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Silicon NPN Power Transistors — 2SC2331

Absolute maximum ratings(Ta=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	100	V
V_{CEO}	Collector-emitter voltage	Open base	100	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		2.0	A
I_{CM}	Collector current-Peak		4.0	A
I_B	Base current		1.0	A
P_T	Total power dissipation	T_a=25□	1.5	W
		T_C=25□	15	
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-55~150	

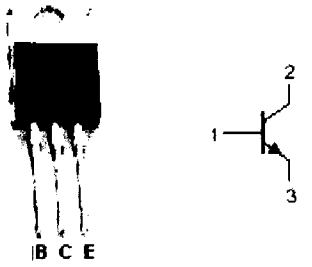

Fig.1 simplified outline (TO-220) and symbol

CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	I_C=1.0A ,I_B=0.1A,L=1mH	100			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=1A; I_B=0.1A			0.6	V
V_{BEsat}	Base-emitter saturation voltage	I_C=1A ;I_B=0.1A			1.5	V
I_{CBO}	Collector cut-off current	V_{CB}=100V; I_E=0			10	μA
I_{EBO}	Emitter cut-off current	V_{EB}=5V; I_C=0			10	μA
h_{FE-1}	DC current gain	I_C=0.1A ; V_{CE}=5V	40			
h_{FE-2}	DC current gain	I_C=1A ; V_{CE}=5V	40		200	

Switching times resistive load

t_{on}	Turn-on time	I_C=1.0A I_{B1}=- I_{B2}=0.1A R_L=50Ω;V_{CC}≈50V			0.5	μs
t_s	Storage time				1.5	μs
t_f	Fall time				0.5	μs