

Silicon NPN triple diffusion mesa type

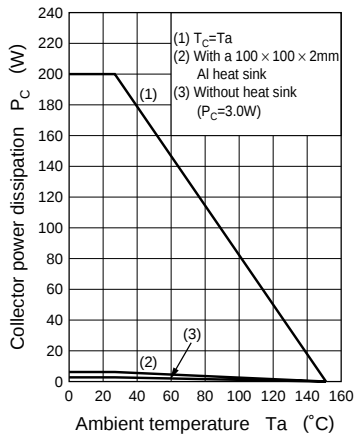
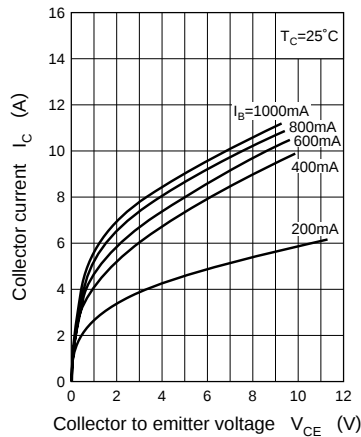
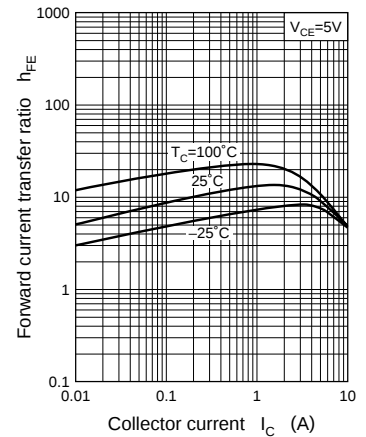
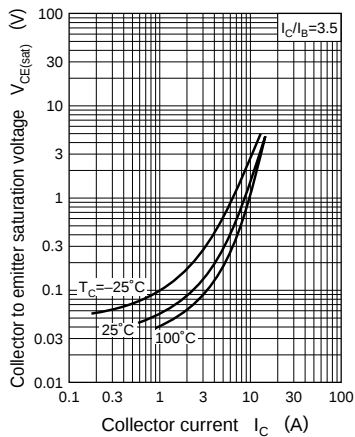
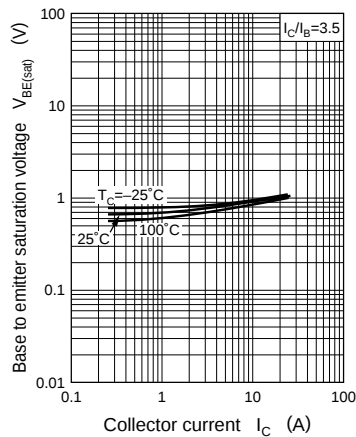
■ Features

- High breakdown voltage, and high reliability through the use of a glass passivation layer
- High-speed switching
- Wide area of safe operation (ASO)

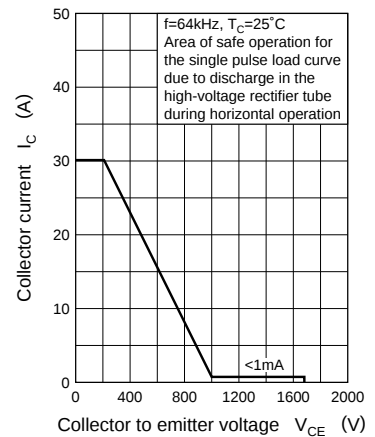
Parameter		Symbol	Ratings	Unit
Collector to base voltage		V_{CBO}	1700	V
Collector to emitter voltage		V_{CES}	1700	V
Emitter to base voltage		V_{EBO}	6	V
Collector current		I_C	15	A
Peak collector current		I_{CP}^*	30	A
Peak base current		I_{BP}	10	A
Collector power dissipation	$T_C=25^{\circ}C$	P_C	200	W
	$T_a=25^{\circ}C$		3.5	
Junction temperature		T_j	150	$^{\circ}C$
Storage temperature		T_{stg}	-55 to +150	$^{\circ}C$

[illegible]

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 1700V, I_E = 0$			1	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 5V, I_C = 0$			50	μA
Forward current transfer ratio	h_{FE}	$V_{CE} = 5V, I_C = 10A$	5		12	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10A, I_B = 2.8A$			3	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 10A, I_B = 2.8A$			1.5	V
Transition frequency	f_T	$V_{CE} = 10V, I_C = 0.1A, f = 0.5MHz$		3		MHz
Storage time	t_{stg}	$I_C = 12A, I_{B1} = 2.4A, I_{B2} = -4.8A,$		1.5	2.5	μs
Fall time	t_f	Resistance loaded		0.12	0.2	μs

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

Area of safe operation, horizontal operation ASO

 $R_{th(t)} - t$ 