

2SC5440

Silicon NPN triple diffusion mesa type

For horizontal deflection output

Features

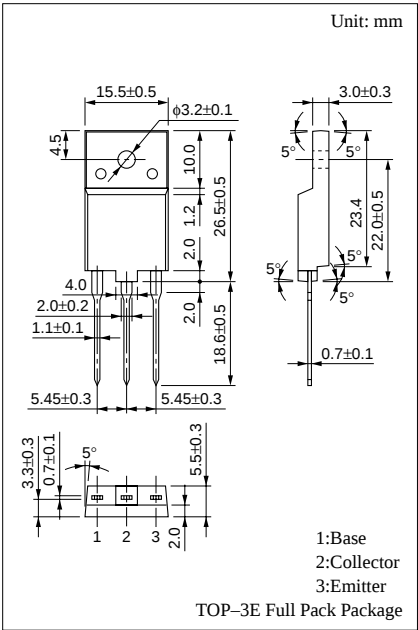
- High breakdown voltage, and high reliability through the use of a glass passivation layer
- High-speed switching
- Wide area of safe operation (ASO)

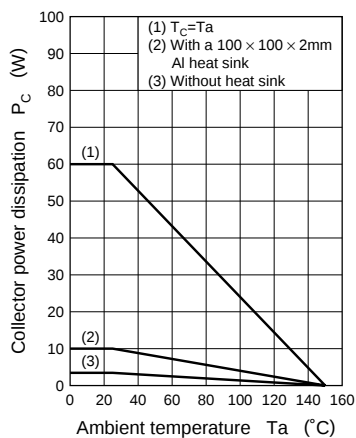
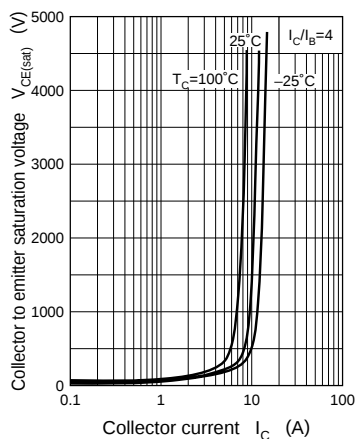
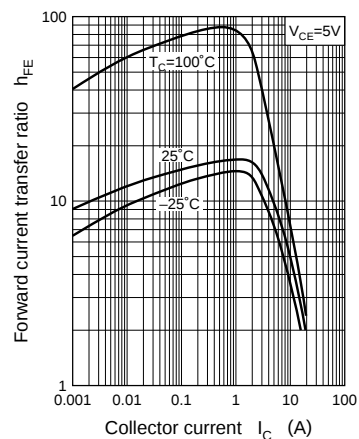
Absolute Maximum Ratings (Ta=25°C)

Parameter		Symbol	Ratings	Unit
Collector to base voltage		V_{CBO}	1500	V
Collector to emitter voltage		V_{CES}	1500	V
		V_{CEO}	600	V
Emitter to base voltage		V_{EBO}	5	V
Peak collector current		I_{CP}	25	A
Collector current		I_C	15	A
Base current		I_B	7.5	A
Collector power dissipation	$T_C=25^{\circ}\text{C}$	P_C	60	W
	$T_a=25^{\circ}\text{C}$		3.0	
Junction temperature		T_j	150	$^{\circ}\text{C}$
Storage temperature		T_{stg}	-55 to +150	$^{\circ}\text{C}$

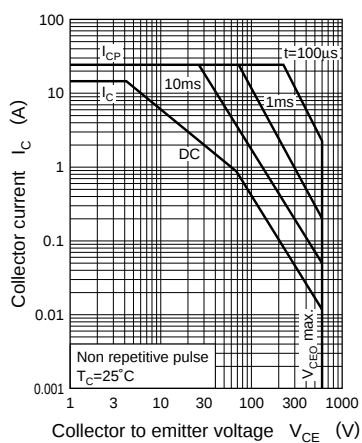
Electrical Characteristics (T_C=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 1000\text{V}, I_E = 0$			50	μA
		$V_{CB} = 1500\text{V}, I_E = 0$			1	mA
Emitter cutoff current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$			50	μA
Forward current transfer ratio	h_{FE}	$V_{CE} = 5\text{V}, I_C = 7.5\text{A}$	5		12	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 7.5\text{A}, I_B = 1.88\text{A}$			3	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 7.5\text{A}, I_B = 1.88\text{A}$			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}	$I_C = 7.5\text{A}, I_{B1} = 1.88\text{A}, I_{B2} = -3.76\text{A}$			2.7	μs
Fall time	t_f				0.2	μs



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

Area of safe operation (ASO)



Area of safe operation, horizontal operation ASO

