

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

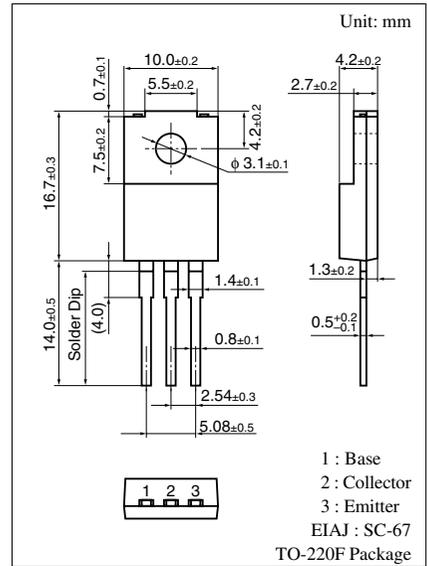
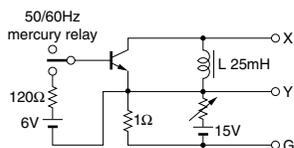
■ Absolute Maximum Ratings $T_C = 25^\circ C$

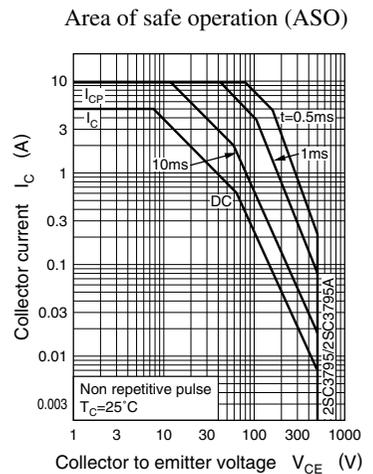
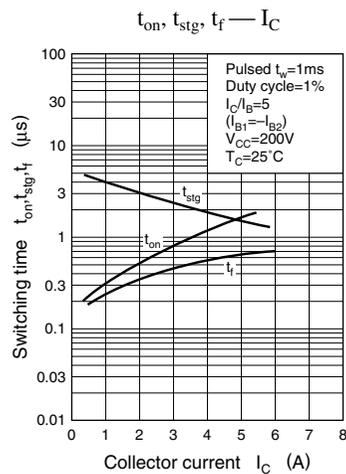
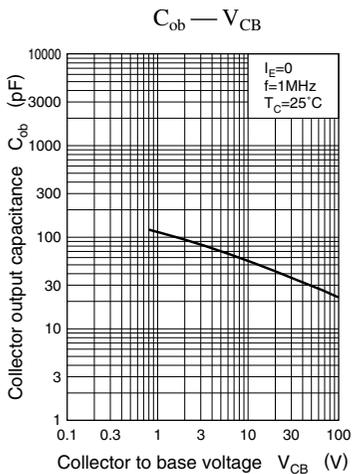
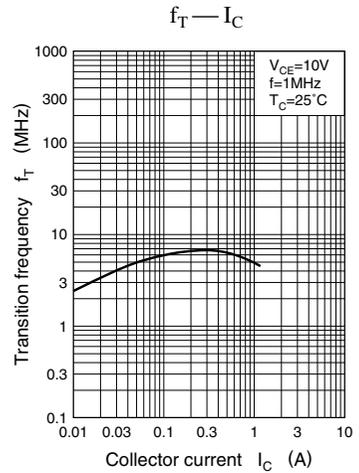
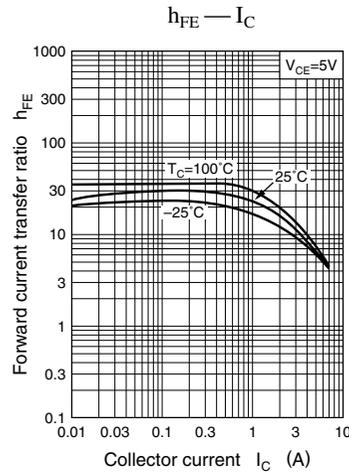
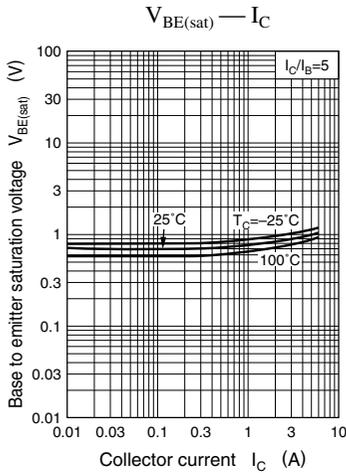
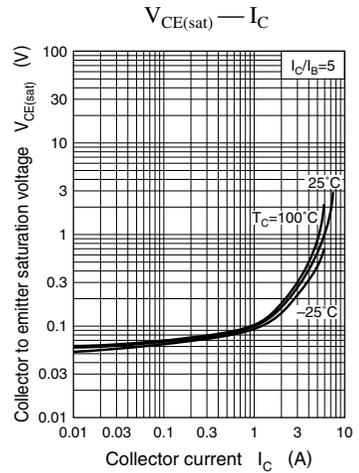
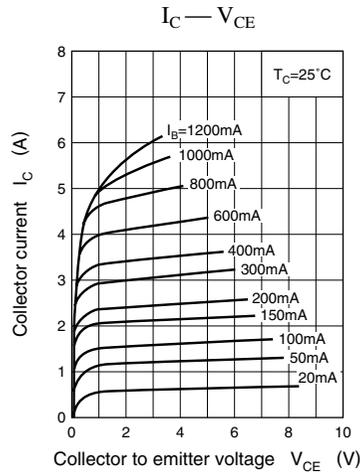
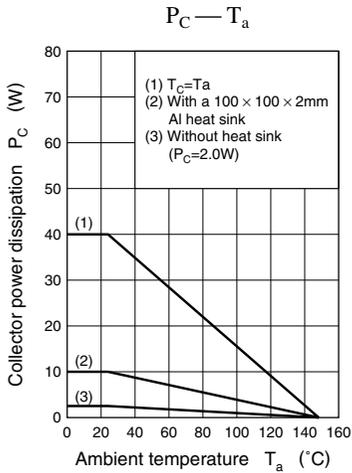
Parameter	Symbol	Rating	Unit	
Collector to base voltage	2SC3795	800	V	
	2SC3795A	900		
Collector to emitter voltage	2SC3795	800	V	
	2SC3795A	900		
Collector to emitter voltage	V_{CEO}	500	V	
Emitter to base voltage	V_{EBO}	8	V	
Peak collector current	I_{CP}	10	A	
Collector current	I_C	5	A	
Base current	I_B	3	A	
Collector power dissipation	P_C	$T_C = 25^\circ C$	40	W
		$T_a = 25^\circ C$	2	
Junction temperature	T_j	150	$^\circ C$	
Storage temperature	T_{stg}	-55 to +150	$^\circ C$	

