2SD1527

Silicon NPN Triple Diffused

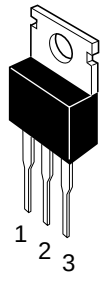
HITACHI

Application

High voltage power amplifier

Outline

TO-220AB



1. Base
2. Collector (Flange)
3. Emitter

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	1000	V
Collector to emitter voltage	V_{CEO}	1000	V
Emitter to base voltage	V_{EBO}	5	V
Collector current	I_C	0.5	A
Collector power dissipation	P_C	1.8	W
	P_C*[1]	25	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

Note: 1. Value at T_C = 25°C.

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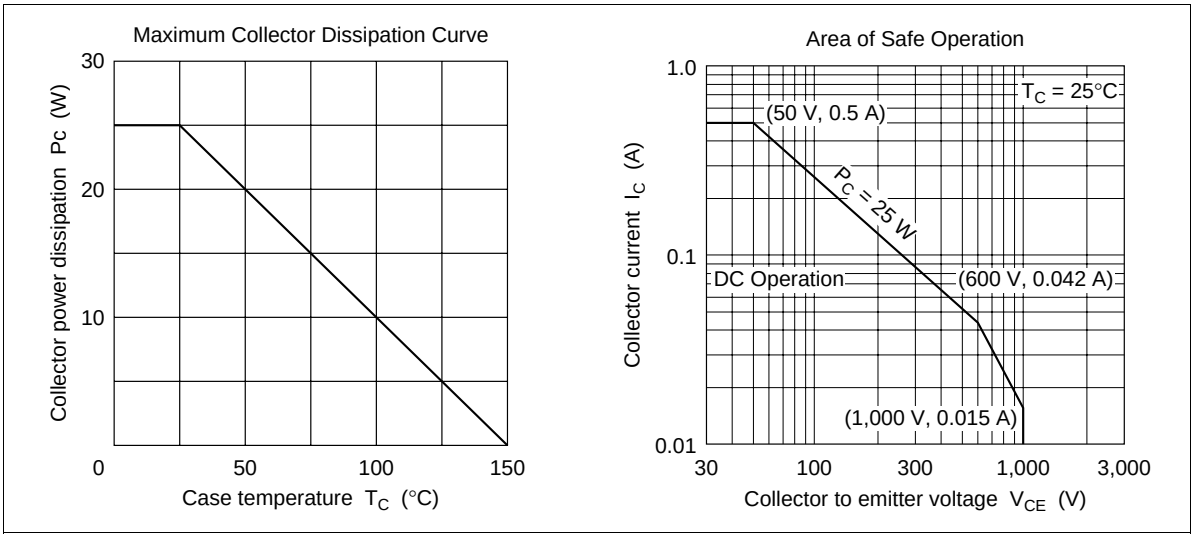
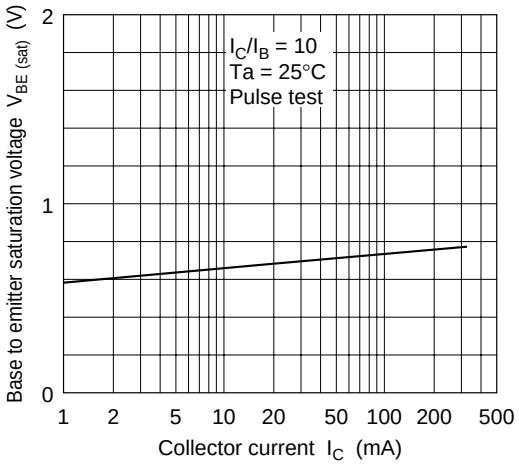
Electrical Characteristics (Ta = 25°C)

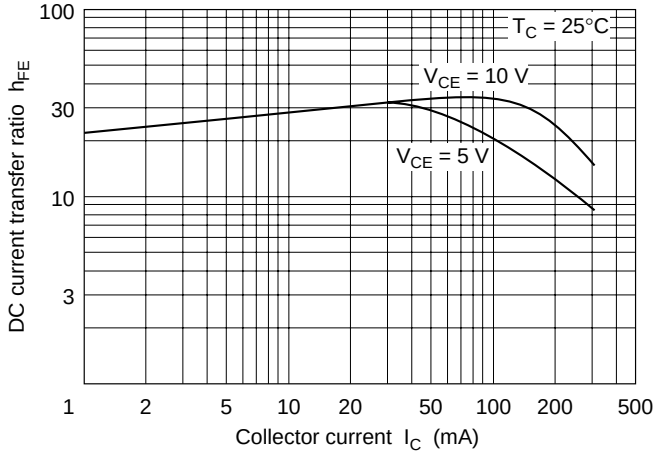
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	1000	—	—	V	I_C = 1 mA, R_{BE} = ∞
Emitter to base breakdown voltage	$V_{(BR)EBO}$	5	—	—	V	I_E = 1 mA, I_C = 0
Collector cutoff current	I_{CBO}	—	—	10	µA	V_{CB} = 800 V, I_E = 0
DC current transfer ratio	h_{FE1}	10	—	—		V_{CE} = 5 V, I_C = 10 mA
	h_{FE2}	10	—	—		V_{CE} = 5 V, I_C = 100 mA
Base to emitter voltage	V_{BE}	—	—	1.2	V	V_{CE} = 5 V, I_C = 100 mA
Collector to emitter saturation voltage	$V_{CE\ (sat)}$	—	—	5	V	I_C = 300 mA, I_B = 60 mA
Gain bandwidth product	f_T	—	5	—	MHz	V_{CE} = 20 V, I_C = 50 mA
Collector output capacitance	Cob	—	5	—	pF	V_{CB} = 100 V, I_E = 0, f = 1 MHz



