

2SD1848

Silicon NPN Triple-Diffused Planar Type

Horizontal Deflection Output

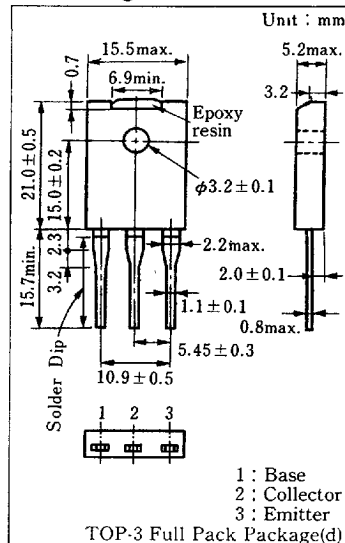
■ Features

- 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

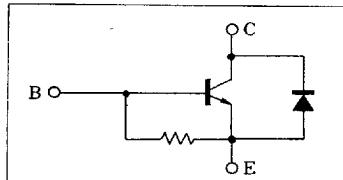
■ Absolute Maximum Ratings (Tc=25°C)

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_{EBO}	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	P_C	T _C = 25°C	100	W
		T _a = 25°C	3	
Junction temperature	T _j	150	°C	
Storage temperature	T _{stg}	-55 ~ +150	°C	

■ Package Dimensions



■ Inner Circuit



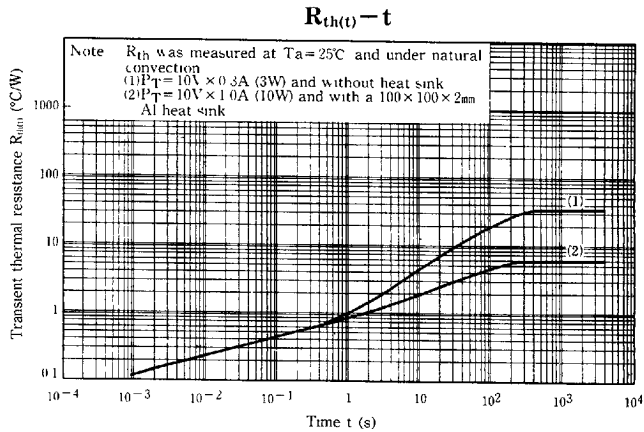
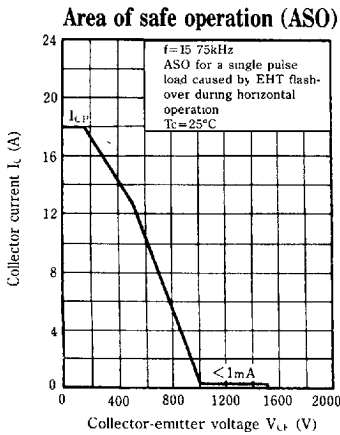
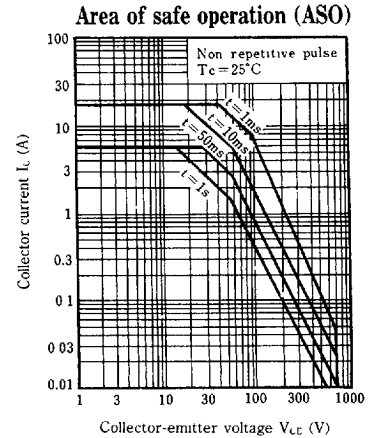
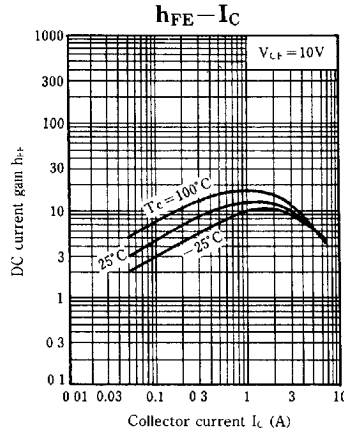
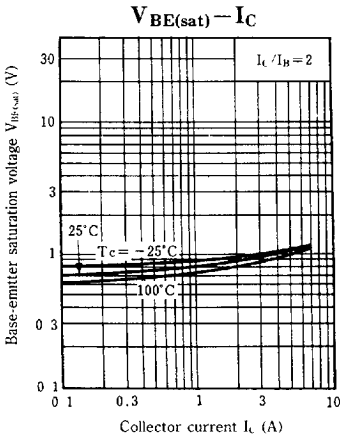
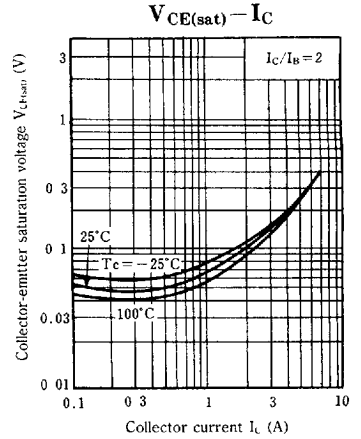
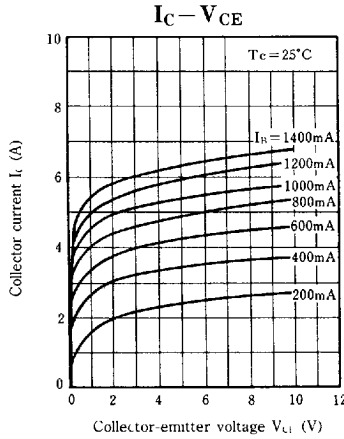
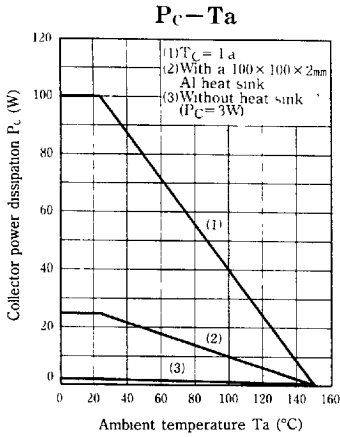
■ Electrical Characteristics (Tc=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 750V, I_E = 0$			10	μA
		$V_{CB} = 1500V, I_E = 0$			1	mA
Emitter-base voltage	V_{EBO}	$I_E = 500mA, I_C = 0$		7		V
DC current gain	h_{FE}	$V_{CE} = 5V, I_C = 1A$	5		25	
		$V_{CE} = 10V, I_C = 5A$	4.5			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 5A, I_B = 1.2A$			8	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 5A, I_B = 1.2A$			1.5	V
Transition frequency	f_T	$V_{CE} = 10V, I_C = 1A, f = 0.5MHz$		2		MHz
Storage time (L load)	t_{stg}	$I_C = 5A, I_{B1} = 1.2A$			10	μs
Collector current fall time (L load)	t_f	$I_{B2} = -1.2A, L_{leak} = 5\mu H$			0.8	μs
Storage time (R load)	t_{stg}	$I_C = 5A, I_{B1} = 1.2A$		1.5		μs
Collector current fall time (R load)	t_f	$I_{B2} = -2.4A, V_{CC} = 200V$		0.2		μs
Diode forward voltage	V_F	$I_C = -6A, I_B = 0$			2.3	V

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