

2SC3825

Silicon PNP Triple-Diffused Planar Type

High Breakdown Voltage, High Speed Switching

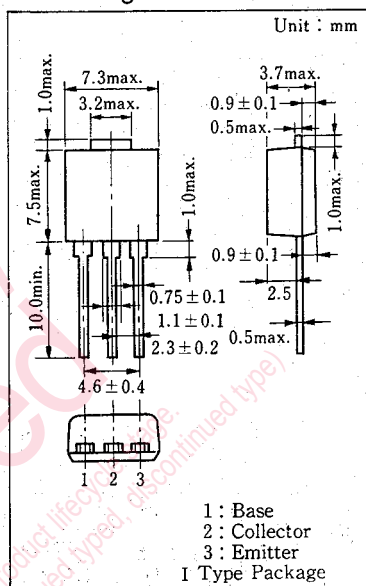
■ Features

- High speed switching
- Low collector-emitter saturation voltage ($V_{CE(sat)}$)
- "I Type" package configuration with a cooling fin for direct soldering on PC board of a small-size electronic equipment

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

Item	Symbol	Value	Unit
Collector-base voltage	V_{CB0}	500	V
Collector-emitter voltage	V_{CE0}	400	V
Emitter-base voltage	V_{EB0}	7	V
Peak collector current	I_{CP}	4	A
Collector current	I_C	2	A
Collector power dissipation	$T_c=25^\circ\text{C}$	15	W
	$T_a=25^\circ\text{C}$	1.3	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$

■ Package Dimensions

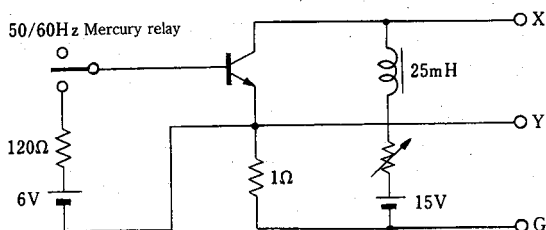


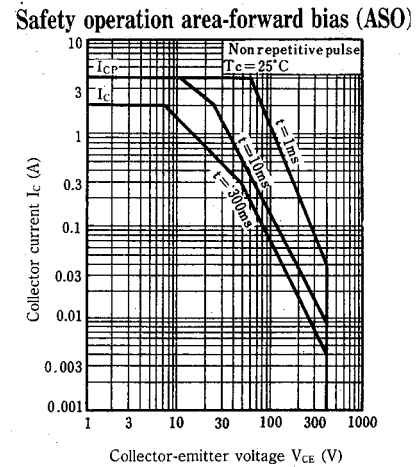
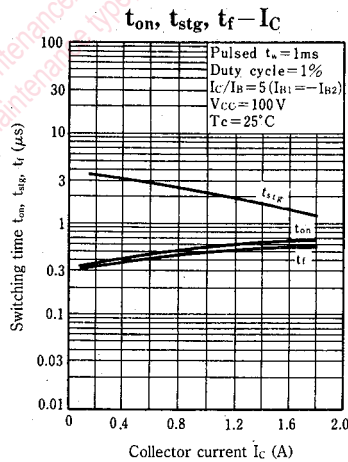
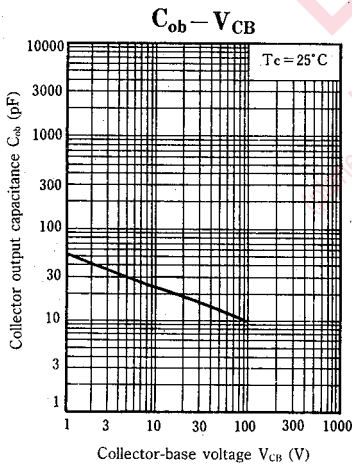
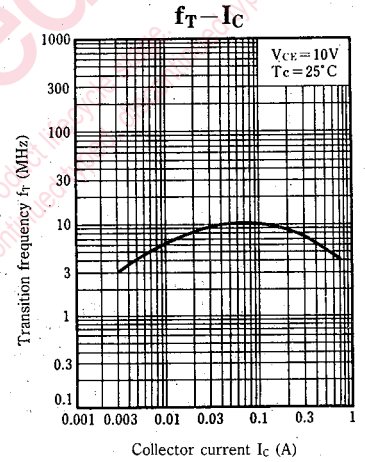
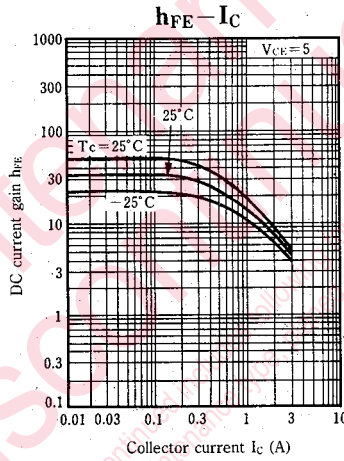
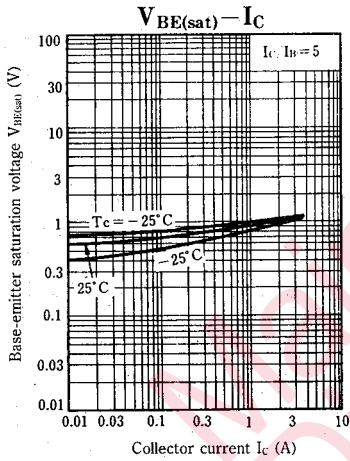
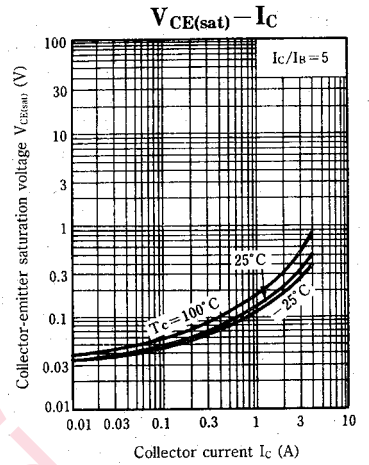
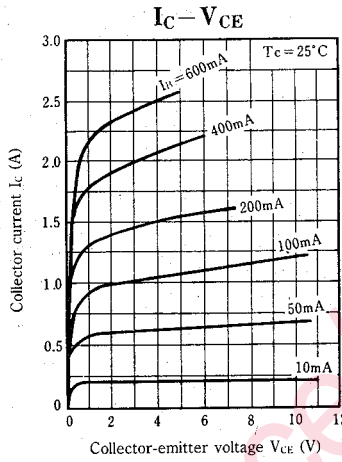
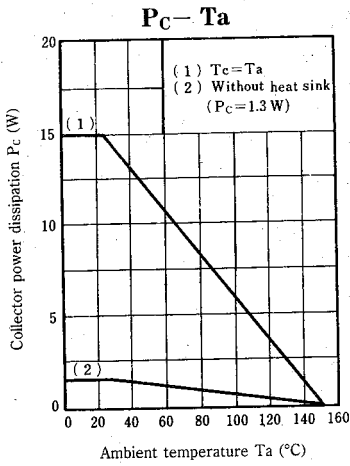
*Surface-mount type is also available. (Refer to p.81.)