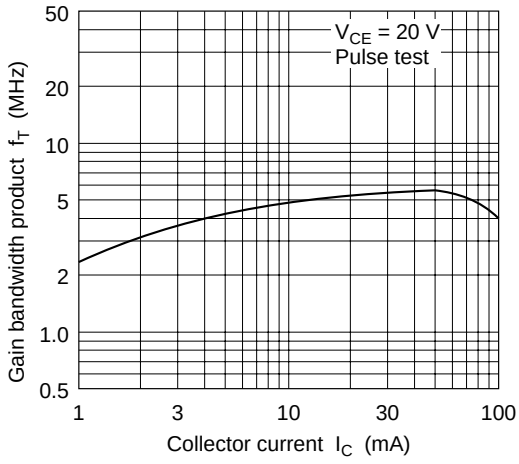
Base to Emitter Saturation Voltage
vs. Collector Current



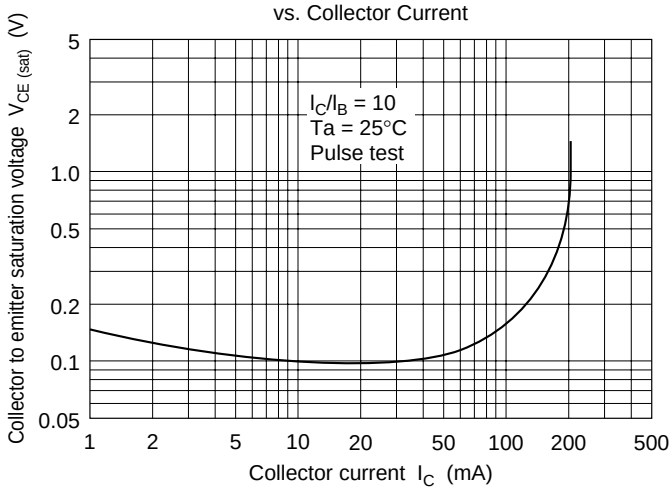
DC Current Transfer Ratio
vs. Collector Current



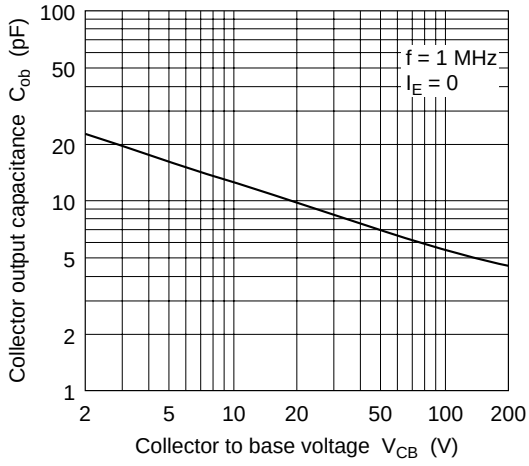
Gain Bandwidth Product
vs. Collector Current



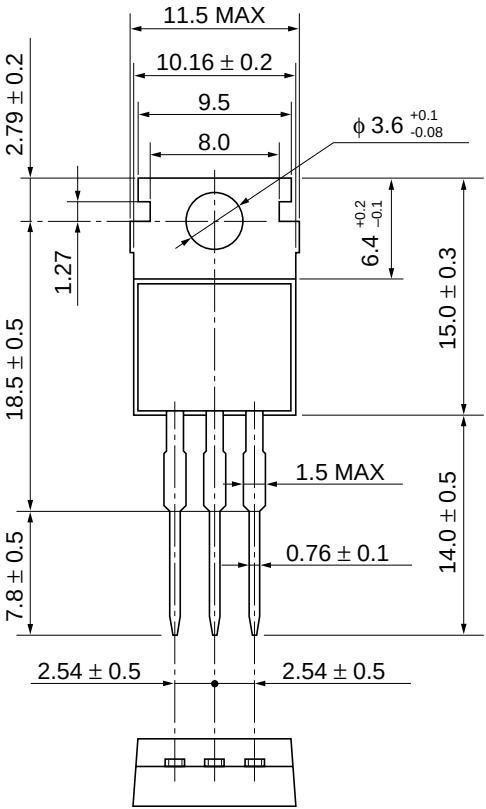
Collector to Emitter Saturation Voltage
vs. Collector Current

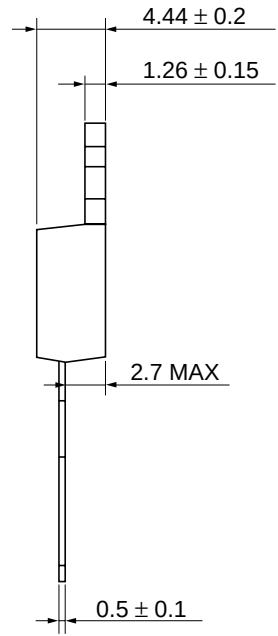


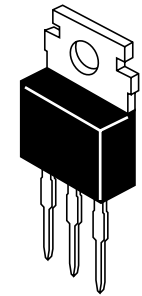
Collector Output Capacitance
vs. Collector to Base Voltage



Unit: mm







Hitachi Code	TO-220AB
JEDEC	Conforms
EIAJ	Conforms
Weight (reference value)	1.8 g

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