2SD2423

Silicon NPN Epitaxial, Darlington

HITACHI

Application

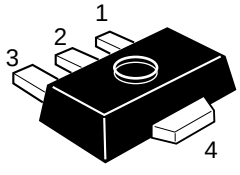
Low frequency power amplifier

Features

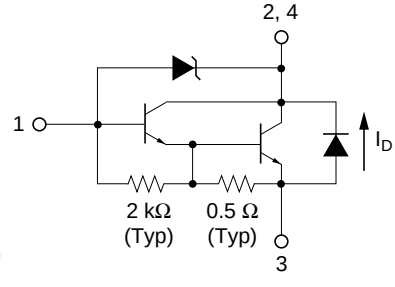
The transistor with a built-in zener diode of surge absorb.

Outline

UPAK



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



Hitachi semiconductor

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	50	V
Collector to emitter voltage	V_{CEO}	50	V
Emitter to base voltage	V_{EBO}	7	V
Collector current	I_C	1.5	A
Collector power dissipation	P_C*[1]	1	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C
Collector to emitter diode forward current	I_D	1.5	A

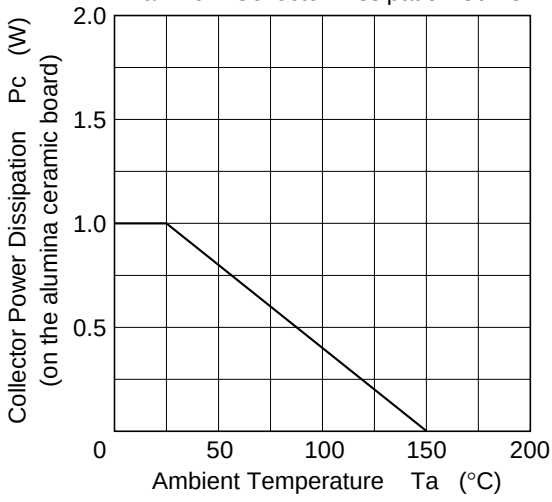
Note: 1. When using the ceramic board 0.7 mm thick (12.5 mm x 20 mm).

Electrical Characteristics (Ta = 25°C)

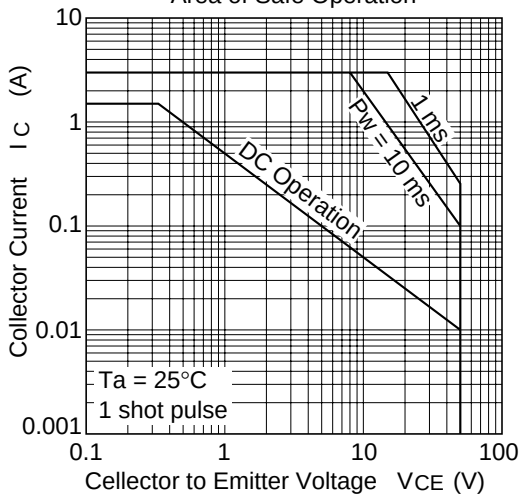
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	50	—	70	V	I_C = 100 µA, I_E = 0
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	50	—	—	V	I_C = 10 mA, R_{BE} = ∞
Collector to emitter sustaining voltage	$V_{CEO(sus)}$	50	—	70	V	I_C = 1.5 A, R_{BE} = ∞, L = 10 mH*[1]
Emitter to base breakdown voltage	$V_{(BR)EBO}$	7	—	—	V	I_E = 50 mA, I_C = 0
Collector cutoff current	I_{CEO}	—	—	10	µA	V_{CE} = 40 V, R_{BE} = ∞
DC current transfer ratio	h_{FE}	2000	—	10000		V_{CE} = 3 V, I_C = 1 A*[1]
Collector to emitter saturation voltage	$V_{CE(sat)1}$	—	—	1.5	V	I_C = 1 A, I_B = 1 mA*[1]
Collector to emitter saturation voltage	$V_{CE(sat)2}$	—	—	2.3	V	I_C = 1.5 A, I_B = 1.5 mA*[1]
Base to emitter saturation voltage	$V_{BE(sat)1}$	—	—	2.0	V	I_C = 1 A, I_B = 1 mA*[1]
Base to emitter saturation voltage	$V_{BE(sat)2}$	—	—	2.5	V	I_C = 1.5 A, I_B = 1.5 mA*[1]
Emitter to collector diode forward voltage	V_D	—	—	3.5	V	I_D = 1.5 A*[1]

Notes: 1. Pulse test
2. Marking is “GT”.

