HITACHI

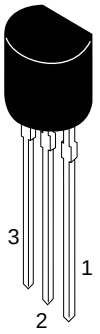
2SD2263

Silicon NPN Epitaxial
Low Frequency Power Amplifier

Features

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

TO-92 (1)



1. Emitter
2. Collector
3. Base

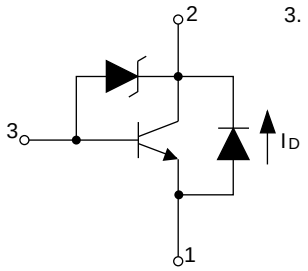


Table 1 Absolute Maximum Ratings
(Ta = 25°C)

Item	Symbol	Rating	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
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

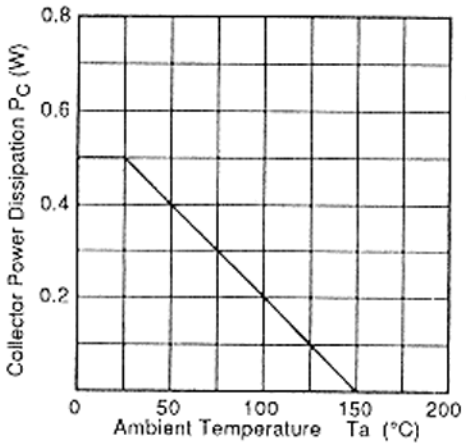
Table 2 Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test condition
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 emittor sustaining voltage	$V_{CEO(sus)}$	26	—	36	V	I_C = 0.5 A, R_{BE} = ∞, L = 20 mH
Emitter to base breakdown voltages	$V_{(BR)EBO}$	6	—	—	V	I_E = 10 µA, I_C = 0
Collector cutoff current	I_{CBO}	—	—	0.2	µA	V_{CB} = 20 V, I_E = 0
Collector cutoff current	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_{FE}1	100	—	500	—	V_{CE} = 2 V, I_C = 50 mA*

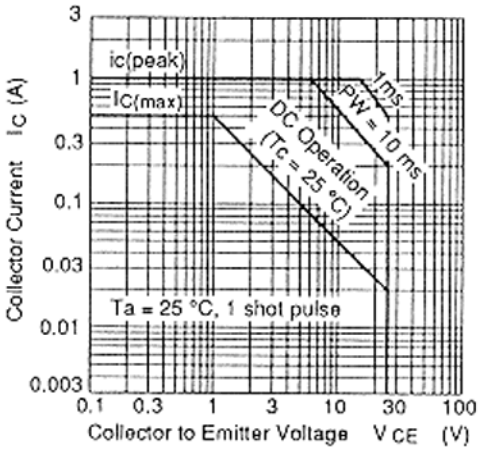
Table 2 Electrical Characteristics (Ta = 25°C) (cont)

Item	Symbol	Min	Typ	Max	Unit	Test condition
DC current transfer ratio	$h_{FE}2$	50	—	—	—	V_{CE} = 2 V, I_C = 0.5 A*
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	0.5	V	I_C = 0.5 A*, I_B = 50 mA
C to E diode forward voltage	V_D	—	—	1.2	V	I_E = 0.5 A*

