

2SC5393

Silicon NPN triple diffusion planar type

For high breakdown voltage high-speed switching

■ Features

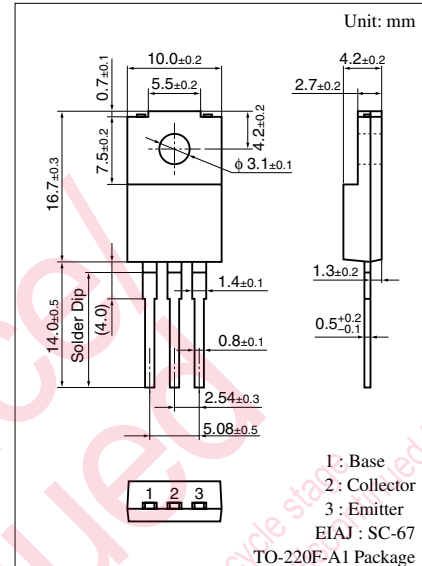
- High-speed switching
- High collector to base voltage V_{CBO}
- Wide area of safe operation (ASO)
- Satisfactory linearity of forward current transfer ratio h_{FE}
- Full-pack package which can be installed to the heat sink with one screw

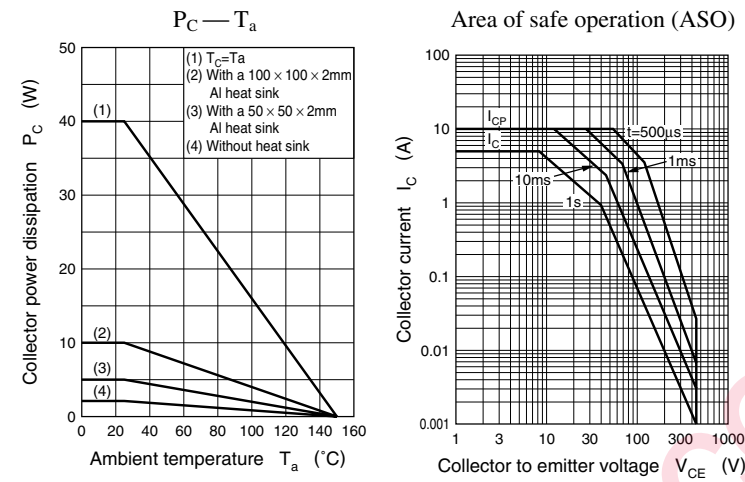
■ Absolute Maximum Ratings $T_C = 25^\circ\text{C}$

Parameter		Symbol	Rating	Unit
Collector to base voltage		V_{CBO}	600	V
Collector to emitter voltage		V_{CES}	600	V
		V_{CEO}	400	V
Emitter to base voltage		V_{EBO}	7	V
Peak collector current		I_{CP}	10	A
Collector current		I_C	5	A
Base current		I_B	1	A
Collector power dissipation	$T_C = 25^{\circ}\text{C}$	P_C	40	W
	$T_a = 25^{\circ}\text{C}$		2	
Junction temperature		T_j	150	$^{\circ}\text{C}$
Storage temperature		T_{stg}	-55 to +150	$^{\circ}\text{C}$

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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 600\text{ V}, I_E = 0$			100	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 5\text{ V}, I_C = 0$			100	μA
Forward current transfer ratio	h_{FE1}	$V_{CE} = 5\text{ V}, I_C = 0.1\text{ A}$	10		60	
	h_{FE2}	$V_{CE} = 5\text{ V}, I_C = 1.5\text{ A}$	8			
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1.5\text{ A}, I_B = 0.3\text{ A}$			1	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 1.5\text{ A}, I_B = 0.3\text{ A}$			2	V
Transition frequency	f_T	$V_{CE} = 10\text{ V}, I_C = 0.1\text{ A}, f = 0.5\text{ MHz}$		30		MHz
Storage time	t_{stg}	$I_C = 2\text{ A}, I_{B1} = 0.4\text{ A}, I_{B2} = -0.8\text{ A},$			2.0	μs
Fall time	t_f	$V_{CC} = 150\text{ V}$			0.3	μs





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