

2SD1731

Silicon PNP Triple-Diffused Planar Type

Horizontal Deflection Output

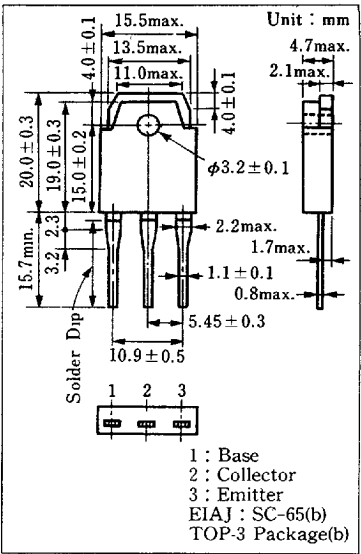
■ Features

- 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)

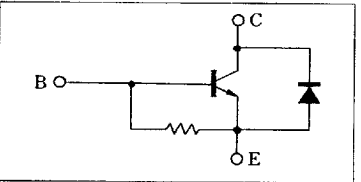
■ Absolute Maximum Ratings (Tc=25°C)

Item		Symbol	Value	Unit
Collector-base voltage		V_{CBO}	1500	V
Collector-emitter voltage		V_{CES}	1500	V
		V_{CEO}	700	V
Emitter-base voltage		V_{EB0}	7	V
Peak collector current		I_{CP}	18	A
Collector current		I_C	6	A
Base current		I_B	2.5	A
Collector power dissipation	$T_c = 25^{\circ}\text{C}$	P_C	100	W
	$T_a = 25^{\circ}\text{C}$		2.5	
Junction temperature		T_j	150	$^{\circ}\text{C}$
Storage temperature		T_{stg}	$-55 \sim +150$	$^{\circ}\text{C}$

