2SC3836

Silicon NPN Epitaxial

HITACHI

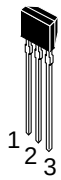
ADE-208-1092 (Z)
1st. Edition
Mar. 2001

Application

Low frequency amplifier, switching

Outline

SPAK



1. Emitter
2. Collector
3. Base

Hitachi semiconductor

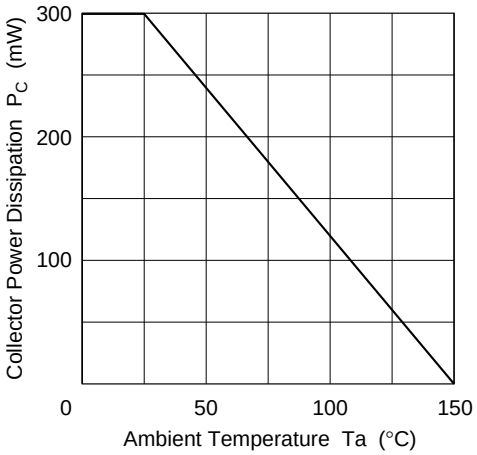
Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	60	V
Collector to emitter voltage	V_{CEO}	50	V
Emitter to base voltage	V_{EBO}	15	V
Collector current	I_C	300	mA
Collector power dissipation	P_C	300	mW
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

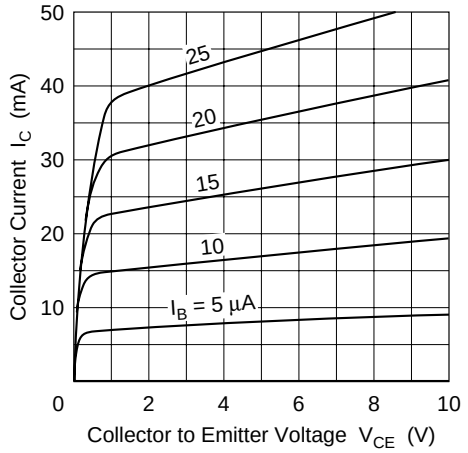
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	60	—	—	V	I_C = 10 µA, I_E = 0
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	50	—	—	V	I_C = 1 mA, R_{BE} = ∞
Emitter to base breakdown voltage	$V_{(BE)EBO}$	15	—	—	V	I_E = 10 µA, I_C = 0
Collector cutoff current	I_{CBO}	—	—	1	µA	V_{CB} = 50 V, I_E = 0
Base to emitter voltage	V_{BE}	—	—	0.75	V	V_{CE} = 6 V, I_C = 1 mA
DC current transfer ratio	h_{FE1}	800	—	2000		V_{CE} = 6 V, I_C = 100 mA (pulse test)
	h_{FE2}	500	—	—		V_{CE} = 6 V, I_C = 1 mA
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	0.3	V	I_C = 300 mA, I_B = 30 mA (pulse test)

