

# 2SD1846

## 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

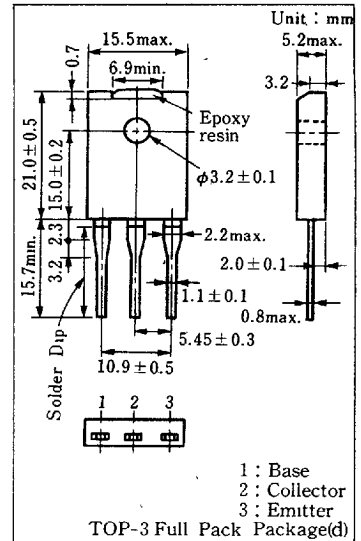
#### ■ Absolute Maximum Ratings (T<sub>c</sub>=25°C)

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>	10	A															
Collector current	I <sub>C</sub>	3.5	A															
Base current	I <sub>B</sub>	1.5	A </tr <tr> <td rowspan="2">Collector power dissipation</td> <td rowspan="2">P<sub>C</sub></td> <td>T<sub>C</sub>=25°C</td> <td>60</td> <td rowspan="2">W</td> </tr> <tr> <td>T<sub>a</sub>=25°C</td> <td>3</td> </tr> <tr> <td>Junction temperature</td> <td>T<sub>J</sub></td> <td>150</td> <td>°C</td> </tr> <tr> <td>Storage temperature</td> <td>T<sub>stg</sub></td> <td>-55 ~ +150</td> <td>°C</td> </tr>	Collector power dissipation	P <sub>C</sub>	T <sub>C</sub> =25°C	60	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
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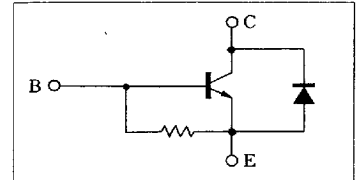
#### ■ Electrical Characteristics (T<sub>c</sub>=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I <sub>CBO</sub>	V <sub>CB</sub> =750V, I <sub>E</sub> =0			10	μA
		V <sub>CB</sub> =1500V, I <sub>E</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> =0.5A	5		25	
		V <sub>CE</sub> =10V, I <sub>C</sub> =3A	4			
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =3A, I <sub>B</sub> =0.8A			8	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =3A, I <sub>B</sub> =0.8A			1.5	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =0.5A, f=0.5MHz		2		MHz
Storage time (L load)	t <sub>stg</sub>	I <sub>C</sub> =3A, I <sub>B1</sub> =0.8A			8	μs
Collector current fall time (L load)	t <sub>f</sub>	I <sub>B2</sub> =-0.8A, L <sub>leak</sub> =5μH			0.8	μs
Storage time (R load)	t <sub>stg</sub>	I <sub>C</sub> =3A, I <sub>B1</sub> =0.8A		1.5		μs
Collector current fall time (R load)	t <sub>f</sub>	I <sub>B2</sub> =-1.6A, V <sub>CC</sub> =200V		0.2		μs
Diode forward voltage	V <sub>f</sub>	I <sub>C</sub> =-3.5A, I <sub>B</sub> =0			2	V

