

2SD2523

Silicon NPN triple diffusion mesa type

For horizontal deflection output

Features

- Incorporating a built-in damper diode
- High breakdown voltage, and high reliability through the use of a glass passivation layer
- High-speed switching
- Wide area of safe operation (ASO)
- Full-pack package with outstanding insulation, which can be installed to the heat sink with one screw

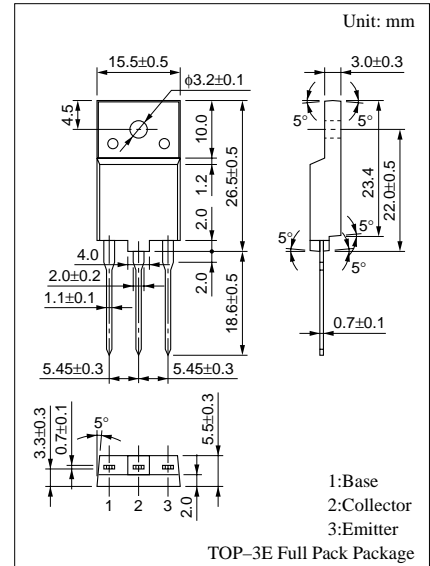
Absolute Maximum Ratings ($T_C=25^\circ\text{C}$)

Parameter	Symbol	Rated	Unit	
Collector to base voltage	V_{CBO}	1700	V	
Collector to emitter voltage	V_{CES}	1700	V	
Emitter to base voltage	V_{EBO}	5	V	
Collector current	I_C	6	A	
Peak collector current	I_{CP}^*	15	A	
Peak base current	I_{BP}	4	A	
Reverse peak base current	I_{BP}	-3	A	
Collector power dissipation	P_C	$T_C=25^\circ\text{C}$	90	W
		$T_a=25^\circ\text{C}$	3	
Junction temperature	T_j	150	$^\circ\text{C}$	
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$	

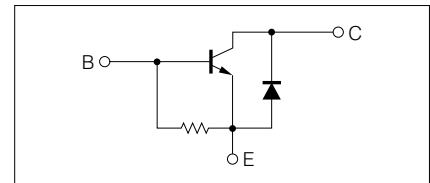
*Non-repetitive peak

Electrical Characteristics ($T_C=25^\circ\text{C}$)

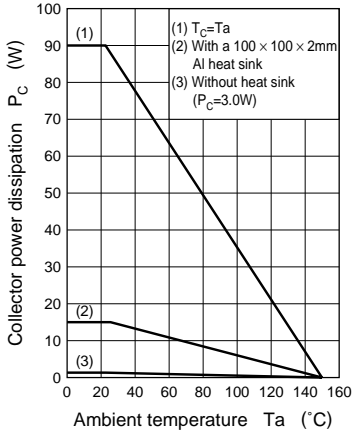
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 1000\text{V}, I_E = 0$			50	μA
		$V_{CB} = 1700\text{V}, I_E = 0$			1	mA
Emitter to base voltage	V_{EBO}	$I_E = 500\text{mA}, I_C = 0$	5			V
Forward current transfer ratio	h_{FE1}	$V_{CE} = 5\text{V}, I_C = 1\text{A}$	6		25	
	h_{FE2}	$V_{CE} = 5\text{V}, I_C = 5\text{A}$	3		10	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 5\text{A}, I_B = 1.6\text{A}$			5	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 5\text{A}, I_B = 1.6\text{A}$			1.5	V
Transition frequency	f_T	$V_{CE} = 10\text{V}, I_C = 0.1\text{A}, f = 0.5\text{MHz}$		3		MHz
Storage time	t_{stg}	$I_C = 5\text{A}, I_{Bend} = 1.6\text{A}, L_{leak} = 5\mu\text{H}$			12	μs
Fall time	t_f				0.8	μs
Diode forward voltage	V_F	$I_C = 6\text{A}, I_B = 0$			-2	V



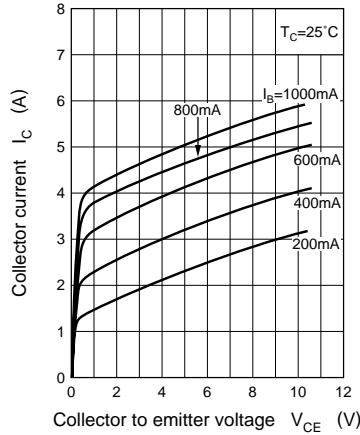
Internal Connection



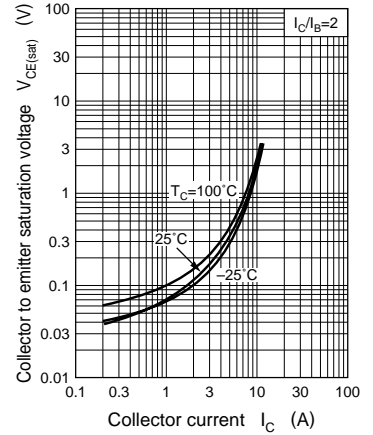
$P_C - T_a$



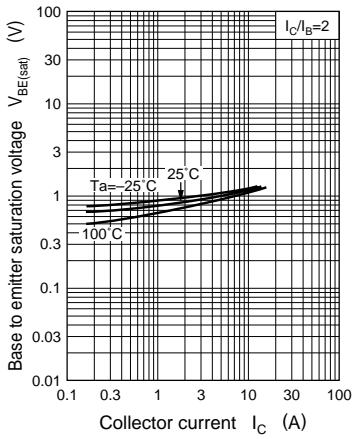
$I_C - V_{CE}$



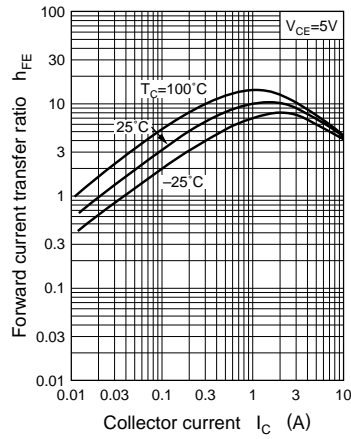
$V_{CE(sat)} - I_C$



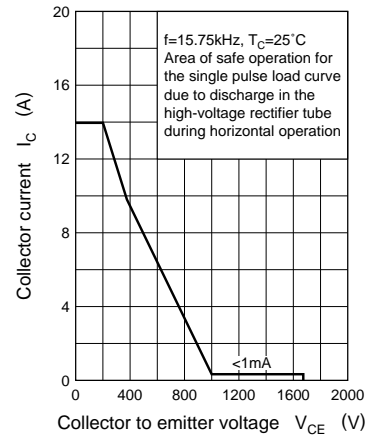
$V_{BE(sat)} - I_C$



$h_{FE} - I_C$



Area of safe operation, horizontal operation ASO



$R_{th(t)} - t$