■ Package Dimensions



■ Inner Circuit



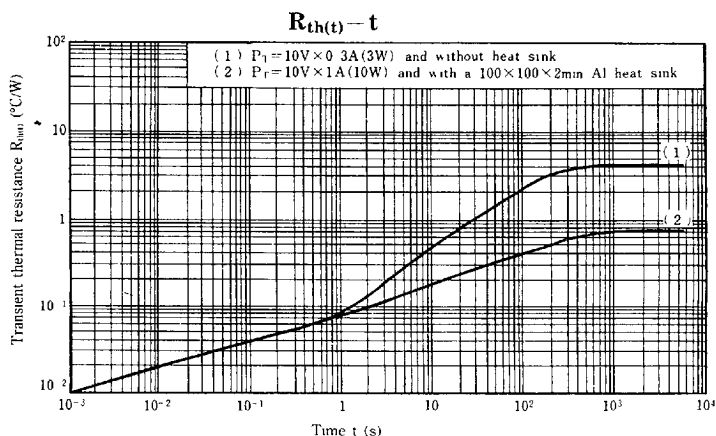
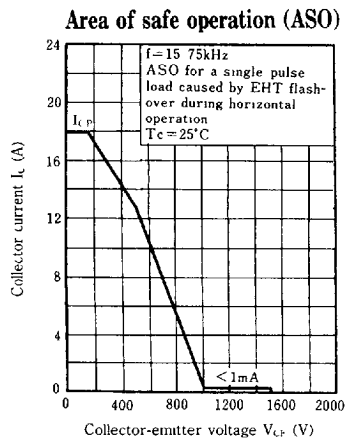
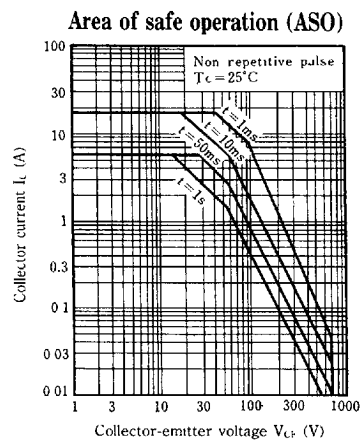
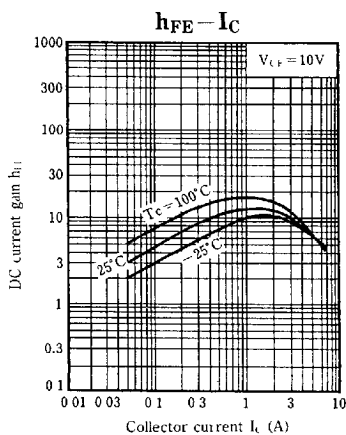
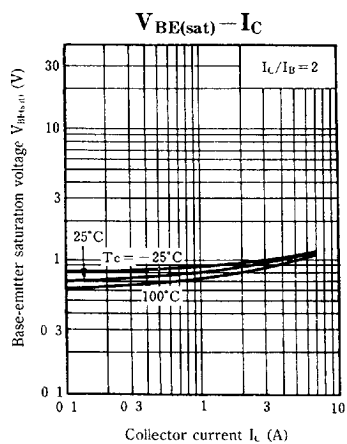
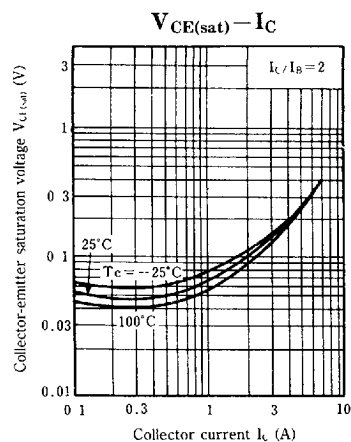
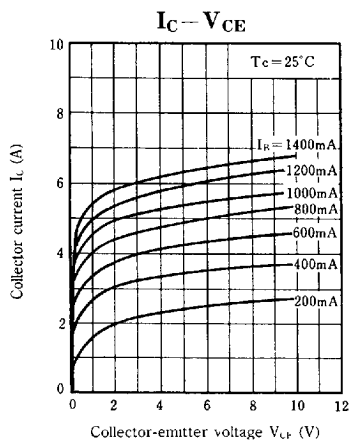
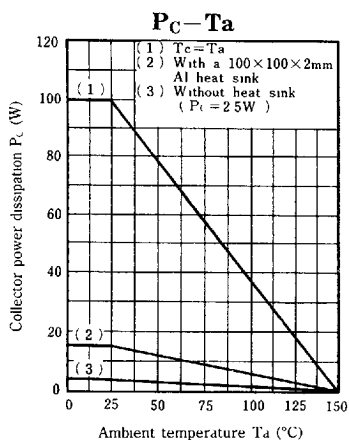
■ Electrical Characteristics (Tc=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 750\text{ V}, I_E = 0$			10	μA
		$V_{CB} = 1500\text{ V}, I_E = 0$			1	mA
Emitter-base voltage	V_{EB0}	$I_E = 500\text{ mA}, I_C = 0$	7			V
DC current gain	h_{FE}	$V_{CE} = 5\text{ V}, I_C = 1\text{ A}$	5		25	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 5\text{ A}, I_B = 1.2\text{ A}$			8	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 5\text{ A}, I_B = 1.2\text{ A}$			1.5	V
Transition frequency	f_T	$V_{CE} = 10\text{ V}, I_C = 1\text{ A}, f = 0.5\text{ MHz}$		2		MHz
Storage time (L load)	t_{stg}	$I_C = 5\text{ A}, I_{B1} = 1.2\text{ A}$			10	μs
Fall time (L load)	t_f	$I_{B2} = -1.2\text{ A}, L_{leak} = 5\text{ H}$			0.8	μs
Storage time (R load)	t_{stg}	$I_C = 5\text{ A}, I_{B1} = 1\text{ A}$		1.5		μs
Fall time (R load)	t_f	$I_{B2} = -2\text{ A}, V_{CC} = 200\text{ V}$		0.2		μs
Diode forward voltage	V_F	$I_C = -6\text{ A}, I_B = 0$			-2.3	V

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