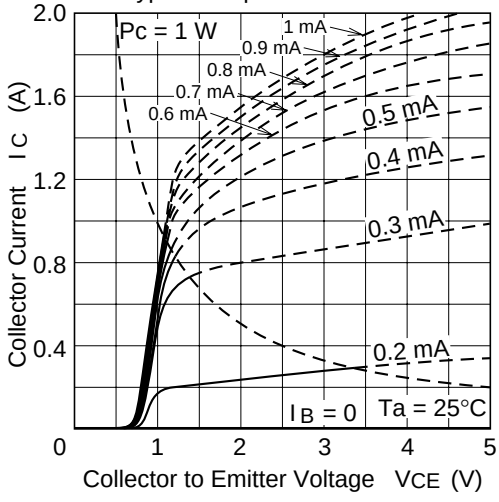
Maximum Collector Dissipation Curve



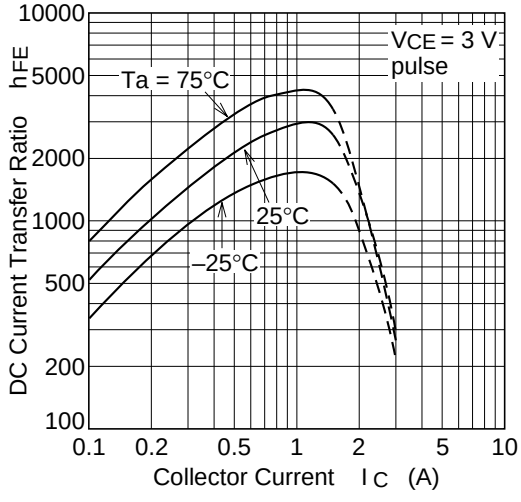
Area of Safe Operation



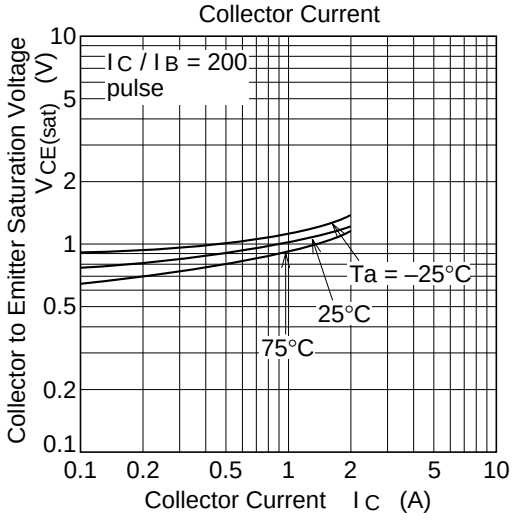
Typical Output Characteristics



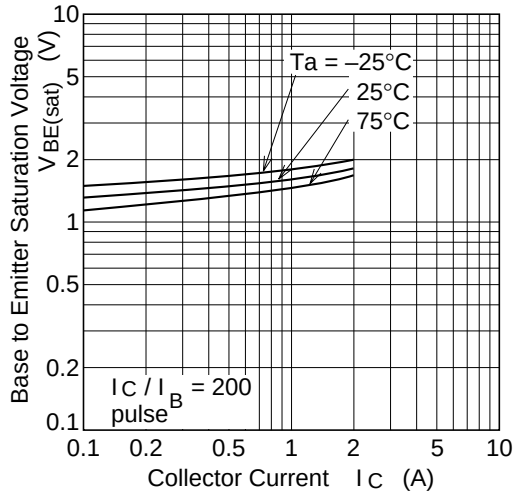
DC Current Transfer Ratio vs. Collector Current



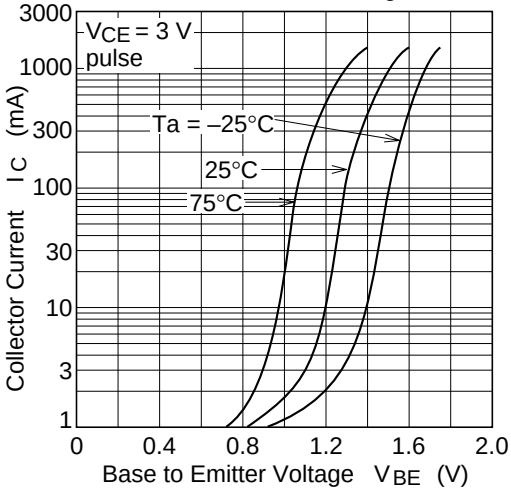
Collector to Emitter Saturation Voltage vs. Collector Current



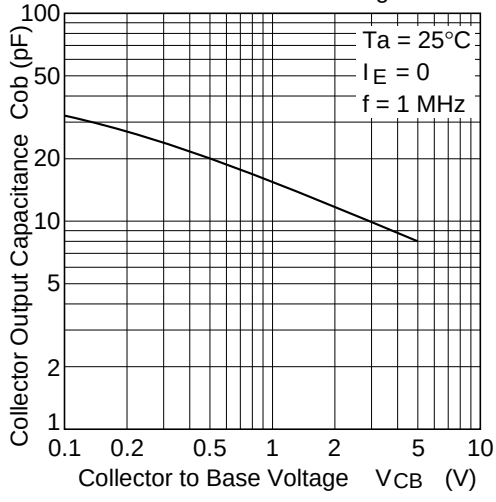
Base to Emitter Saturation Voltage vs. Collector Current



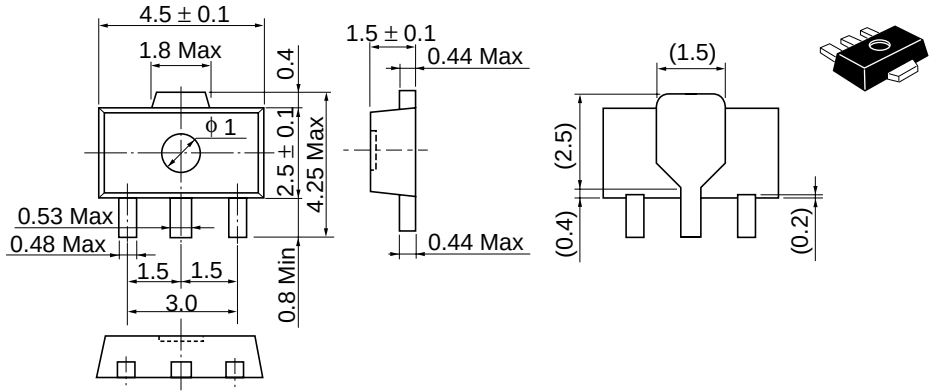
Collector Current vs. Base to Emitter Voltage



Collector Output Capacitance vs. Collector to Base Voltage



Unit: mm



Hitachi Code	UPAK
JEDEC	—
EIAJ	Conforms
Weight (reference value)	0.050 g

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