#### ■ Package Dimensions



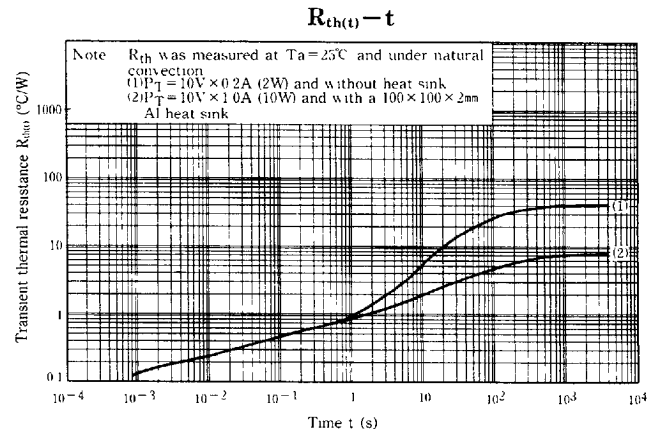
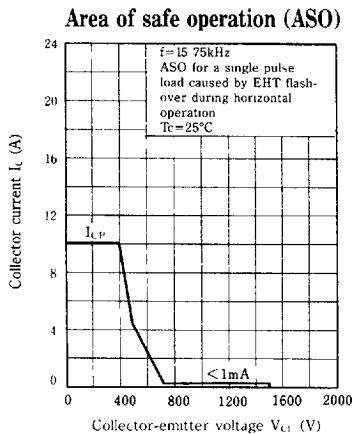
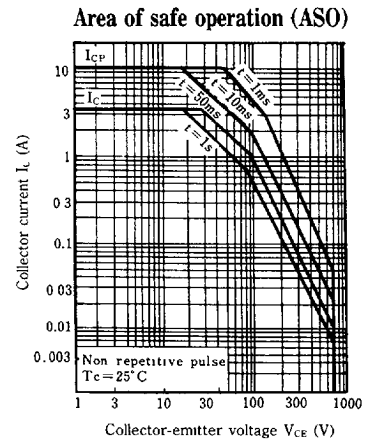
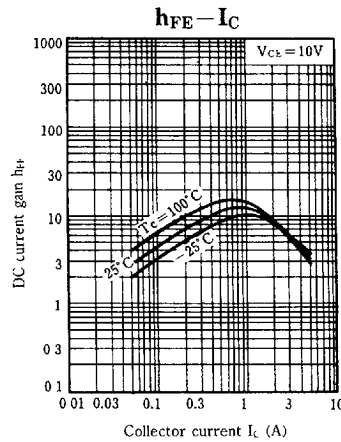
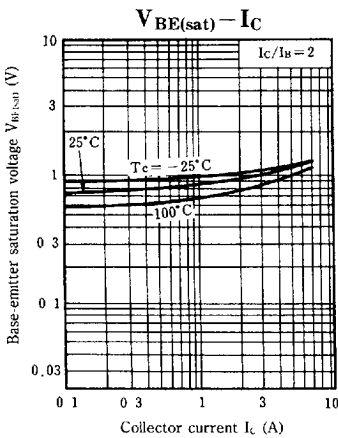
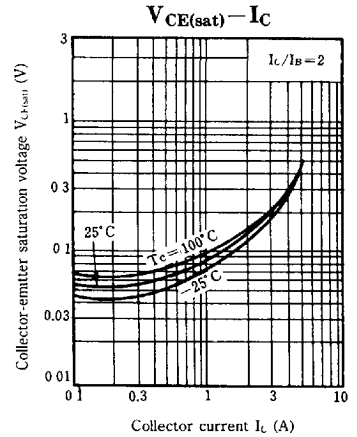
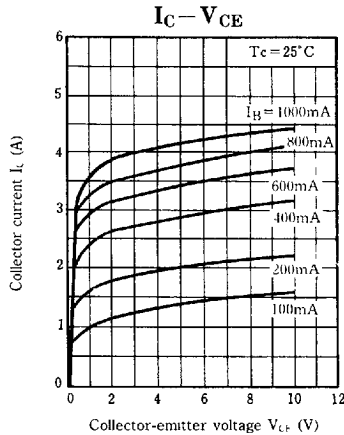
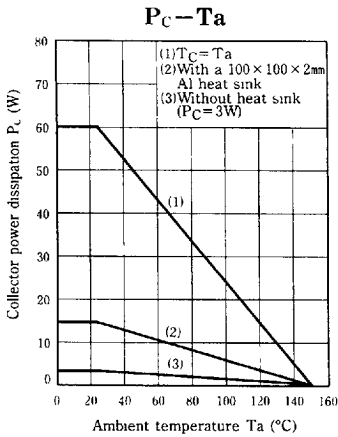
#### ■ Inner Circuit



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Panasonic

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