

2SD1850

Silicon NPN Triple-Diffused Planar Type

Horizontal Deflection Output

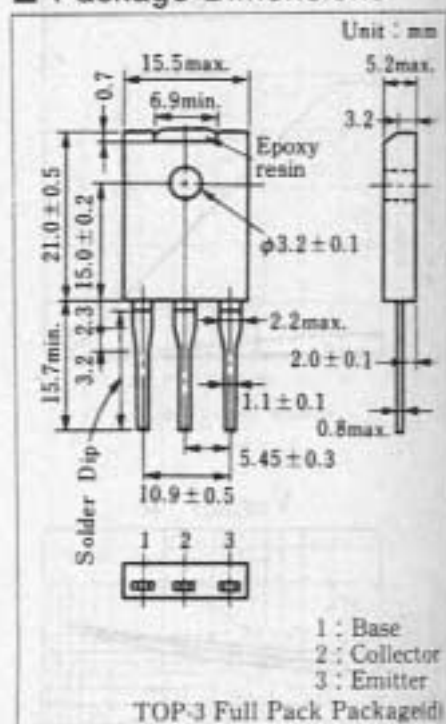
■ Features

- 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_c=25°C)

Item	Symbol	Value	Unit	
Collector-base voltage	V _{CB0}	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}	20	A	
Collector current	I _C	7	A	
Base current	I _B	3	A	
Collector power dissipation	P _C	T _C = 25°C	120	W
		T _A = 25°C	3	
Junction temperature	T _J	150	°C	
Storage temperature	T _{stg}	-55 ~ +150	°C	

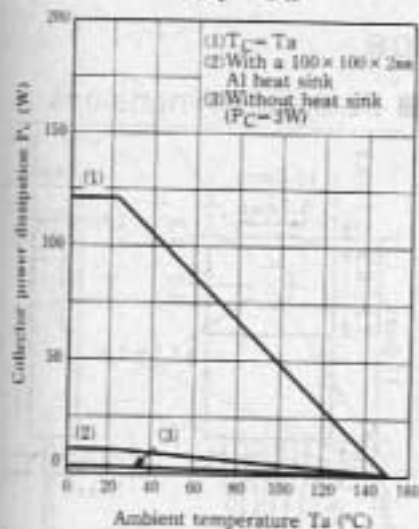
■ Package Dimensions



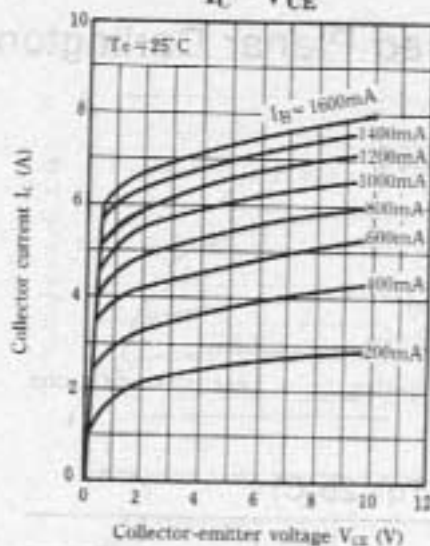
■ Electrical Characteristics (T_c=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I _{CB0}	V _{CB} = 1000V, I _E = 0			10	μA
		V _{CB} = 1500V, I _E = 0			1	mA
Emitter-base voltage	V _{EBO}	I _E = 1mA, I _C = 0		7		V
DC current gain	h _{FE1}	V _{CE} = 5V, I _C = 1A	5		25	
	h _{FE2}	V _{CE} = 5V, I _C = 6A	4.5			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = 6A, I _B = 1.5A			8	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C = 6A, I _B = 1.5A			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 = 6A, I _{B1} = 1.5A			11	μs
Collector current fall time (L load)	t _f	I _{B2} = -1.5A, L _{break} = 5μH			0.8	μs
Storage time (R load)	t _{stg}	I _C = 6A, I _{B1} = 1.5A		1.5		μs
Collector current fall time (R load)	t _f	I _{B2} = -3A, V _{CC} = 200V		0.2		μs

