

2SD1632

Silicon NPN Triple-Diffused Junction Mesa Type

Horizontal Deflection Output

■ Features

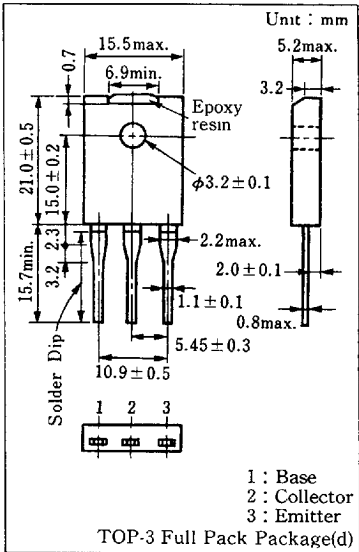
- Damper diode built-in
- High breakdown voltage and high reliability by glass passivation
- High speed switching
- Wide area of safety operation (ASO)
- “Full Pack” package for simplified mounting on a heat sink with one screw

■ Absolute Maximum Ratings (Tc=25°C)

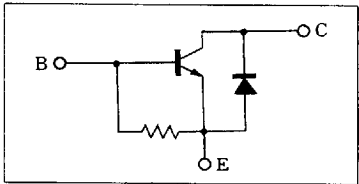
Item	Symbol	Value	Unit
Collector-base voltage	V <sub>CB0</sub>	1500	V
Collector-emitter voltage	V <sub>CES</sub>	1500	V
Emitter-base voltage	V <sub>EBO</sub>	5	V
Collector current	I <sub>C</sub>	4	A
Peak collector current	I <sub>CP</sub> *	15	A
Peak base current	I <sub>BP</sub>	3.5	A
Reverse peak base current	I <sub>BP</sub>	−2.5	A
Collector power dissipation	T <sub>c</sub> = 25°C T <sub>a</sub> = 25°C	P <sub>C</sub>	W
Junction temperature	T <sub>J</sub>	130	°C
Storage temperature	T <sub>stg</sub>	−55 ~ +130	°C

\* Non-repetitive peak value

■ Package Dimensions



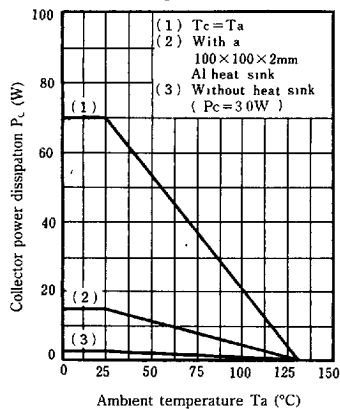
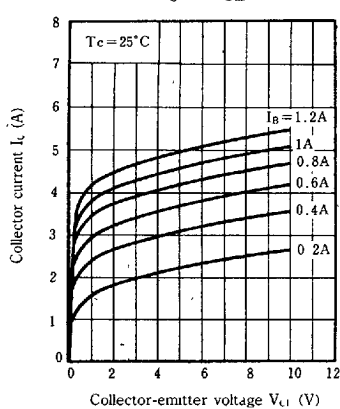
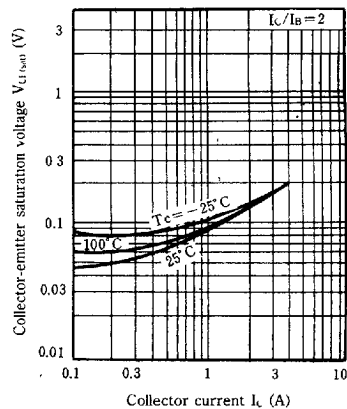
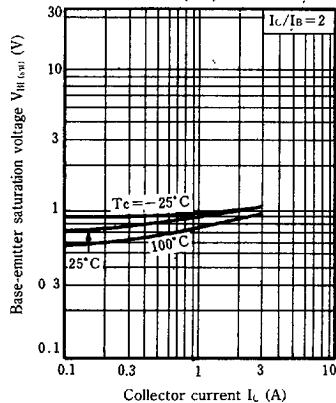
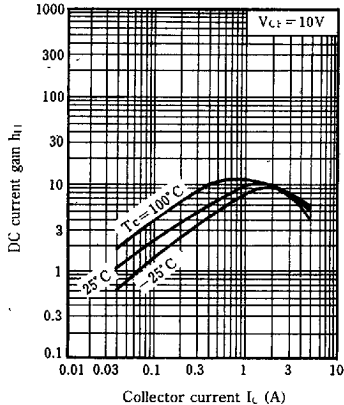
■ Inner Circuit



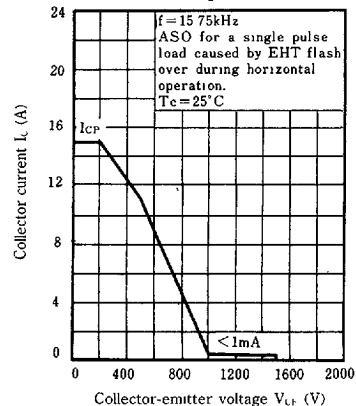
■ Electrical Characteristics (Tc=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I <sub>CB0</sub>	V <sub>CB</sub> = 750 V, I <sub>E</sub> = 0			50	μA
		V <sub>CB</sub> = 1500 V, I <sub>E</sub> = 0			1	mA
Emitter-base voltage	V <sub>EBO</sub>	I <sub>E</sub> = 500 mA, I <sub>C</sub> = 0	5			
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = 10 V, I <sub>C</sub> = 3 A	5		15	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 3 A, I <sub>B</sub> = 1 A			1	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 3 A, I <sub>B</sub> = 1 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
Fall time	t <sub>f</sub>	I <sub>C</sub> = 3 A, I <sub>Bend</sub> = 1 A			0.75	μs
Storage time	t <sub>stg</sub>	L <sub>leak</sub> = 5 μH	4		9	μs
Diode forward voltage	V <sub>F</sub>	I <sub>C</sub> = −4 A, I <sub>B</sub> = 0			−2.2	V

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$P_C - T_a$  $I_C - V_{CE}$  $V_{CE(sat)} - I_C$  $V_{BE(sat)} - I_C$  $h_{FE} - I_C$ 

Area of safe operation (ASO)

 $R_{th(t)} - t$ 