

# 2SD1680

## Silicon PNP Triple-Diffused Planar Type

### Horizontal Deflection Output

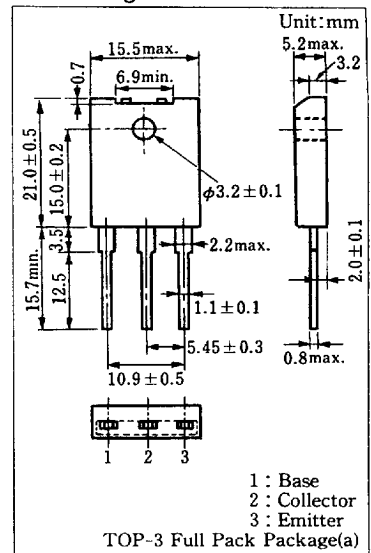
#### ■ Features

- 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-repetive peak collector current	$I_{CP}$	15	A
Peak collector current	$I_{CP}$	10	A
Collector current	$I_C$	7	A
Collector power dissipation	$T_c=25^\circ\text{C}$	$P_C$	W
	$T_a=25^\circ\text{C}$		
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 ~ +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	$\mu\text{A}$
		$V_{CE}=300\text{ V}, V_{BE}=0, T_a=100^\circ\text{C}$			1	$\text{mA}$
Emitter cutoff current	$I_{EBO}$	$V_{EB}=6\text{ V}, I_C=0$			1	$\text{mA}$
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	$t_f$	$I_C=5\text{ A}, I_{B1}=0.8\text{ A}, V_{EB}=-5\text{ V}, R_B=0.5\ \Omega$			0.75	$\mu\text{s}$

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