

# 2SD1731

## Silicon PNP Triple-Diffused Planar Type

### Horizontal Deflection Output

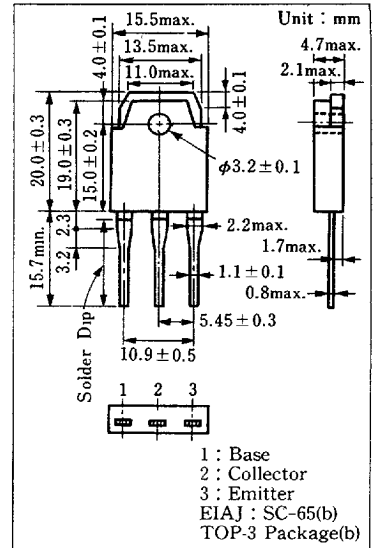
#### ■ Features

- Damper diode built-in
- Minimizes external component counts and simplifies circuitry
- High breakdown voltage, high reliability
- High speed switching
- Wide area of safety operation (ASO)

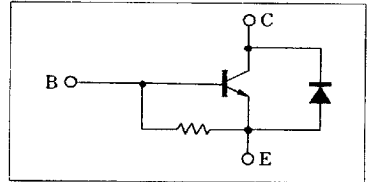
#### ■ Absolute Maximum Ratings (T<sub>c</sub>=25°C)

Item	Symbol	Value	Unit	
Collector-base voltage	V <sub>CB0</sub>	1500	V	
Collector-emitter voltage	V <sub>CES</sub>	1500	V	
	V <sub>CE0</sub>	700	V	
Emitter-base voltage	V <sub>EB0</sub>	7	V	
Peak collector current	I <sub>CP</sub>	18	A	
Collector current	I <sub>C</sub>	6	A	
Base current	I <sub>B</sub>	2.5	A	
Collector power dissipation	P <sub>C</sub>	T <sub>c</sub> = 25°C	100	W
		T <sub>a</sub> = 25°C	2.5	
Junction temperature	T <sub>J</sub>	150	°C	
Storage temperature	T <sub>stg</sub>	-55 ~ +150	°C	

