

2SD1680

Silicon PNP Triple-Diffused Planar Type

Horizontal Deflection Output

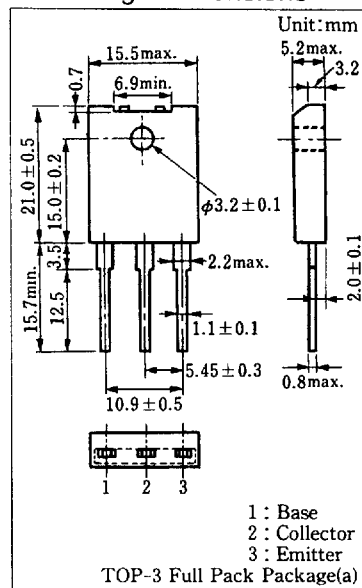
■ Features

- High collector-base voltage (V_{CBO})
- Large collector power dissipation (P_C)
- High speed switching

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

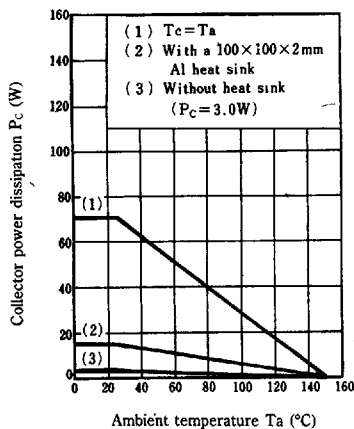
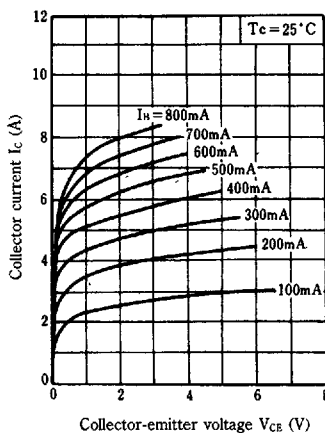
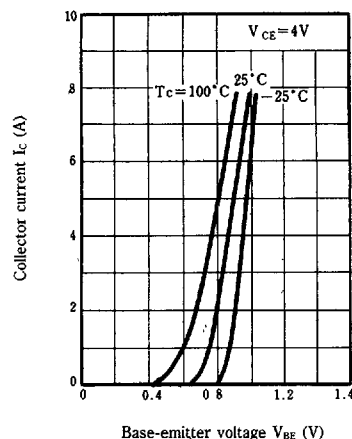
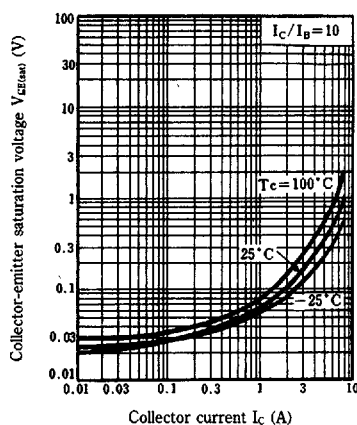
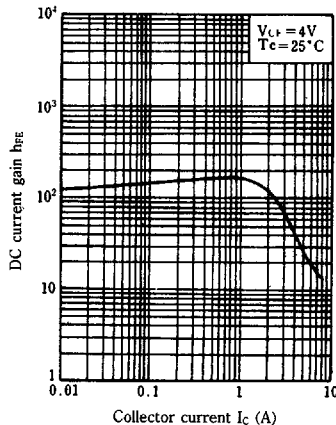
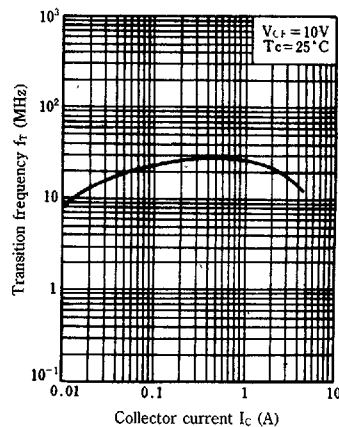
Item	Symbol	Value	Unit
Collector-base voltage	V_{CBO}	330	V
Collector-emitter voltage	V_{CES}	330	V
Collector-emitter voltage	V_{CEO}	200	V
Emitter-base voltage	V_{EBO}	6	V
Non-repetitive peak collector current	I_{CP}	15	A
Peak collector current	I_{CP}	10	A
Collector current	I_C	7	A
Collector power dissipation	$T_c=25^\circ\text{C}$	P_C	70
	$T_a=25^\circ\text{C}$		
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	$-55 \sim +150$	$^\circ\text{C}$

■ Package Dimensions

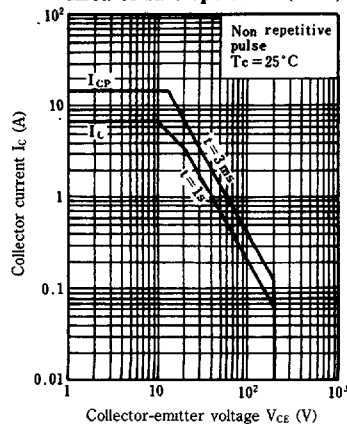


■ Electrical Characteristics ($T_c=25^\circ\text{C}$)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CFS}	$V_{CE}=330\text{ V}, V_{BE}=0$			100	μA
		$V_{CE}=300\text{ V}, V_{BE}=0, T_a=100^\circ\text{C}$			1	mA
Emitter cutoff current	I_{EBO}	$V_{EB}=6\text{ V}, I_C=0$			1	mA
DC current gain	h_{FE}	$V_{CE}=4\text{ V}, I_C=5\text{ A}$	15		45	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=5\text{ A}, I_B=0.5\text{ A}$			1	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=5\text{ A}, I_B=0.5\text{ A}$			1.2	V
Transition frequency	f_T	$V_{CE}=10\text{ V}, I_C=0.5\text{ A}, f=10\text{ MHz}$		30		MHz
Fall time	t_f	$I_C=5\text{ A}, I_{B1}=0.8\text{ A}, V_{EB}=-5\text{ V}, R_B=0.5\text{ }\Omega$			0.75	μs

$P_C - T_a$  $I_C - V_{CE}$  $I_C - V_{BE}$  $V_{CE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_C$ 

Area of safe operation (ASO)

 $R_{th(t)} - t$ 