

2SC3795, 2SC3795A

Silicon NPN triple diffusion planar type
For high breakdown voltage high-speed switching

■ Features

- High-speed switching
- High collector to base voltage V_{CBO}
- Low collector to emitter saturation voltage $V_{CE(sat)}$
- Full-pack package which can be installed to the heat sink with one screw

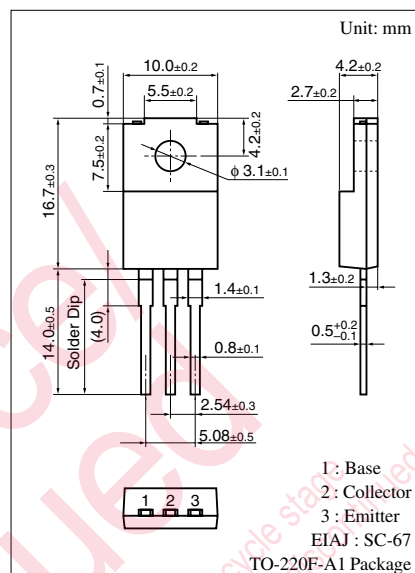
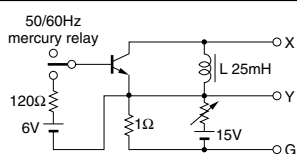
■ Absolute Maximum Ratings $T_C = 25^\circ\text{C}$

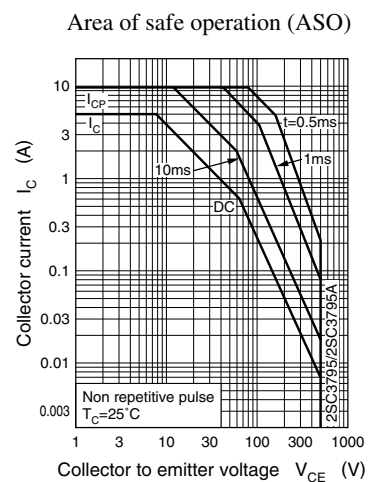
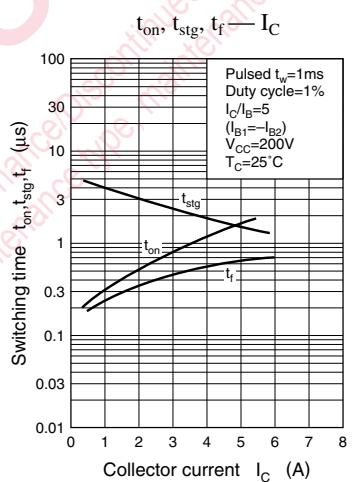
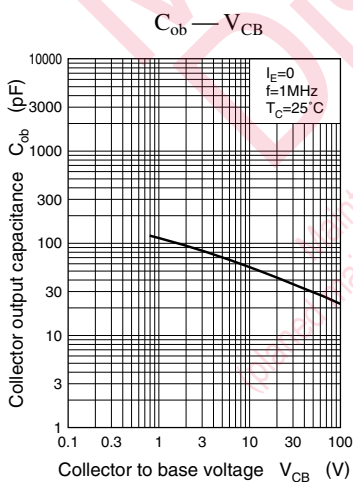
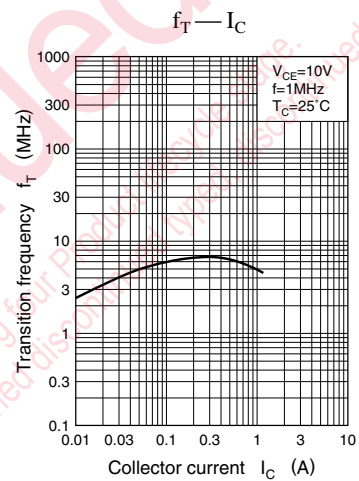
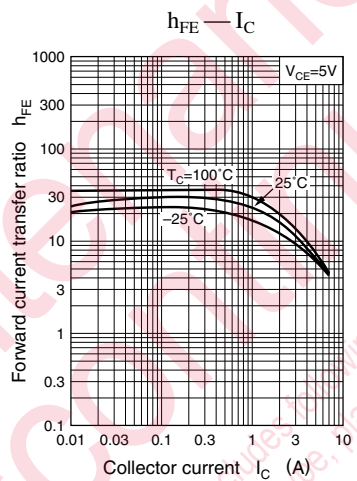
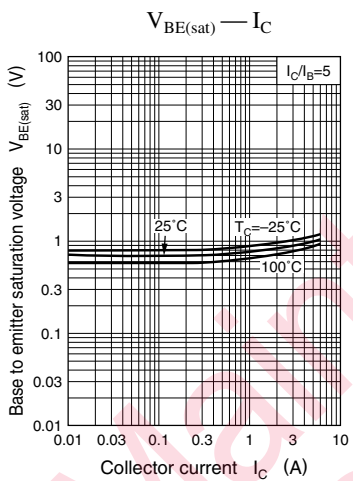
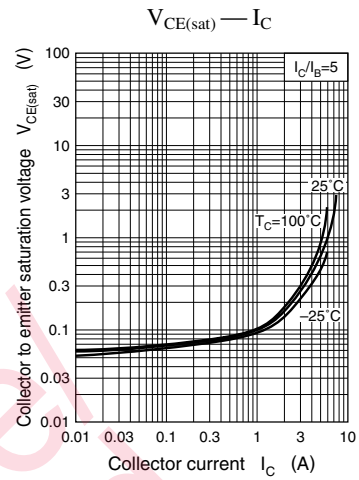
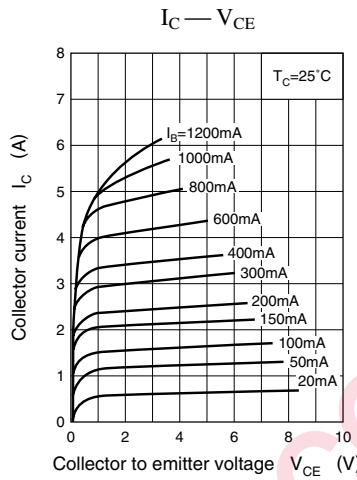
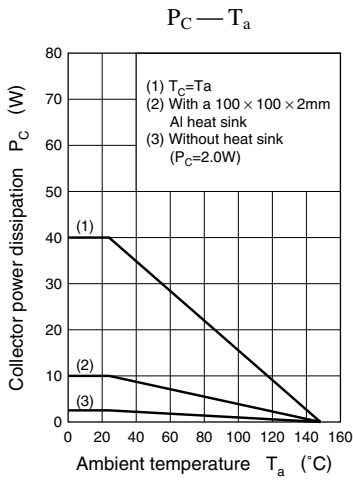
Parameter	Symbol	Rating	Unit
Collector to base voltage	2SC3795	800	V
	2SC3795A	900	
Collector to emitter voltage	2SC3795	800	V
	2SC3795A	900	
Collector to emitter voltage	V_{CEO}	500	V
Emitter to base voltage	V_{EBO}	8	V
Peak collector current	I_{CP}	10	A
Collector current	I_C	5	A
Base current	I_B	3	A
Collector power dissipation	$T_C = 25^\circ\text{C}$	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 $T_C = 25^\circ\text{C}$