#### ■ Package Dimensions



#### ■ Inner Circuit



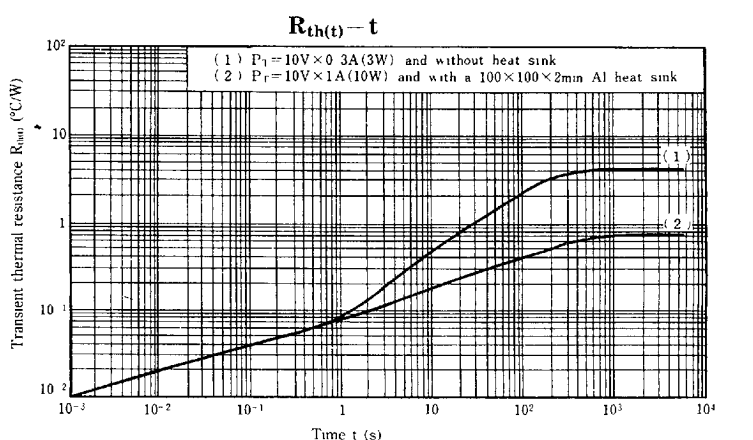
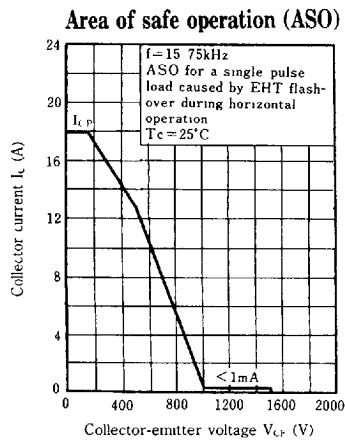
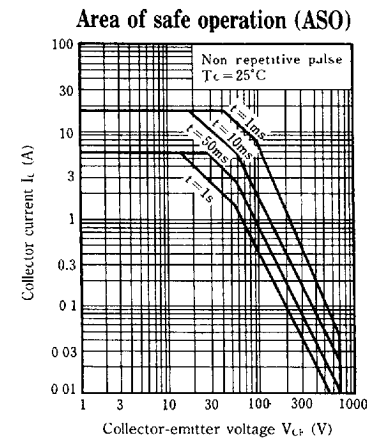
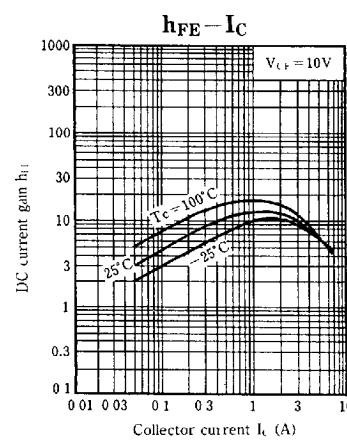
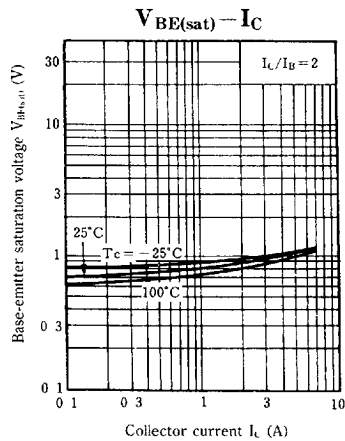
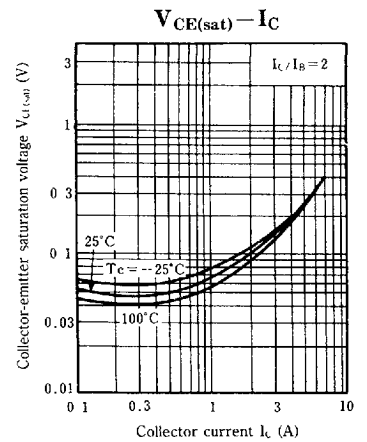
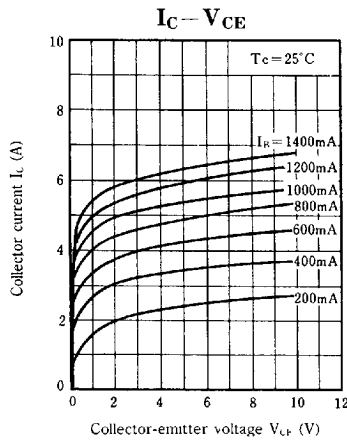
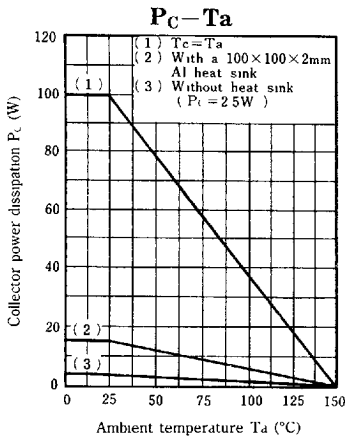
#### ■ Electrical Characteristics (T<sub>c</sub>=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I <sub>CBO</sub>	V <sub>CB</sub> = 750 V, I <sub>E</sub> = 0			10	μA
		V <sub>CB</sub> = 1500 V, I <sub>E</sub> = 0			1	mA
Emitter-base voltage	V <sub>EB0</sub>	I <sub>L</sub> = 500 mA, I <sub>C</sub> = 0	7			V
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 1 A	5		25	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 5 A, I <sub>B</sub> = 1.2 A			8	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 5 A, I <sub>B</sub> = 1.2 A			1.5	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 10 V, I <sub>C</sub> = 1 A, f = 0.5 MHz		2		MHz
Storage time (L load)	t <sub>stg</sub>	I <sub>C</sub> = 5 A, I <sub>B1</sub> = 1.2 A			10	μs
Fall time (L load)	t <sub>f</sub>	I <sub>B2</sub> = -1.2 A, L <sub>leak</sub> = 5 H			0.8	μs
Storage time (R load)	t <sub>stg</sub>	I <sub>C</sub> = 5 A, I <sub>B1</sub> = 1 A		1.5		μs
Fall time (R load)	t <sub>f</sub>	I <sub>B2</sub> = -2 A, V <sub>CC</sub> = 200 V		0.2		μs
Diode forward voltage	V <sub>F</sub>	I <sub>C</sub> = -6 A, I <sub>B</sub> = 0			-2.3	V

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