2SC4420

Silicon NPN triple diffusion planar type

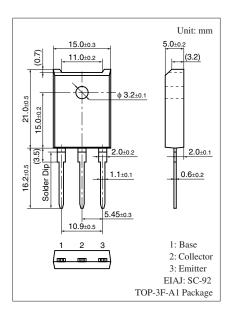
For high breakdown voltage high-speed switching

■ Features

- High-speed switching
- High collector-base voltage (Emitter open) V_{CBO}
- Wide safe operation area
- 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 $T_C = 25$ °C

Parameter	Symbol	Rating	Unit	
Collector-base voltage (E	V _{CBO}	900	V	
Collector-emitter voltage	V _{CES}	900	V	
Collector-emitter voltage	V _{CEO}	800	V	
Emitter-base voltage (Collector open)		V _{EBO}	7	V
Base current		I_B	1	A
Collector current	I_{C}	3	A	
Peak collector current		I_{CP}	5	A
Collector power dissipation		P _C	70	W
	$T_a = 25^{\circ}C$		3.0	
Junction temperature		T _j	150	°C
Storage temperature		T_{stg}	-55 to +150	°C



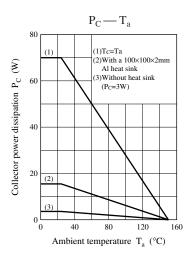
■ Electrical Characteristics $T_C = 25$ °C ± 3 °C

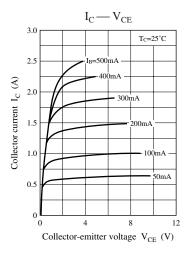
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-emitter voltage (Base open)	V _{CEO}	$I_C = 10 \text{ mA}, I_B = 0$	800			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 900 \text{ V}, I_E = 0$			50	μΑ
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = 7 \text{ V}, I_{C} = 0$			50	μΑ
Forward current transfer ratio	h _{FE1}	$V_{CE} = 5 \text{ V}, I_{C} = 0.1 \text{ A}$	8			_
	h _{FE2}	$V_{CE} = 5 \text{ V}, I_{C} = 0.8 \text{ A}$	6			
Collector-emitter saturation voltage	V _{CE(sat)}	$I_C = 0.8 \text{ A}, I_B = 0.16 \text{ A}$			1.5	V
Base-emitter saturation voltage	V _{BE(sat)}	$I_C = 0.8 \text{ A}, I_B = 0.16 \text{ A}$			1.5	V
Transition frequency	f_T	$V_{CE} = 5 \text{ V}, I_{C} = 0.15 \text{ A}, f = 1 \text{ MHz}$		10		MHz
Turn-on time	t _{on}	$I_{\rm C} = 0.8 \text{ A}$			0.7	μs
Storage time	t _{stg}	$I_{B1} = 0.16 \text{ A}, I_{B2} = -0.32 \text{ A}$			2.5	μs
Fall time	$t_{\rm f}$	$V_{CC} = 250 \text{ V}$			0.3	μs

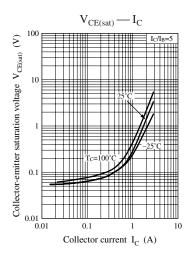
Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

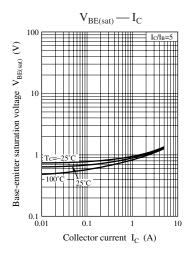
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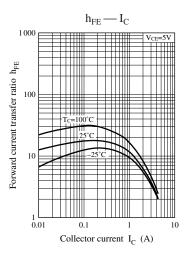
Panasonic

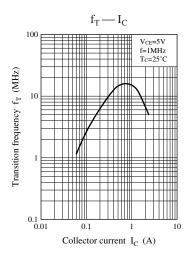


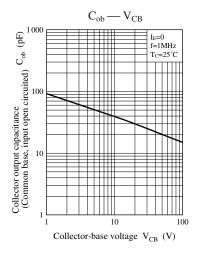


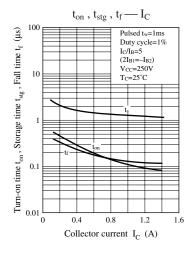


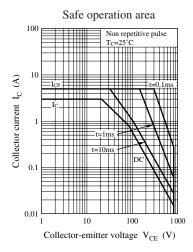






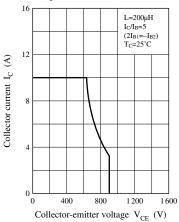




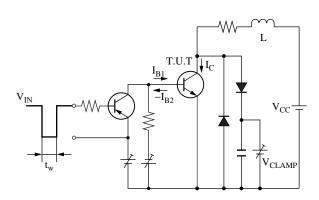


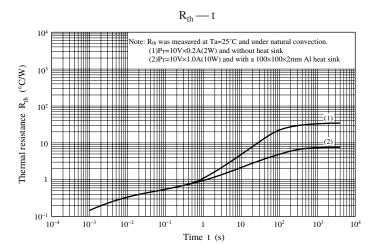
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Safe operation area (Reverse bias)



Safe operation area (Reverse bias) measurement circuit





SJD00128BED 3

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