

2SD1446

Silicon NPN triple diffusion planar type Darlington

For power amplification

■ Features

- High forward current transfer ratio h_{FE}
- High collector to base voltage V_{CBO}
- Full-pack package which can be installed to the heat sink with one screw

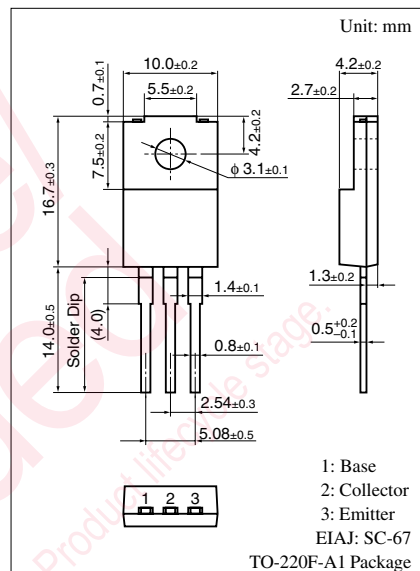
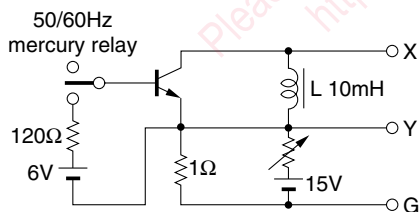
■ Absolute Maximum Ratings $T_C = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit	
Collector to base voltage	V_{CBO}	500	V	
Collector to emitter voltage	V_{CEO}	400	V	
Emitter to base voltage	V_{EBO}	5	V	
Peak collector current	I_{CP}	10	A	
Collector current	I_C	6	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	$^\circ\text{C}$	

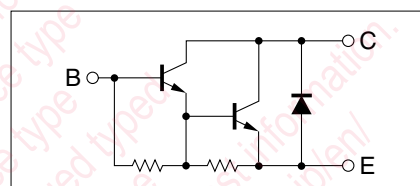
■ Electrical Characteristics $T_C = 25^\circ\text{C}$

