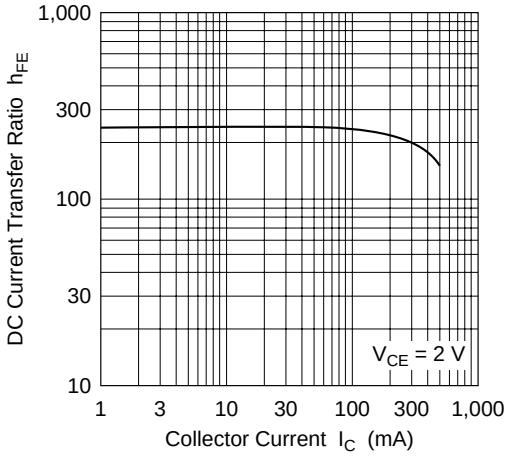
Typical Output Characteristics



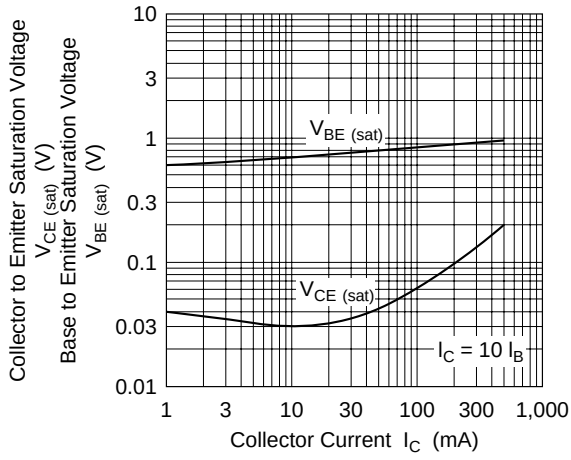
Typical Transfer Characteristics



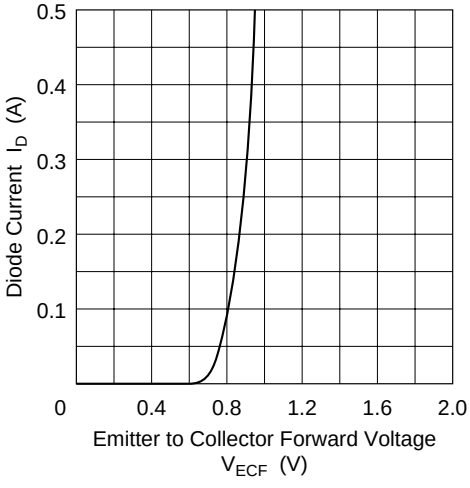
DC Current Transfer Ratio vs. Collector Current



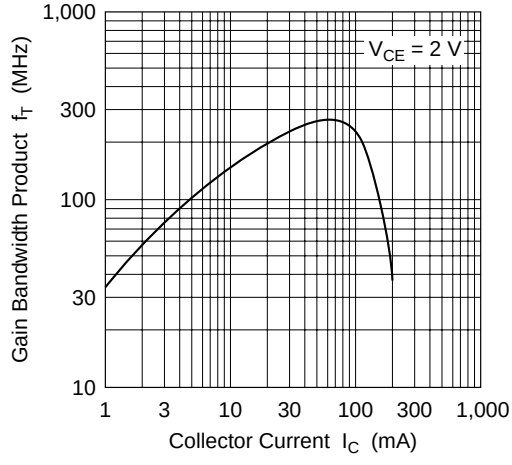
Saturation Voltage vs. Collector Current

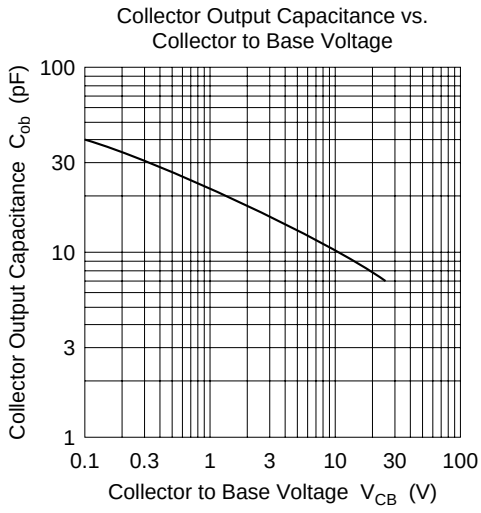


Typical Characteristics of Emitter to Collector Diode

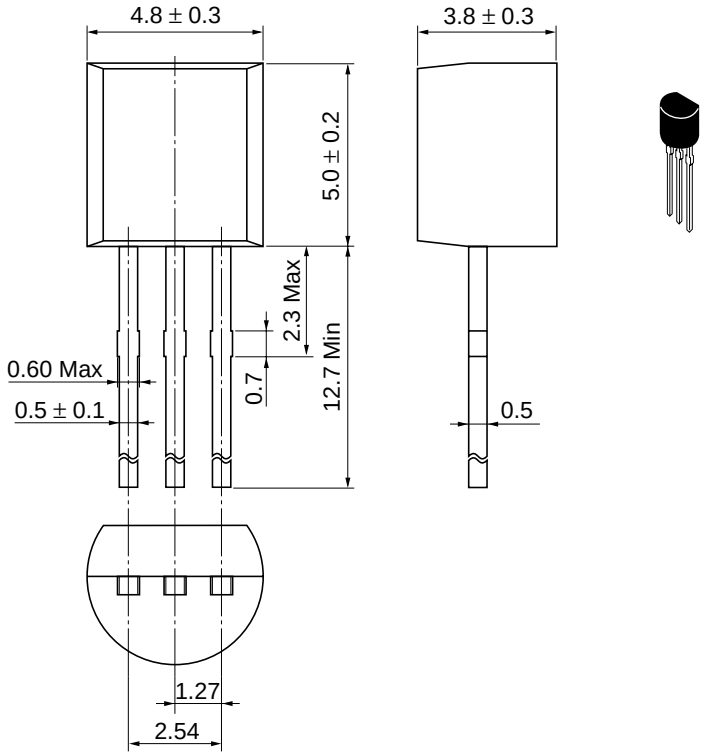


Gain Bandwidth Product vs. Collector Current




Collector Output Capacitance vs.
Collector to Base Voltage
Collector Output Capacitance C_{ob} (pF)
100
30
10
3
1
0.1
0.3
1
3
10
30
100
Collector to Base Voltage V_{CB} (V)

Unit: mm



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

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