

2SC3794, 2SC3794A

Silicon PNP Triple-Diffused Planar Type

High Breakdown Voltage, High Speed Switching

■ Features

- High speed switching
- High collector-base voltage (V_{CB0})
- Low collector-emitter saturation voltage ($V_{CE(sat)}$)
- "Full Pack" package for simplified mounting on a heat sink with one screw

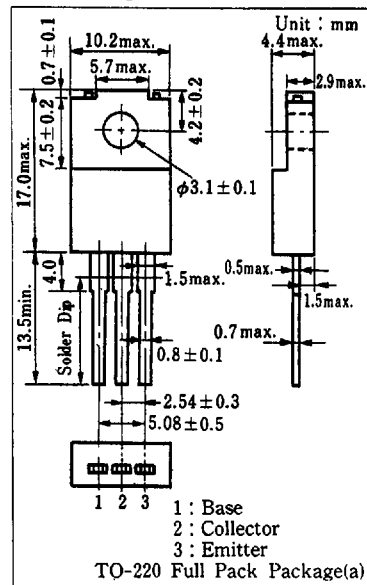
■ Absolute Maximum Ratings ($T_c=25^\circ\text{C}$)

Item	Symbol	Value	Unit
Collector-base voltage	V_{CB0}	800	V
		900	
Collector-emitter voltage	V_{CES}	800	V
		900	
Collector-emitter voltage	V_{CEO}	500	V
Emitter-base voltage	V_{EBO}	8	V
Peak collector current	I_{CP}	3	A
Collector current	I_C	1.5	A
Base current	I_B	0.5	A
Collector power dissipation	$T_c=25^\circ\text{C}$	25	W
	$T_a=25^\circ\text{C}$	2	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	$-55 \sim +150$	$^\circ\text{C}$

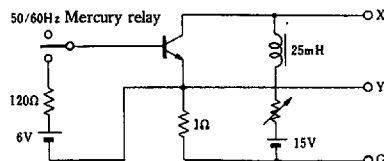
■ Electrical Characteristics ($T_c=25^\circ\text{C}$)

