

# 2SD1847

## Silicon NPN 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)
- "Full Pack" package for simplified mounting on a heat sink with one screw

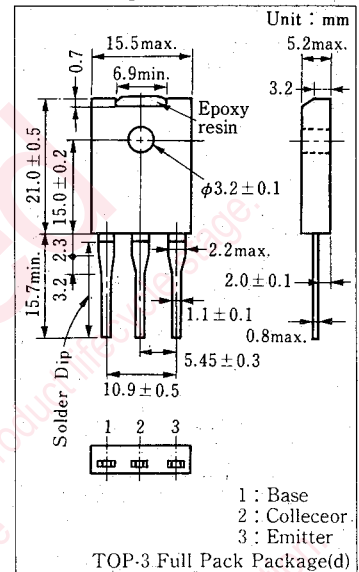
#### ■ Absolute Maximum Ratings (T<sub>c</sub>=25°C)

Item	Symbol	Value	Unit	
Collector-base voltage	V <sub>CB0</sub>	1500	V	
Collector-emitter voltage	V <sub>CES</sub>	1500	V	
	V <sub>CEO</sub>	700	V	
Emitter-base voltage	V <sub>EBO</sub>	7	V	
Peak collector current	I <sub>CP</sub>	15	A	
Collector current	I <sub>C</sub>	5	A	
Base current	I <sub>B</sub>	2	A	
Collector power dissipation	P <sub>C</sub>	T <sub>c</sub> =25°C	100	W
		T <sub>a</sub> =25°C	3	
Junction temperature	T <sub>j</sub>	150	°C	
Storage temperature	T <sub>stg</sub>	-55 ~ +150	°C	

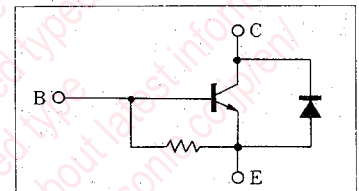
#### ■ Electrical Characteristics (T<sub>c</sub>=25°C)