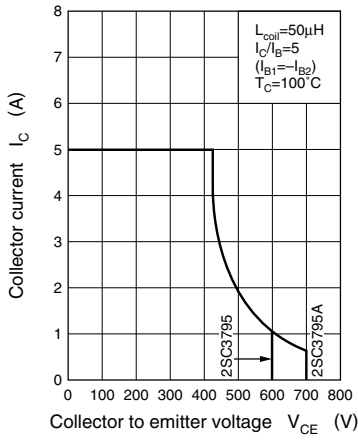
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	2SC3795	$V_{CB} = 800\text{ V}, I_E = 0$			100	μA
	2SC3795A	$V_{CB} = 900\text{ V}, I_E = 0$			100	
Emitter cutoff current	I_{EBO}	$V_{EB} = 5\text{ V}, I_C = 0$			100	μA
Collector to emitter voltage *	$V_{CEO(sus)}$	$I_C = 0.2\text{ A}, L = 25\text{ mH}$	500			V
Forward current transfer ratio	h_{FE1}	$V_{CE} = 5\text{ V}, I_C = 0.1\text{ A}$	15			
	h_{FE2}	$V_{CE} = 5\text{ V}, I_C = 3\text{ A}$	8			
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 3\text{ A}, I_B = 0.6\text{ A}$			1	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 3\text{ A}, I_B = 0.6\text{ A}$			1.5	V
Transition frequency	f_T	$V_{CE} = 10\text{ V}, I_C = 0.5\text{ A}, f = 1\text{ MHz}$		8		MHz
Turn-on time	2SC3795	$I_C = 3\text{ A}, I_{B1} = 0.6\text{ A}, I_{B2} = -0.6\text{ A}, V_{CC} = 200\text{ V}$			1	μs
	2SC3795A				1.2	
Storage time					3	μs
Fall time	2SC3795				1	μs
	2SC3795A				1.2	

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

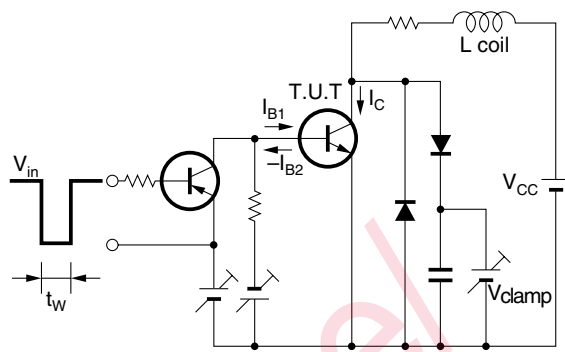




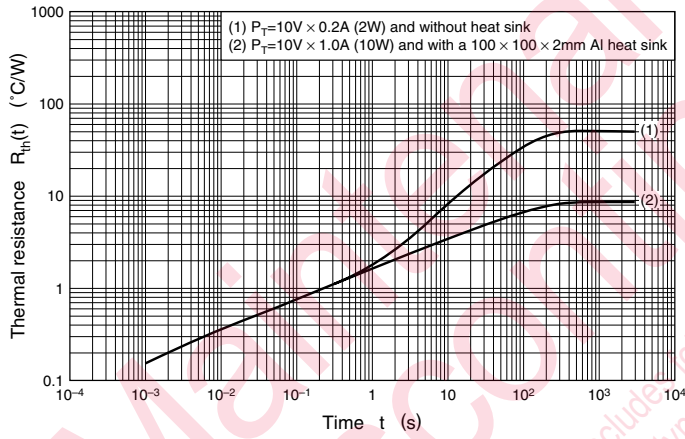
Area of safe operation, reverse bias ASO



Reverse bias ASO measuring circuit



$R_{th}(t) - t$



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