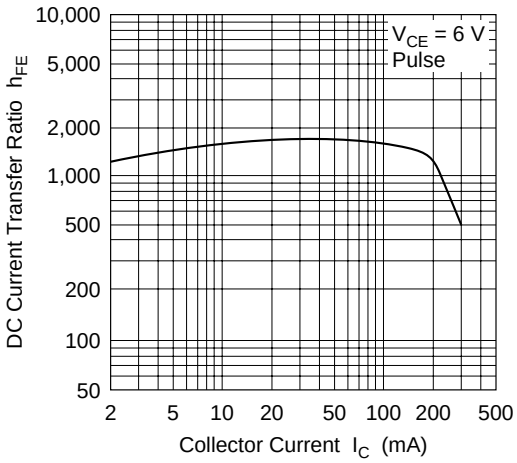
Maximum Collector Dissipation Curve



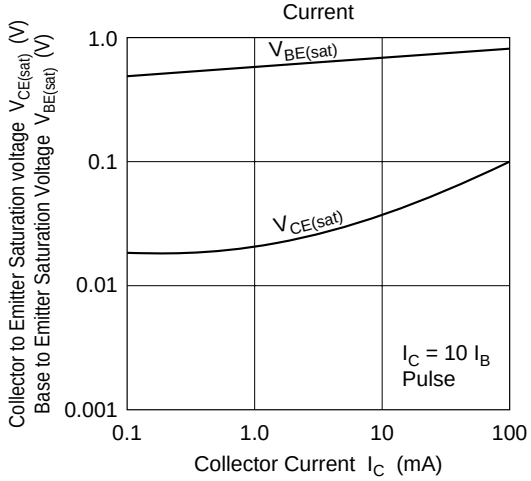
Typical Output Characteristics



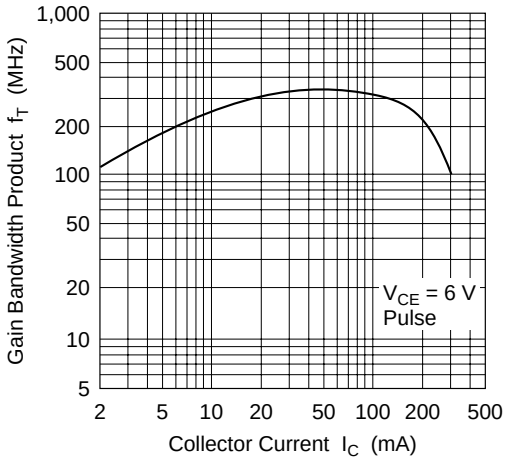
DC Current Transfer Ratio vs. Collector Current



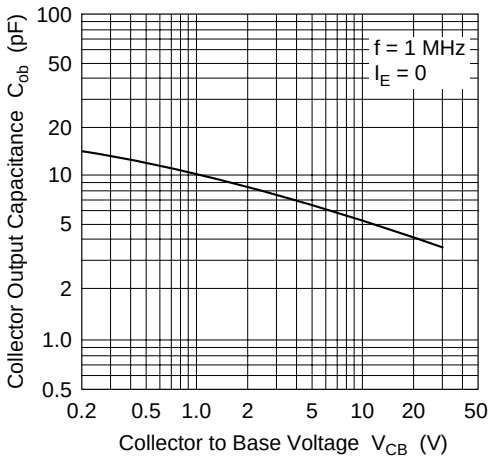
Saturation Voltage vs. Collector Current



Gain Bandwidth Product vs. Collector Current



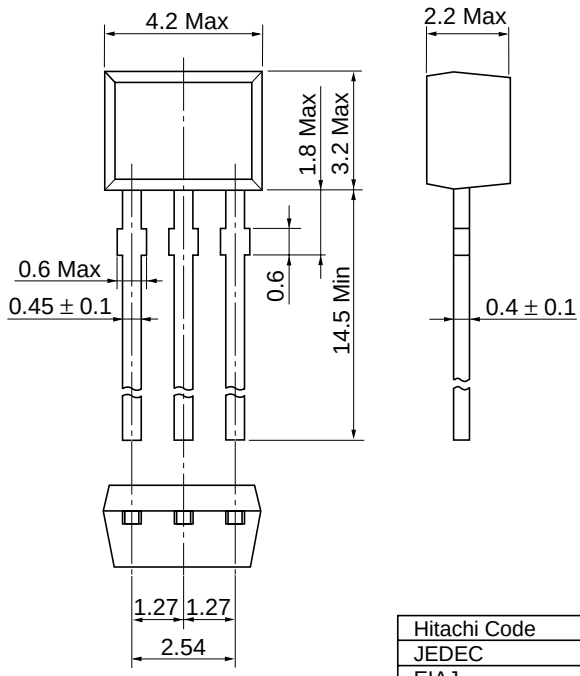
Collector Output Capacitance vs. Collector to Base Voltage

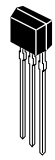


Package Dimensions

As of January, 2001

Unit: mm





Hitachi Code	SPAK
JEDEC	—
EIAJ	—
Mass (reference value)	0.10 g

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