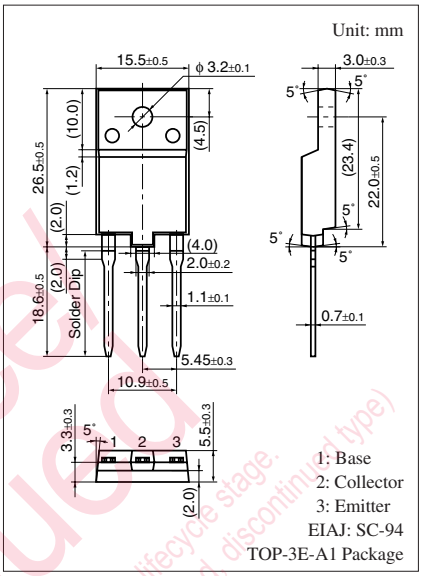
2SC5591

Silicon NPN triple diffusion mesa type

For horizontal deflection output



■ Features

- High breakdown voltage: 1 700 V; supporting a large screen CRT and wider visible angle
- High-speed switching: Fall time $t_f < 0.2$ µs
- Low collector-emitter saturation voltage: Collector-emitter saturation voltage $V_{CE(sat)} < 3$ V
- Wide safe operation area

■ Absolute Maximum Ratings $T_C = 25°C$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	1 700	V
Collector-emitter voltage (E-B short)	V_{CES}	1 700	V
Collector-emitter voltage (Base open)	V_{CEO}	600	V
Emitter-base voltage (Collector open)	V_{EBO}	7	V
Base current	I_B	11	A
Collector current	I_C	20	A
Peak collector current *	I_{CP}	30	A
Collector power dissipation	P_C	70	W
$T_a = 25°C$		3.5	
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

Note) ∗: Non-repetitive peak collector current

■ 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} = 1 700 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 = 10 A	6		12	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 10 A, I_B = 2.5 A			3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C = 10 A, I_B = 2.5 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 = 10 A, Resistance loaded			3.0	µs
Fall time	t_f	I_{B1} = 2.5 A, I_{B2} = −5.0 A			0.2	µs

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

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