■ Electrical Characteristics $T_C = 25^\circ C$

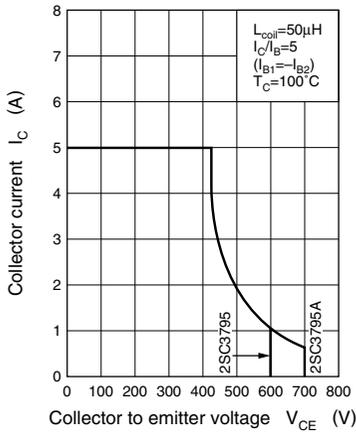
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 800 V, I_E = 0$			100	μA
		$V_{CB} = 900 V, I_E = 0$			100	
Emitter cutoff current	I_{EBO}	$V_{EB} = 5 V, I_C = 0$			100	μA
Collector to emitter voltage *	$V_{CEO(sus)}$	$I_C = 0.2 A, L = 25 mH$	500			V
Forward current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

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

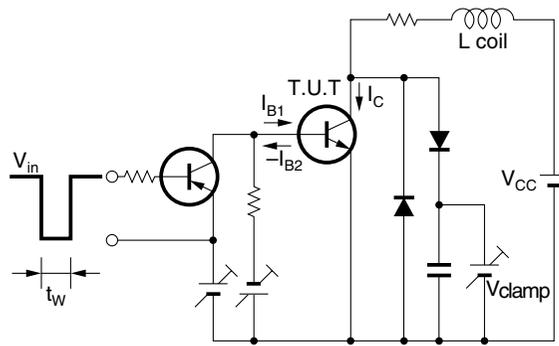




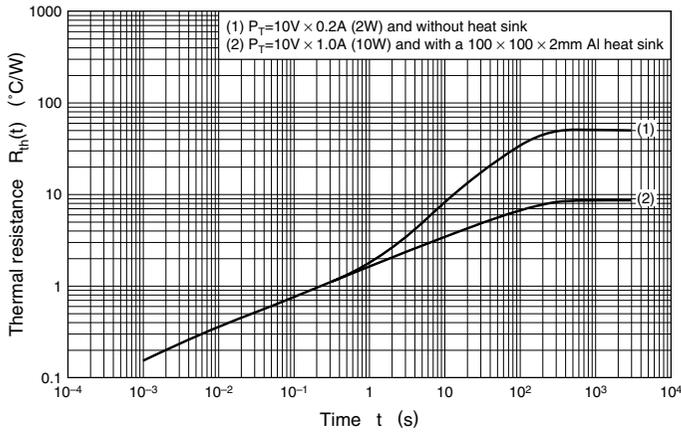
Area of safe operation, reverse bias ASO



Reverse bias ASO measuring circuit



$R_{th(t)} - t$



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