

# 2SD1439

## Silicon NPN Triple-Diffused Junction Mesa Type

### Horizontal Deflection Output

#### ■ Features

- Damper diode built-in
- High breakdown voltage and high reliability by glass passivation
- High speed switching
- Wide area of safety operation (ASO)

#### ■ Absolute Maximum Ratings (Tc=25°C)

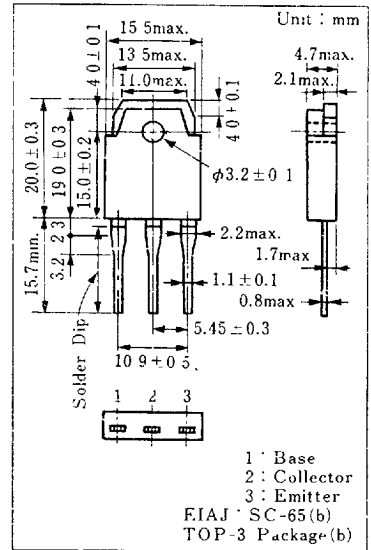
Item	Symbol	Value	Unit	
Collector-base voltage	$V_{CB0}$	1500	V	
Collector-emitter voltage	$V_{CEs}$	1500	V	
Emitter-base voltage	$V_{EB0}$	5	V	
Collector current	$I_C$	3	A	
Peak collector current	$I_{CP}^*$	10	A	
Peak base current	$I_{BP}$	3.5	A	
Reverse peak base current	$I_{BP}$	-2.5	A	
Collector power dissipation	$P_C$	Tc = 25°C	50	W
		Ta = 25°C	2.5	
Junction temperature	$T_J$	130	°C	
Storage temperature	$T_{stg}$	-55 ~ +130	°C	

\* Non repetitive peak value

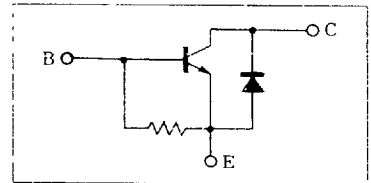
#### ■ Electrical Characteristics (Tc=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current'	$I_{CBO}$	$V_{CB} = 750 \text{ V}, I_L = 0$			50	$\mu\text{A}$
		$V_{CB} = 1500 \text{ V}, I_F = 0$			1	mA
Emitter-base voltage	$V_{EB0}$	$I_F = 500 \text{ mA}, I_C = 0$	5			V
DC current gain	$h_{FE}$	$V_{CE} = 10 \text{ V}, I_C = 2 \text{ A}$	4		12	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 2 \text{ A}, I_B = 0.75 \text{ A}$			5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 2 \text{ A}, I_B = 0.75 \text{ A}$			1.5	V
Transition frequency	$f_T$	$V_{CE} = 10 \text{ V}, I_C = 0.5 \text{ A}, f = 0.5 \text{ MHz}$		2		MHz
Fall time	$t_f$	$I_C = 2 \text{ A}, I_{Bend} = 0.75 \text{ A}$			0.75	$\mu\text{s}$
Storage time	$t_{stg}$	$L_{leak} = 5 \mu\text{H}$	3		7	$\mu\text{s}$
Diode forward voltage	$V_F$	$V_{CE} = 10 \text{ V}, I_C = 0.5 \text{ A}, f = 0.5 \text{ MHz}$			-2.2	V

#### ■ Package Dimensions



#### ■ Inner Circuit



■ 6932852 0016716 T01 ■