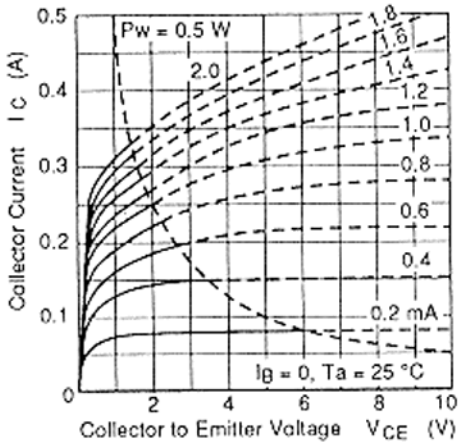
Maximum collector dissipation curve



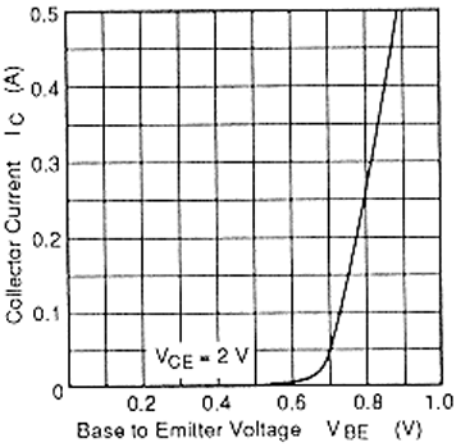
Area of safe operation



Typical output characteristics



Typical transfer characteristics



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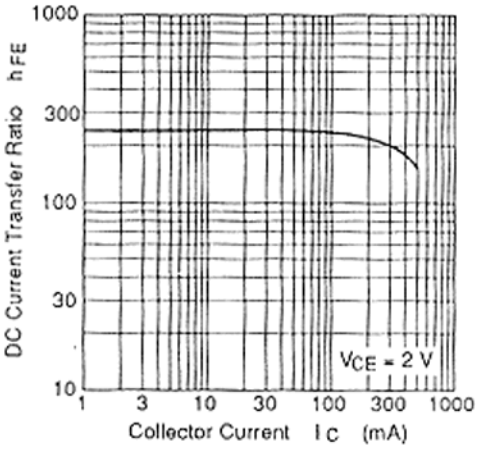
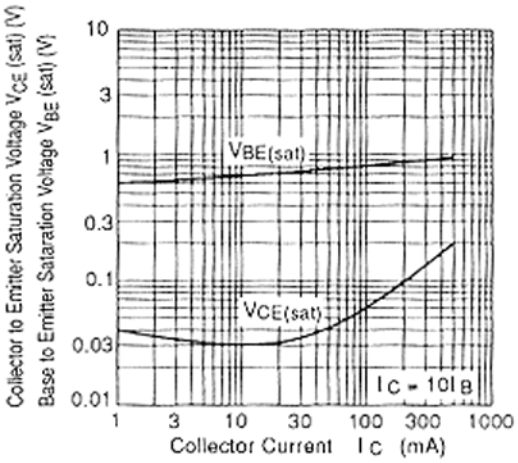
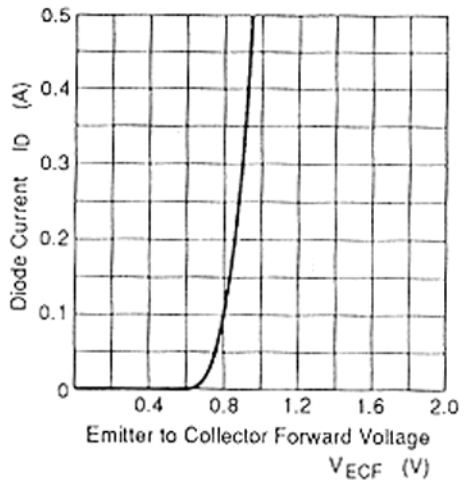
DC current transfer ratio
vs. collector current



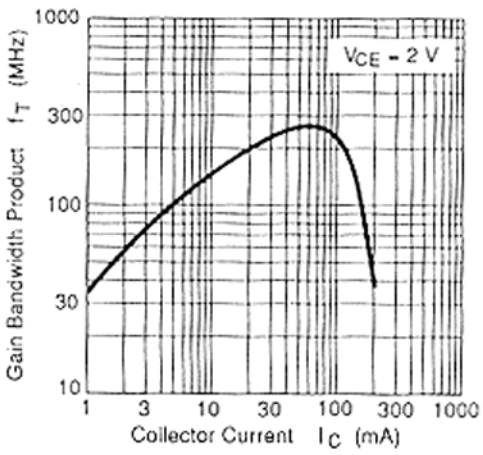
Saturation voltage vs. collector current



Typical characteristics of
emitter to collector diode



Gain bandwidth product
vs. collector current



Collector output capacitance
vs. collector to base voltage