HITACHI

2SD2423

Silicon NPN Epitaxial

Application

Low frequency power amplifier

Features

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

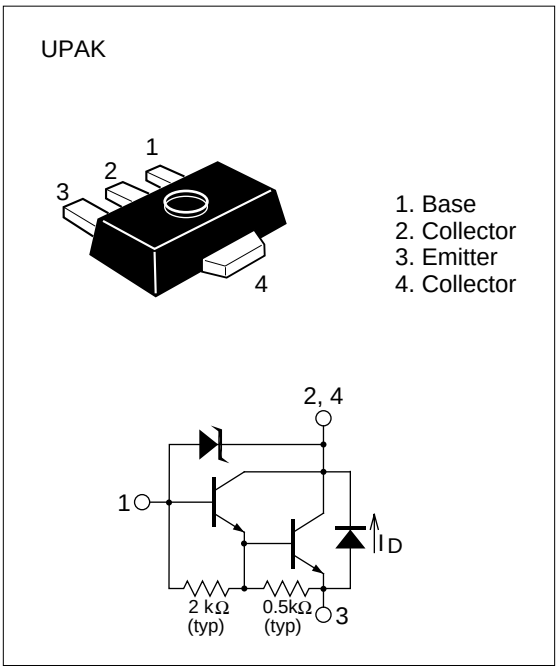

Table 1 Absolute Maximum Ratings (Ta = 25°C)

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

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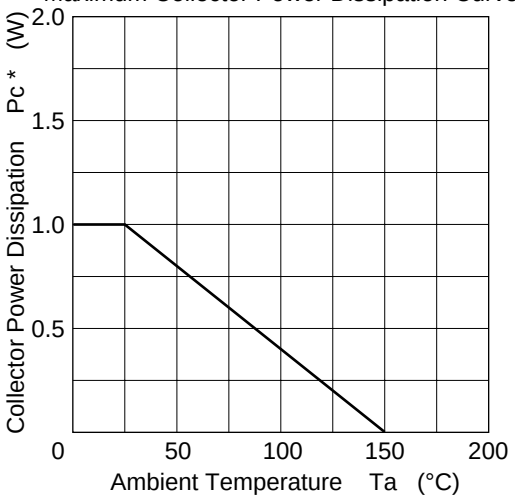
Table 2 Electrical Characteristics (Ta = 25°C)

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 sustain voltage	$V_{CEO(sus)}$	50	—	70	V	I_C = 1.5 A, R_{BE} = ∞ L = 10 mH *
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*
Collector to emitter saturation voltage	$V_{CE(sat)1}$	—	—	1.5	V	I_C = 1 A, I_B = 1 mA*
Collector to emitter saturation voltage	$V_{CE(sat)2}$	—	—	2.3	V	I_C = 1.5 A, I_B = 1.5 mA*
Base to emitter saturation voltage	$V_{BE(sat)1}$	—	—	2.0	V	I_C = 1 A, I_B = 1 mA*
Base to emitter saturation voltage	$V_{BE(sat)2}$	—	—	2.5	V	I_C = 1.5 A, I_B = 1.5 mA*
Collector to emitter diode forward voltage	V_D	—	—	3.5	V	I_D = 1.5 A*

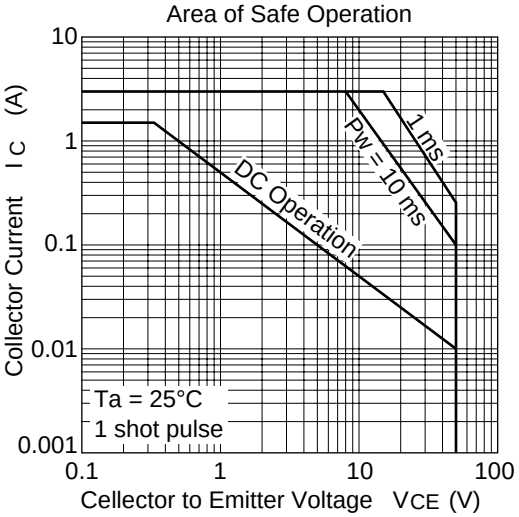
Note: Pulse test

Maximum Collector Power Dissipation Curve

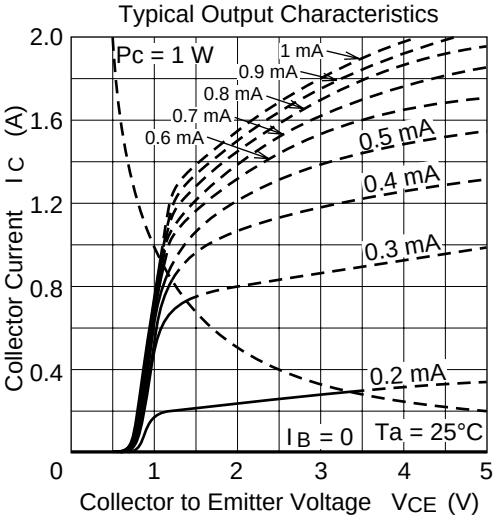


* When using the ceramic board 0.7 mm thick. (12.5 mm x 20 mm)