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

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CB0}	$V_{CB}=500\text{ V}, I_E=0$			100	μA
Emitter cutoff current	I_{EB0}	$V_{EB}=5\text{ V}, I_C=0$			100	μA
Collector-emitter voltage	$V_{CE0(sus)}$	$I_C=0.2\text{ A}, L=25\text{ mH}$	400			V
DC current gain	h_{FE1}	$V_{CE}=5\text{ V}, I_C=0.1\text{ A}$	15			
	h_{FE2}	$V_{CE}=5\text{ V}, I_C=1\text{ A}$	8			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=1\text{ A}, I_B=0.2\text{ A}$			1	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=1\text{ A}, I_B=0.2\text{ A}$			1.5	V
Transition frequency	f_T	$V_{CE}=10\text{ V}, I_C=0.2\text{ A}, f=1\text{ MHz}$		8		MHz
Turn-on time	t_{on}	$I_C=1\text{ A}$			1	μs
Storage time	t_{stg}	$I_{B1}=0.2\text{ A}, I_{B2}=-0.2\text{ A}$			3	μs
Collector current fall time	t_f	$V_{CC}=100\text{ V}$			1	μs

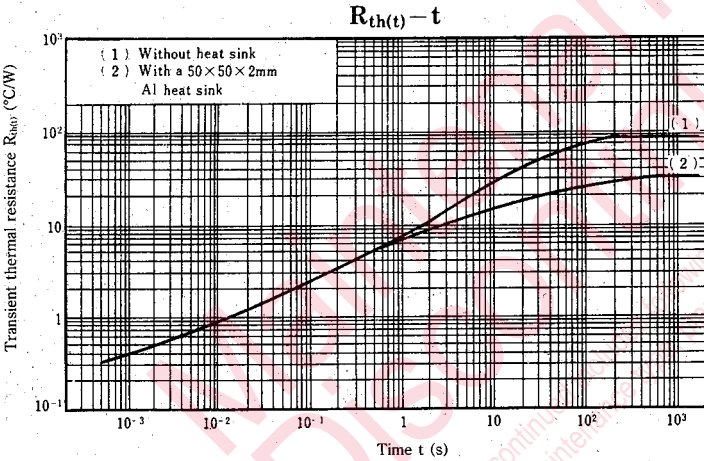
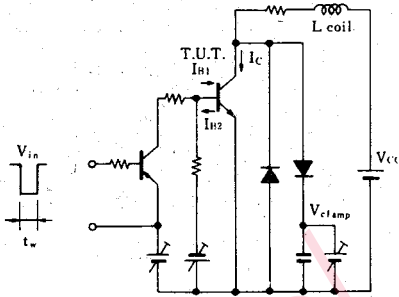
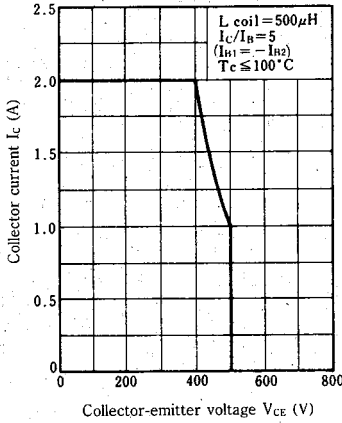
* $V_{CE0(sus)}$ Test method





Safety operation area-reverse bias (ASO)

Measurement circuit of reverse bias ASO



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