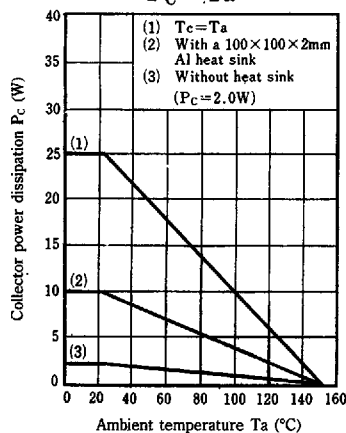
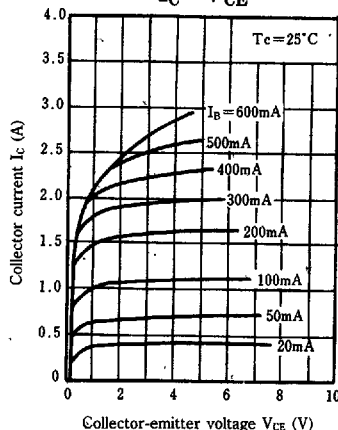
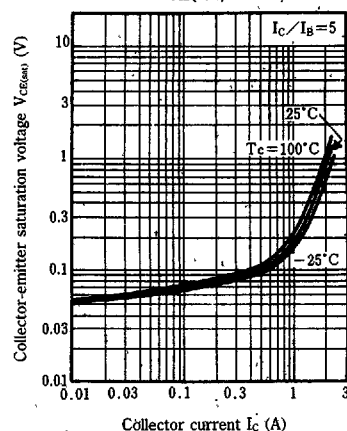
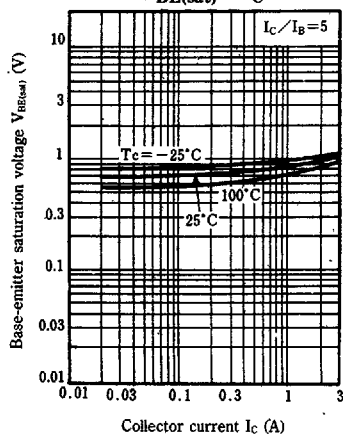
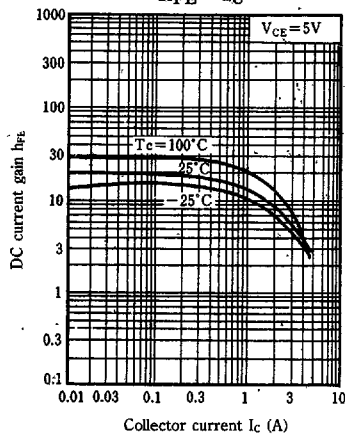
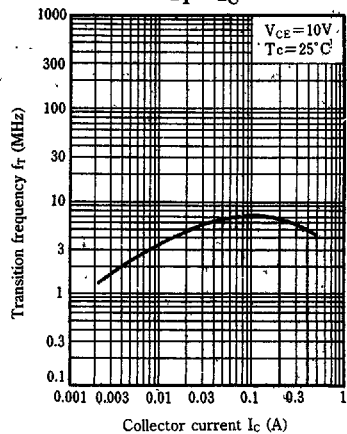
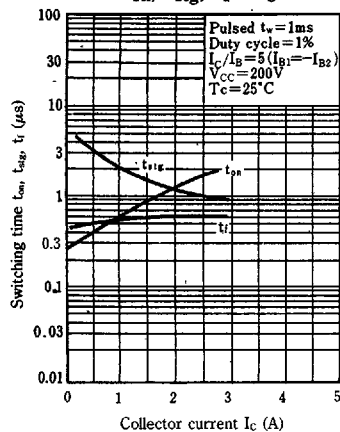
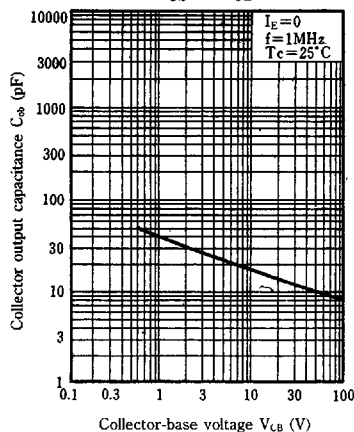
Item		Symbol	Condition	min.	typ.	max	Unit
Collector cutoff current	2SC3794	I _{CBO}	V _{CB} =800 V, I _E =0			100	μA
	2SC3794A		V _{CB} =900 V, I _E =0			100	
Emitter cutoff current		I _{EBO}	V _{EB} =5 V, I _C =0			100	μA
Collector-emitter voltage		V _{CEO(sus)}	I _C =0.2 A, L=25 mH	500			V
DC current gain		h _{FE1}	V _{CE} =5 V, I _C =0.1 A	15			
		h _{FE2}	V _{CE} =5 V, I _C =1 A	8			
Collector-emitter saturation voltage		V _{CE(sat)}	I _C =1 A, I _B =0.2 A			1	V
Base-emitter saturation voltage		V _{BE(sat)}	I _C =1 A, I _B =0.2 A			1.5	V
Transition frequency		f _T	V _{CE} =10V, I _C =0.2A, f=1MHz		8		MHz
Turn-on time	2SC3794	t _{on}	I _C =1A I _{B1} =0.2A, I _{B2} =-0.2A V _{CC} =200V			1	μs
	2SC3794A					1.2	
Storage time		t _{stg}				3	μs
Collector current fall time	2SC3794	t _f				1	μs
	2SC3794A					1.2	

■ Package Dimensions

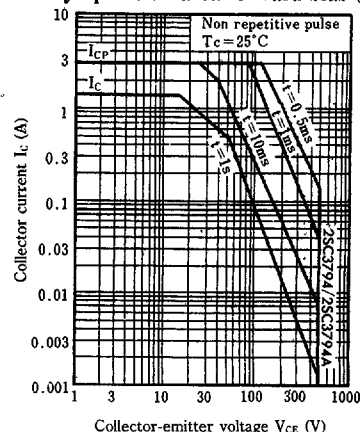


* $V_{CE0(sus)}$ Test method

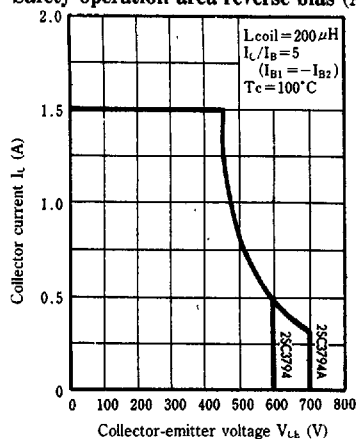


$P_C - T_a$  $I_C - V_{CE}$  $V_{CE(sat)} - I_C$  $V_{BE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_C$  $t_{on}, t_{stg}, t_f - I_C$  $C_{ob} - V_{CB}$ 

Safety operation area-forward bias (ASO)



Safety operation area-reverse bias (ASO)



Measurement circuit of reverse bias ASO

