

2SC5591

Silicon NPN triple diffusion mesa type

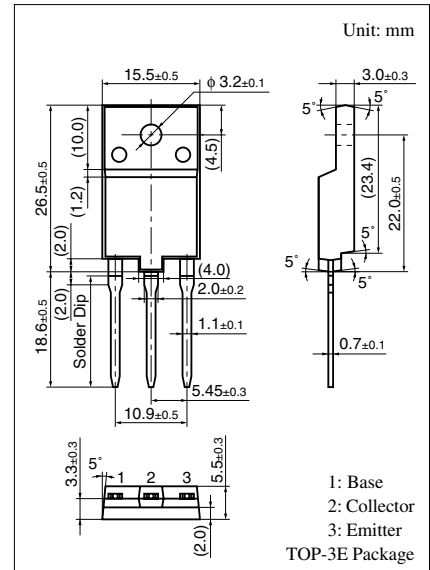
For horizontal deflection output

■ Features

- High breakdown voltage: 1 700 V; supporting a large screen CRT and wider visible angle
- High-speed switching: $t_f < 0.2 \mu\text{s}$
- Low Collector to emitter saturation voltage: $V_{CE(sat)} < 3 \text{ V}$
- Wide area of safe operation (ASO)

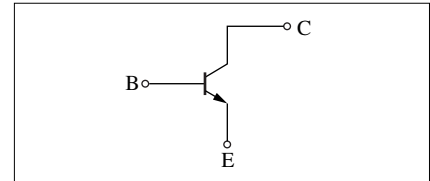
■ Absolute Maximum Ratings $T_C = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit	
Collector to base voltage	V_{CBO}	1 700	V	
Collector to emitter voltage	V_{CES}	1 700	V	
	V_{CEO}	600	V	
Emitter to base voltage	V_{EBO}	7	V	
Peak collector current	I_{CP}	30	A	
Collector current	I_C	20	A	
Base current	I_B	11	A	
Collector power dissipation	P_C	$T_C = 25^\circ\text{C}$	70	W
		$T_a = 25^\circ\text{C}$	3.5	
Junction temperature	T_j	150	$^\circ\text{C}$	
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$	



Marking Symbol: C5591

Internal Connection



■ Electrical Characteristics $T_C = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 1\,000 \text{ V}, I_E = 0$			50	μA
		$V_{CB} = 1\,700 \text{ V}, I_E = 0$			1	mA
Emitter cutoff current	I_{EBO}	$V_{EB} = 7 \text{ V}, I_C = 0$			50	μA
Forward current transfer ratio	h_{FE}	$V_{CE} = 5 \text{ V}, I_C = 10 \text{ A}$	6		12	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10 \text{ A}, I_B = 2.5 \text{ A}$			3	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 10 \text{ A}, I_B = 2.5 \text{ A}$			1.5	V
Transition frequency	f_T	$V_{CE} = 10 \text{ V}, I_C = 0.1 \text{ A}, f = 0.5 \text{ MHz}$		3		MHz
Storage time	t_{stg}	$I_C = 10 \text{ A}, \text{Resistance loaded}$			3.0	μs
Fall time	t_f	$I_{B1} = 2.5 \text{ A}, I_{B2} = -5.0 \text{ A}$			0.2	μs

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