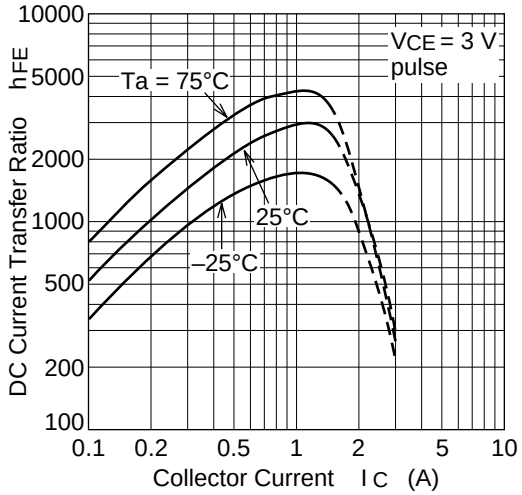
Area of Safe Operation



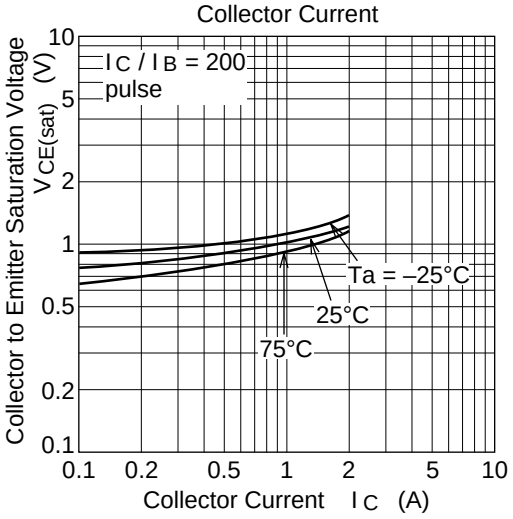
Typical Output Characteristics



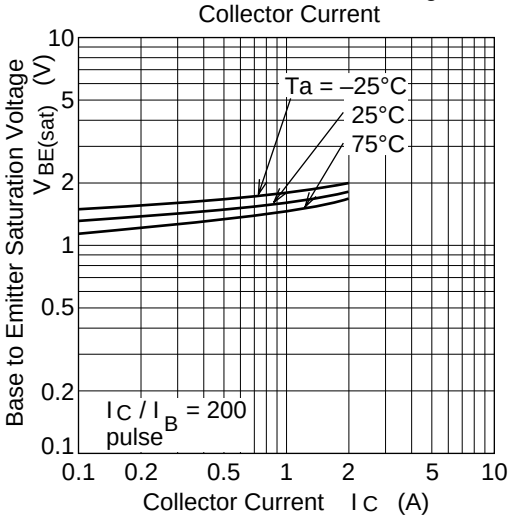
DC Current Transfer Ratio vs. Collector Current



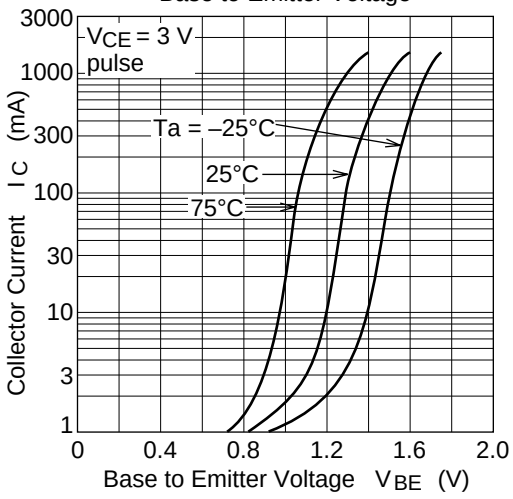
Collector to Emitter Saturation Voltage vs. Collector Current



Base to Emitter Saturation Voltage vs. Collector Current



Collector Current vs. Base to Emitter Voltage



Collector Output Capacitance vs. Collector to Base Voltage