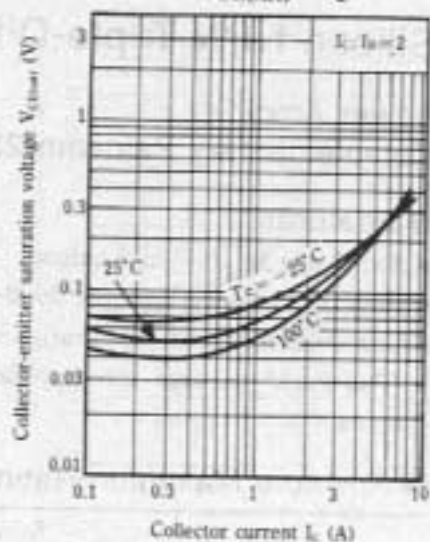
$P_C - T_a$



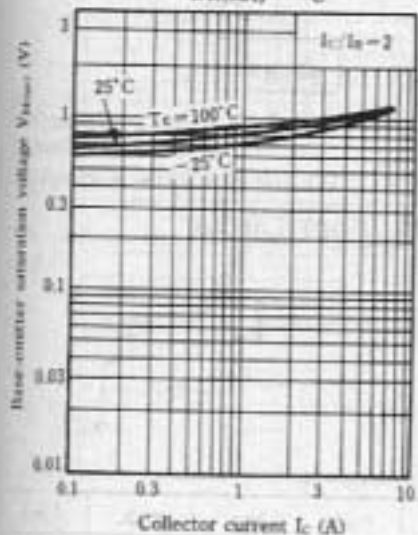
$I_C - V_{CE}$



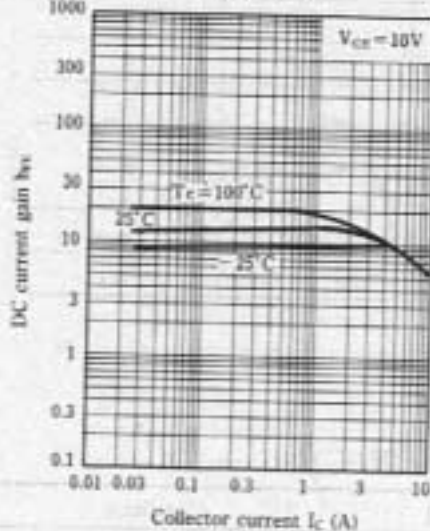
$V_{CE(sat)} - I_C$



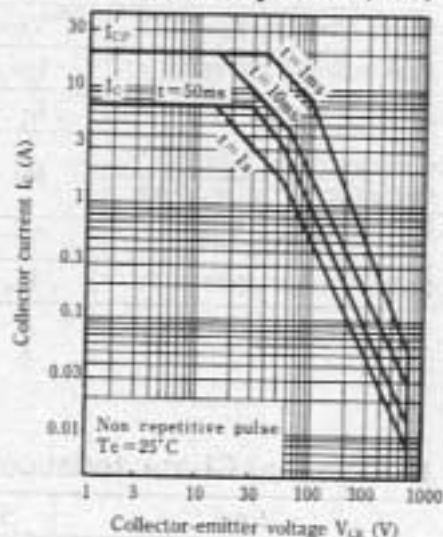
$V_{BE(sat)} - I_C$



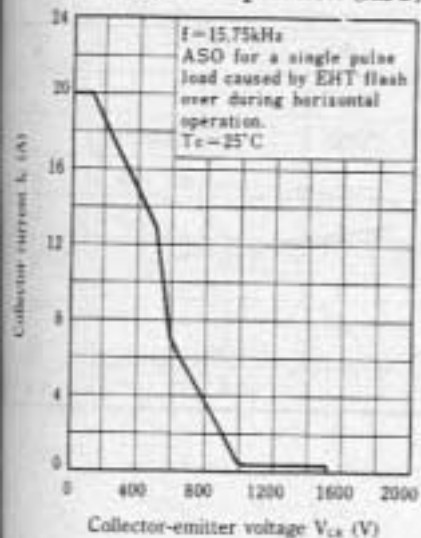
$h_{FE} - I_C$



Area of safe operation (ASO)



Area of safe operation (ASO)



$R_{th(t)} - t$

