

2SD1336, 2SD1336A

Silicon NPN Triple-Diffused Planar Darlington Type

Power Switching

■ Features

- High speed switching
- Good linearity of DC current gain (h_{FE})
- “Full Pack” package for simplified mounting on a heat sink with one screw

■ Absolute Maximum Ratings (Tc=25°C)

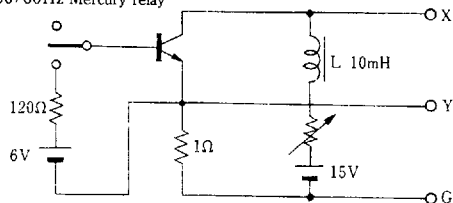
Item	Symbol	Value	Unit
Collector-base voltage	2SD1336	150	V
	2SD1336A	180	
Collector-emitter voltage	2SD1336	100	V
	2SD1336A	120	
Emitter-base voltage	V_{FBO}	8	V
Peak collector current	I_{CP}	10	A
Collector current	I_{C}	6	A
Collector power dissipation	$T_{\text{C}} = 25^{\circ}\text{C}$	35	W
	$T_{\text{A}} = 25^{\circ}\text{C}$	2	
Junction temperature	T_{J}	150	$^{\circ}\text{C}$
Storage temperature	T_{stg}	$-55 \sim +150$	$^{\circ}\text{C}$

■ Electrical Characteristics (Tc=25°C)

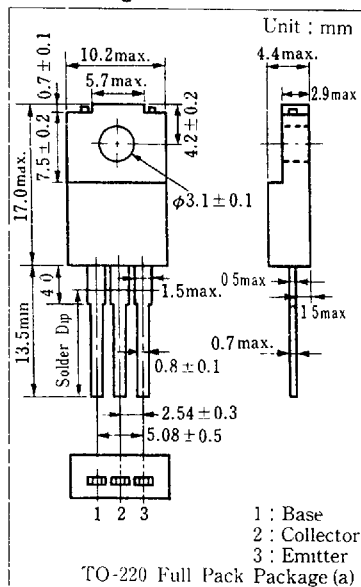
Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	2SD1336	$V_{CB}=150\text{ V}, I_F=0$			100	μA
	2SD1336A	$V_{CB}=180\text{ V}, I_F=0$			100	
Collector cutoff current	2SD1336	$V_{CE(sus)}^*, I_C=2\text{ A}, L=10\text{ mH}$	100			V
	2SD1336A	$I_C=2\text{ A}, L=10\text{ mH}$	120			
Emitter-base voltage	V_{EB0}	$I_E=200\text{ mA}, I_C=0$	8			V
DC current gain	h_{FE}	$V_{CE}=4\text{ V}, I_C=5\text{ A}$	1500			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=5\text{ A}, I_B=12.5\text{ mA}$			1.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=5\text{ A}, I_B=12.5\text{ mA}$			2.5	V
Transition frequency	f_T	$V_{CE}=10\text{ V}, I_C=0.5\text{ A}, f=1\text{ MHz}$		20		MHz
Turn-on time	t_{on}	$I_C=5\text{ A}$		0.7		μs
Storage time	t_{stg}	$I_{B1}=12.5\text{ mA}, I_{B2}=-12.5\text{ mA}$		4.0		μs
Fall time	t_f	$V_{CC}=50\text{ V}$		1.5		μs

* $V_{(EO(us))}$ Test method

50/60Hz Mercury relay



■ Package Dimensions



■ Inner Circuit

