

2SC3795, 2SC3795A

Silicon NPN triple diffusion planar type

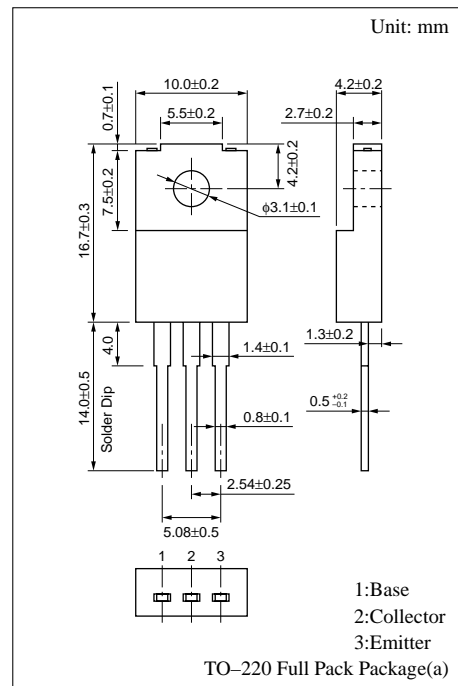
For high breakdown voltage high-speed switching

■ 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 ($T_C=25^\circ C$)

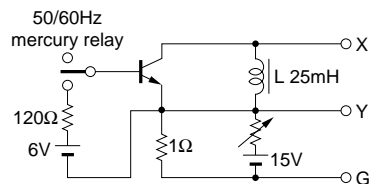
Parameter	Symbol	Ratings	Unit	
Collector to base voltage	V_{CBO}	2SC3795	800	V
		2SC3795A	900	
Collector to emitter voltage	V_{CES}	2SC3795	800	V
		2SC3795A	900	
Collector to emitter voltage	V_{CEO}	500	V	
Emitter to base voltage	V_{EBO}	8	V	
Peak collector current	I_{CP}	10	A	
Collector current	I_C	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	$^\circ C$	

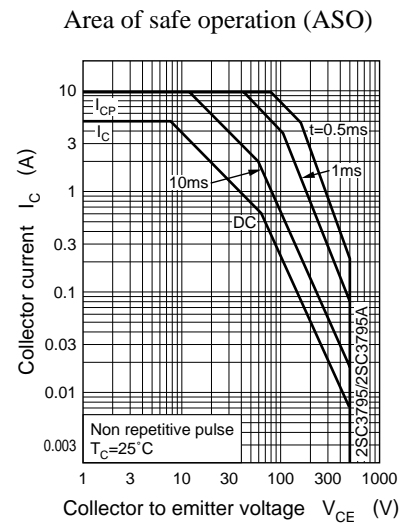
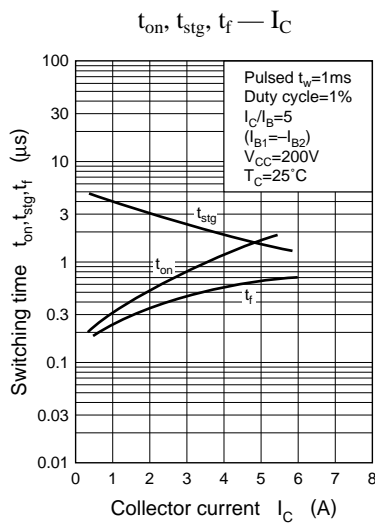
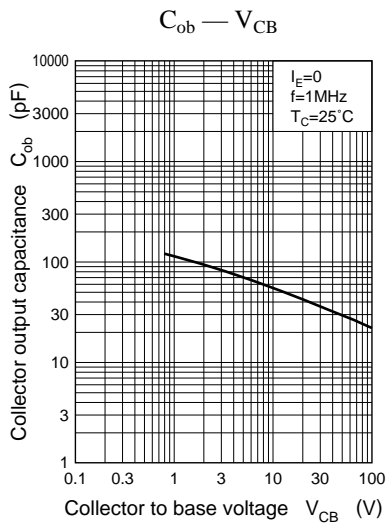
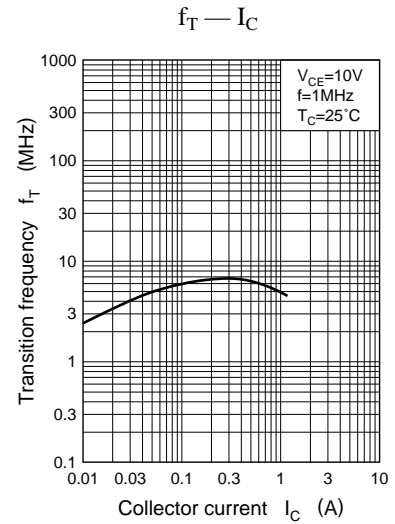
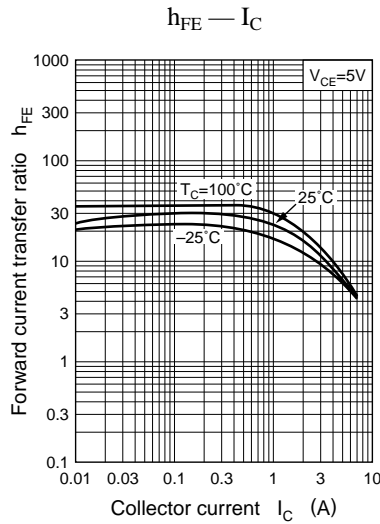
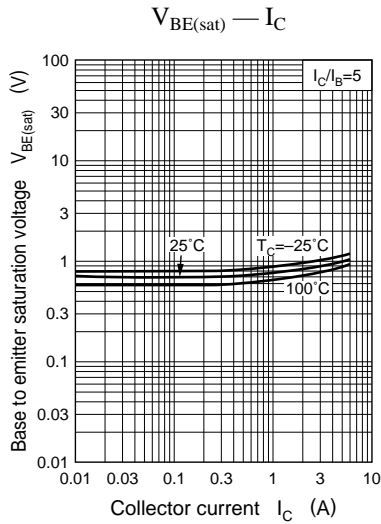
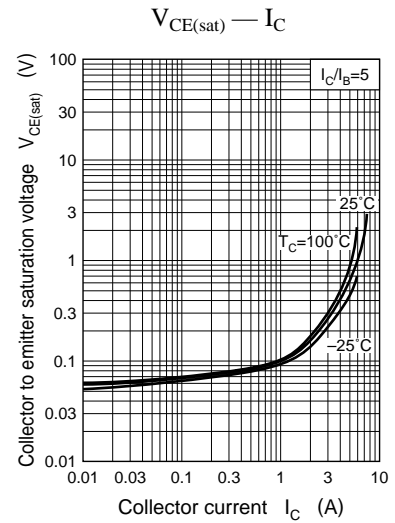
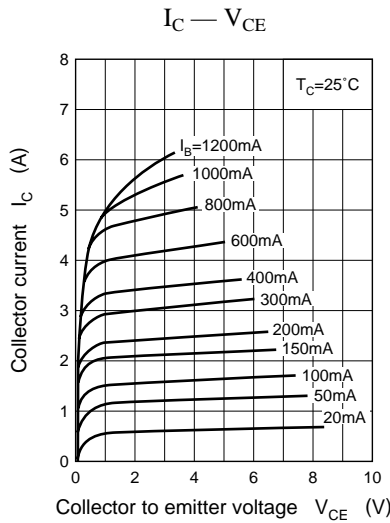
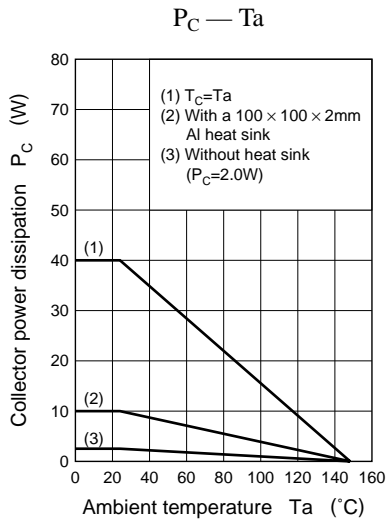


