

2SD2415

Silicon NPN Epitaxial

Application

Low frequency power amplifier

Features

- The transistor with a built-in zener diode of surge absorb.
- The design is resist to electro magnetic interference.
- High resist design of unnecessary zener diode.

Table 1 Ordering Information

Type No	h_{FE1}
2SD2415B	60 to 120
2SD2415C	100 to 200
2SD2415D	160 to 320

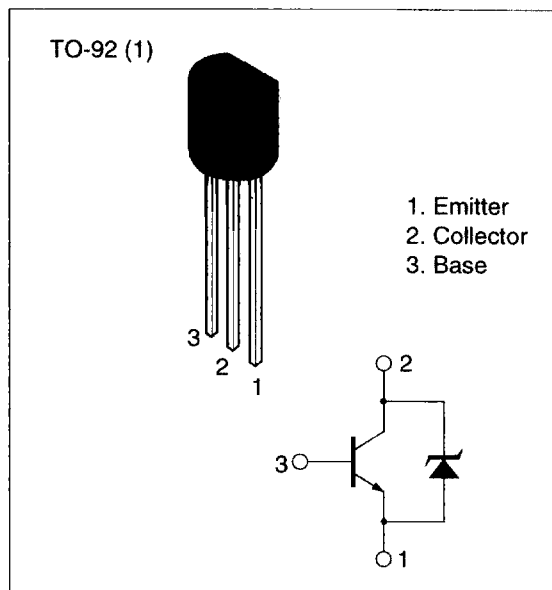


Table 2 Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

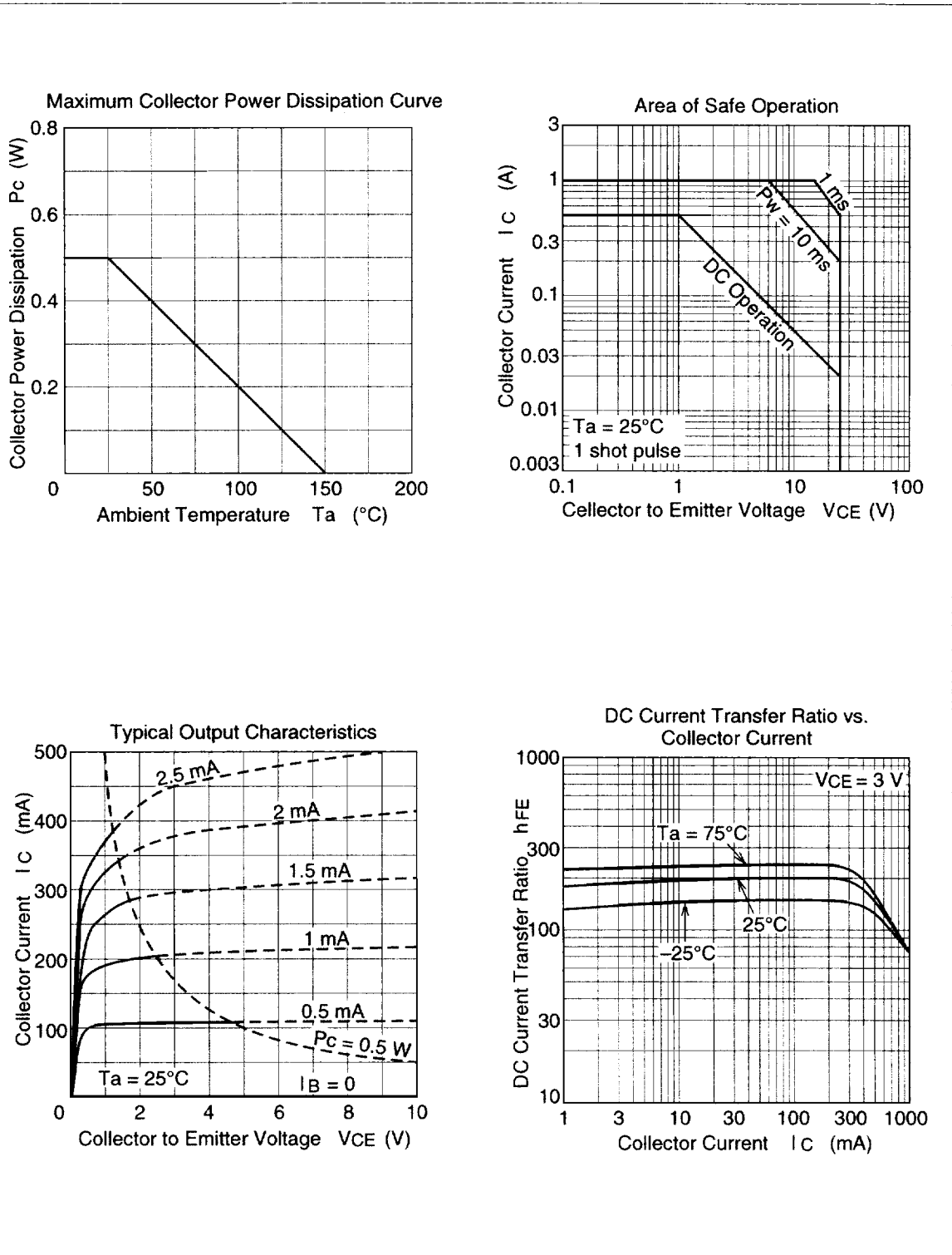
Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	25	V
Collector to emitter voltage	V_{CEO}	25	V
Emitter to base voltage	V_{EBO}	6	V
Collector current	I_C	0.5	A
Collector peak current	$i_{C(\text{peak})}$	1	A
Collector power dissipation	P_C	0.5	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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Table 3 Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	25	—	—	V	$I_C = 10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	25	—	35	V	$I_C = 1 \text{ mA}, R_{BE} = \infty$
Collector to emitter sustain voltage	$V_{CEO(sus)}$	26	—	—	V	$I_C = 0.5 \text{ A}, R_{BE} = \infty, L = 20 \text{ mH}$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	6	—	—	V	$I_E = 10 \mu A, I_C = 0$
Collector cutoff current	I_{CBO}	—	—	0.2	μA	$V_{CB} = 20 \text{ V}, I_E = 0$
Collector cutoff current	I_{CEO}	—	—	0.5	μA	$V_{CE} = 20 \text{ V}, R_{BE} = \infty$
Collector cutoff current	I_{EBO}	—	—	0.2	μA	$V_{EB} = 5 \text{ V}, I_C = 0$
DC current transfer ratio						$V_{CE} = 2 \text{ V}, I_C = 50 \text{ mA}$
2SD2415B	h_{FE1}^*	60	—	120		
2SD2415C		100	—	200		
2SD2415D		160	—	320		
DC current transfer ratio	h_{FE2}^*	10	—	—		$V_{CE} = 2 \text{ V}, I_C = 0.5 \text{ A}$
Collector to emitter saturation voltage	$V_{CE(sat)}^*$	—	—	0.5	V	$I_C = 0.5 \text{ A}, I_B = 50 \text{ mA}$
Base to emitter saturation voltage	$V_{BE(sat)}^*$	—	—	1.2	V	$I_C = 0.5 \text{ A}, I_B = 50 \text{ mA}$

Note: Pulse test



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