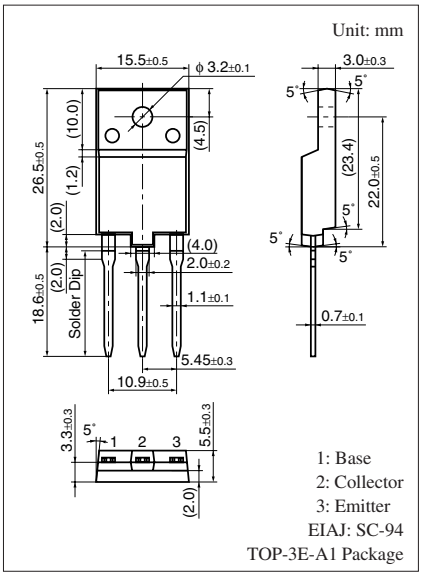
2SC5909

Silicon NPN triple diffusion mesa type

For horizontal deflection output

■ Features

- High breakdown voltage: $V_{CBO} \geq 1\,500$ V
- High-speed switching: $t_f < 200$ ns
- Wide safe operation area

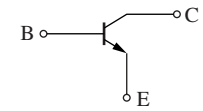


■ Absolute Maximum Ratings $T_C = 25°C$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	1 500	V
Collector-emitter voltage (E-B short)	V_{CES}	1 500	V
Collector-emitter voltage (Base open)	V_{CEO}	600	V
Emitter-base voltage (Collector open)	V_{EBO}	7	V
Base current	I_B	5	A
Collector current	I_C	15	A
Peak collector current *	I_{CP}	25	A
Collector power dissipation	P_C	50	W
$T_a = 25°C$		3	
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

Note) ∗: Non-repetitive peak collector current

Internal Connection

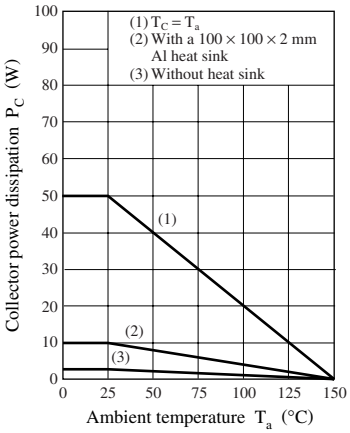


■ Electrical Characteristics $T_C = 25°C \pm 3°C$

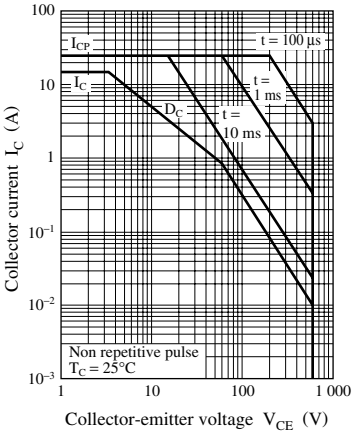
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base cutoff current (Emitter open)	I_{CBO}	V_{CB} = 1 000 V, I_E = 0			50	µA
		V_{CB} = 1 500 V, I_E = 0			1	mA
Emitter-base cutoff current (Collector open)	I_{EBO}	V_{EB} = 7 V, I_C = 0			50	µA
Forward current transfer ratio	h_{FE}	V_{CE} = 5 V, I_C = 7.5 A	5		10	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 7.5 A, I_B = 1.88 A			2.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C = 7.5 A, I_B = 1.88 A			1.5	V
Transition frequency	f_T	V_{CE} = 10 V, I_C = 0.1 A, f = 0.5 MHz		3		MHz
Storage time	t_{stg}	I_C = 7.5 A, Resistance loaded			2.7	µs
Fall time	t_f	I_{B1} = 1.88 A, I_{B2} = −3.75 A			0.2	µs

Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

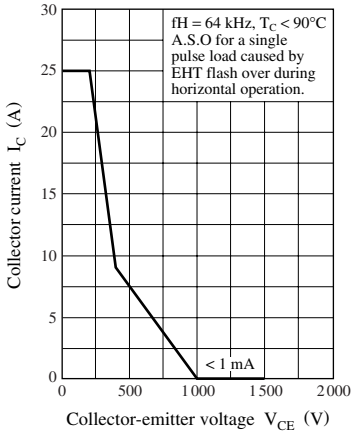
P_C — T_a



Safe operation area



Safe operation area (Horizontal operation)



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