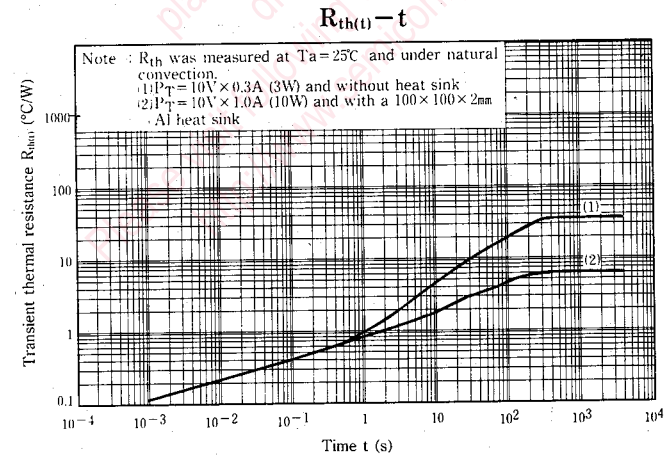
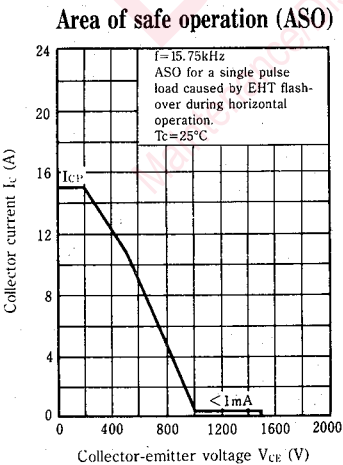
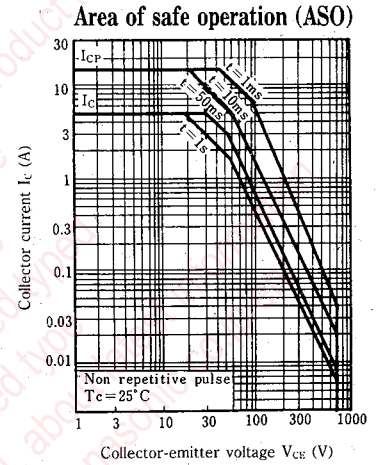
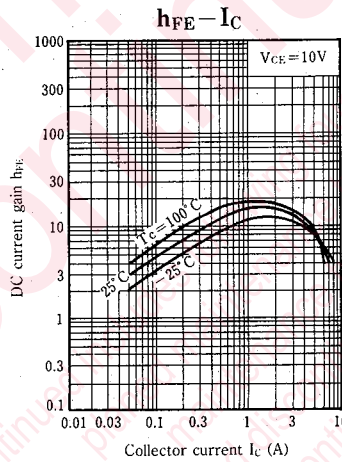
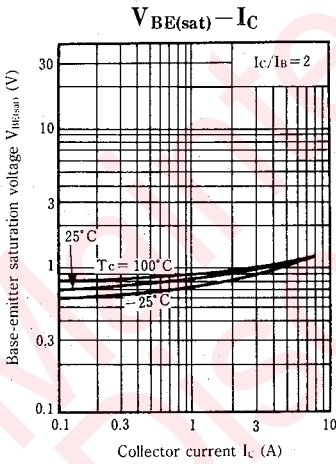
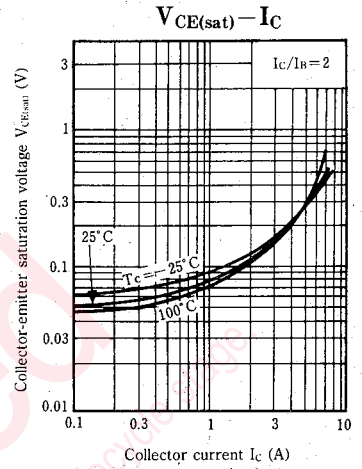
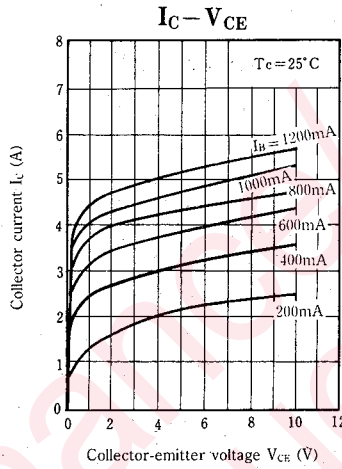
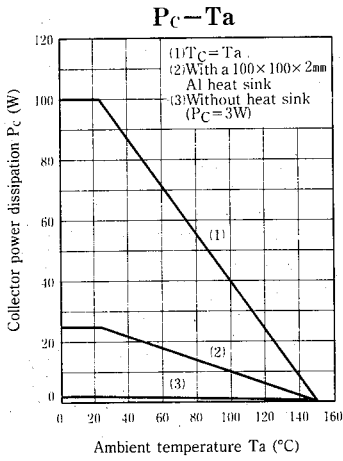
Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I <sub>CB0</sub>	V <sub>CB</sub> =750V, I <sub>E</sub> =0			10	μA
		V <sub>CB</sub> =1500V, I <sub>F</sub> =0			1	mA
Emitter-base voltage	V <sub>EBO</sub>	I <sub>E</sub> =500mA, I <sub>C</sub> =0	7			V
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =1A	5		25	
		V <sub>CE</sub> =10V, I <sub>C</sub> =4A	4			
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =4A, I <sub>B</sub> =1A			8	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =4A, I <sub>B</sub> =1A			1.5	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =1A, f=0.5MHz		2		MHz
Storage time (L load)	t <sub>stg</sub>	I <sub>C</sub> =4A, I <sub>B1</sub> =1A			9	μs
Collector current fall time (L load)	t <sub>f</sub>	I <sub>B2</sub> =-1A, L <sub>leak</sub> =5μH			0.8	μs
Storage time (R load)	t <sub>stg</sub>	I <sub>C</sub> =4A, I <sub>B1</sub> =1A		1.5		μs
Collector current fall time (R load)	t <sub>f</sub>	I <sub>B2</sub> =-2A, V <sub>CC</sub> =200V		0.2		μs
Diode forward voltage	V <sub>F</sub>	I <sub>C</sub> =-5A, I <sub>B</sub> =0			2.3	V

#### ■ Package Dimensions



#### ■ Inner Circuit





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