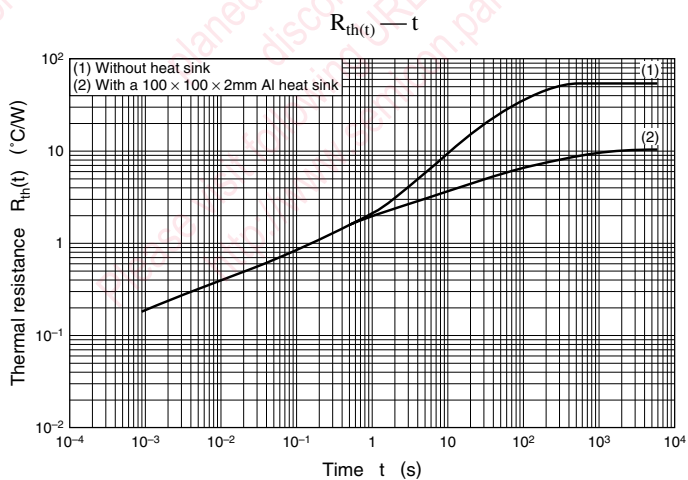
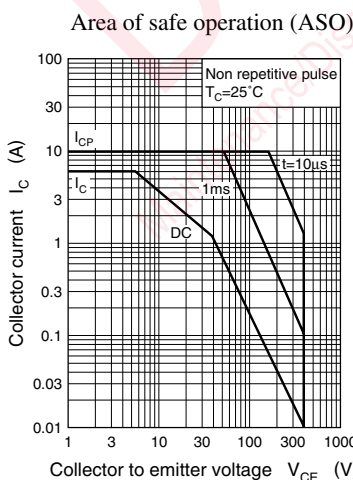
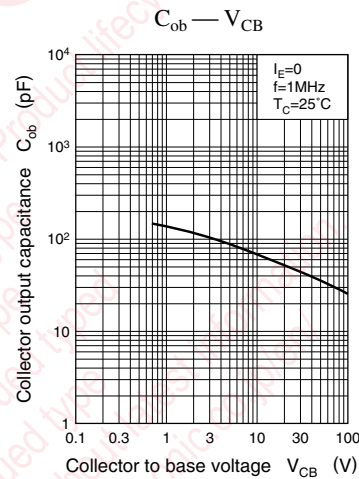
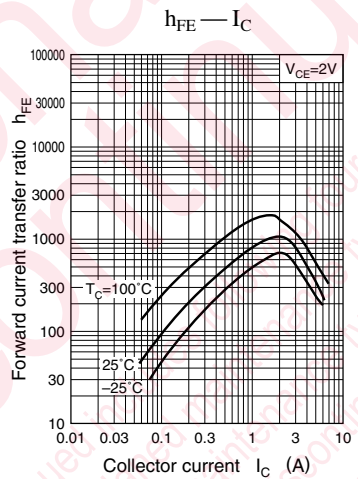
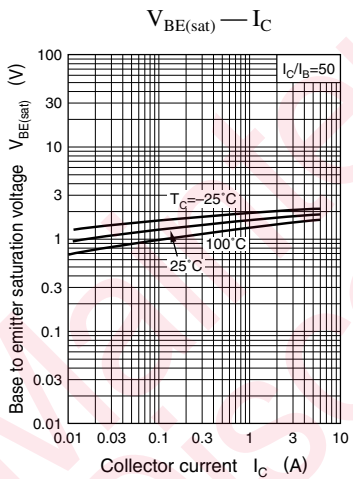
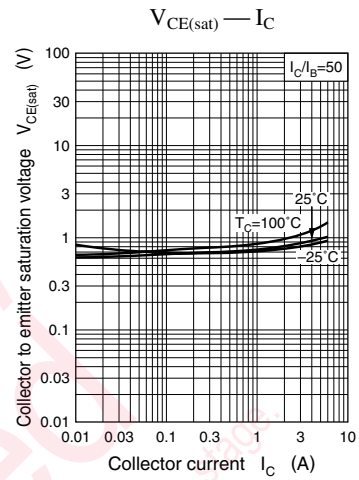
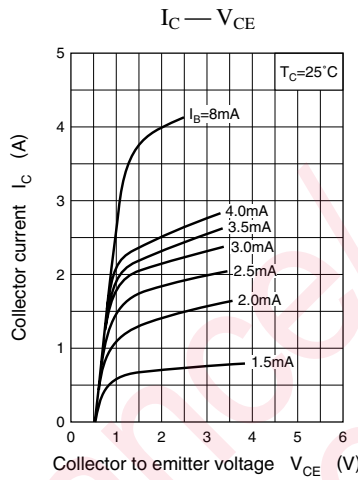
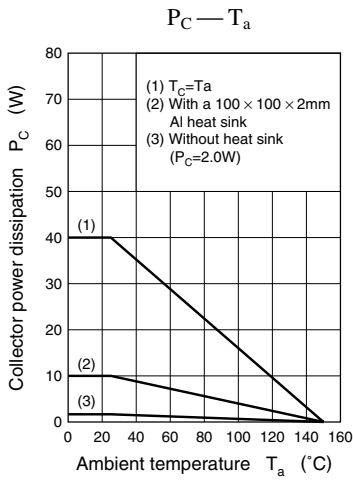
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 350\text{ V}, I_E = 0$			100	μA
Collector to emitter voltage *	$V_{CEO(sus)}$	$I_C = 2\text{ A}, L = 10\text{ mH}$	400			V
Emitter to base voltage	V_{EBO}	$I_E = 0.1\text{ A}, I_C = 0$	5			V
Forward current transfer ratio	h_{FE}	$V_{CE} = 2\text{ V}, I_C = 2\text{ A}$	500			
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 3\text{ A}, I_B = 0.06\text{ A}$			1.5	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 3\text{ A}, I_B = 0.06\text{ A}$			2.5	V
Transition frequency	f_T	$V_{CE} = 10\text{ V}, I_C = 1\text{ A}, f = 1\text{ MHz}$		15		MHz

Note) *: $V_{CEO(sus)}$ Test circuit



Internal Connection





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