2SD1846

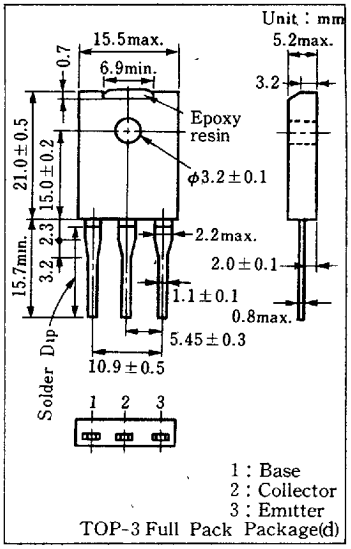
Silicon NPN Triple-Diffused Planar Type

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

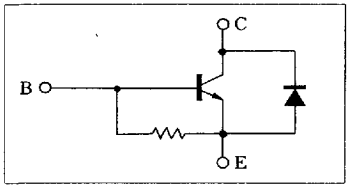
■ Package Dimensions



■ 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}	10	A
Collector current		I_C	3.5	A
Base current		I_B	1.5	A
Collector power dissipation	T_C=25℃	P_C	60	W
	Ta=25℃		3	
Junction temperature		T_j	150	℃
Storage temperature		T_{stg}	−55～+150	℃

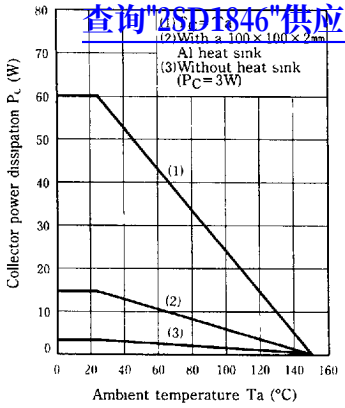
■ Inner Circuit



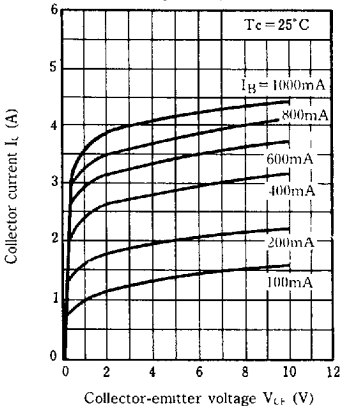
■ Electrical Characteristics (Tc=25°C)

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=0.5A	5		25	
		V_{CE}=10V, I_C=3A	4			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=3A, I_B=0.8A			8	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=3A, I_B=0.8A			1.5	V
Transition frequency	f_T	V_{CE}=10V, I_C=0.5A, f=0.5MHz		2		MHz
Storage time (L load)	t_{stg}	I_C=3A, I_{B1}=0.8A			8	μs
Collector current fall time (L load)	t_f	I_{B2}=−0.8A, L_{leak}=5μH			0.8	μs
Storage time (R load)	t_{stg}	I_C=3A, I_{B1}=0.8A		1.5		μs
Collector current fall time (R load)	t_f	I_{B2}=−1.6A, V_{CC}=200V		0.2		μs
Diode forward voltage	V_F	I_C=−3.5A, I_B=0			2	V

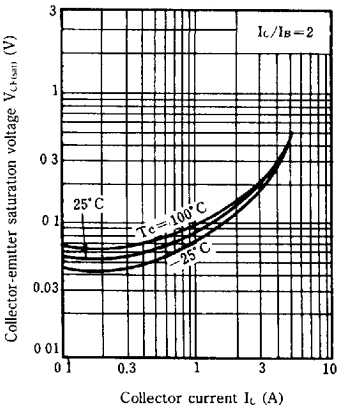
$P_C - Ta$



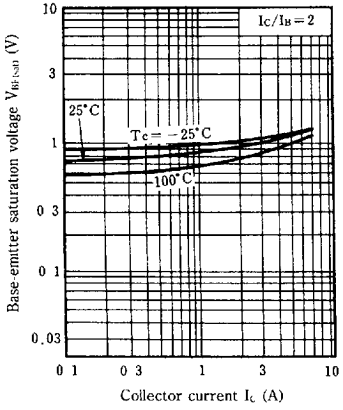
$I_C - V_{CE}$



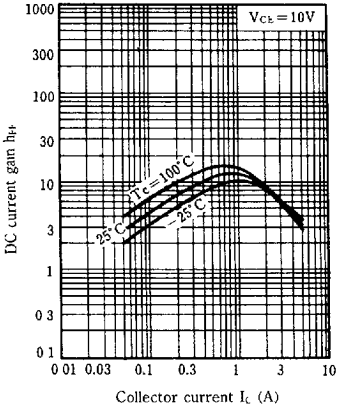
$V_{CE(sat)} - I_C$



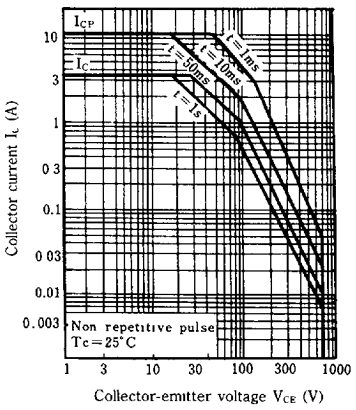
$V_{BE(sat)} - I_C$



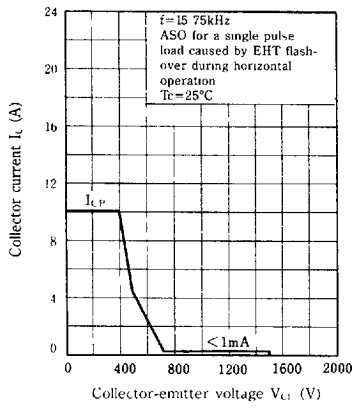
$h_{FE} - I_C$



Area of safe operation (ASO)



Area of safe operation (ASO)



$R_{th(t)} - t$