■ Electrical Characteristics ($T_C=25^\circ C$)

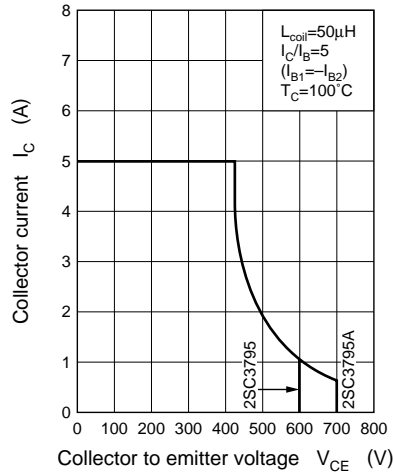
Parameter	Symbol	Conditions	min	typ	max	Unit	
Collector cutoff current	I_{CBO}	$V_{CB} = 800V, I_E = 0$			100	μA	
		$V_{CB} = 900V, I_E = 0$			100		
Emitter cutoff current	I_{EBO}	$V_{EB} = 5V, I_C = 0$			100	μA	
Collector to emitter voltage	$V_{CEO(sus)}$ *	$I_C = 0.2A, L = 25mH$	500			V	
Forward current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

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

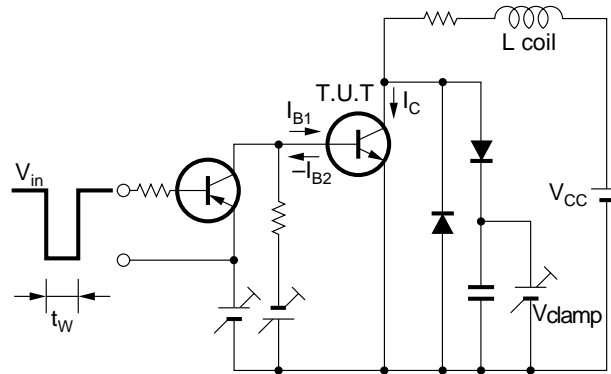




Area of safe operation, reverse bias ASO



Reverse bias ASO measuring circuit



$R_{th(t)} - t$

