

2SC4111

Silicon NPN triple diffusion planar type

For horizontal deflection output

Features

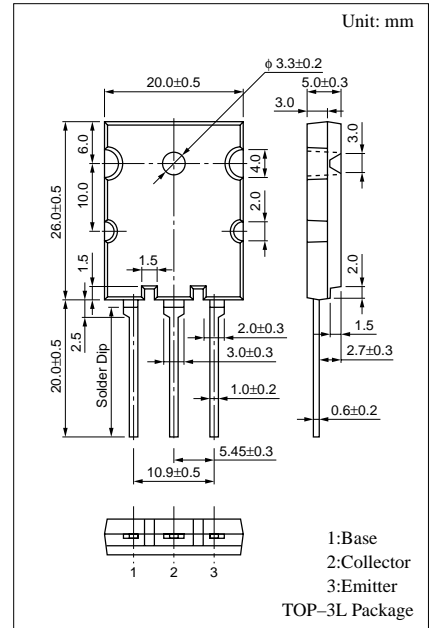
- High-speed switching
- High collector to base voltage V_{CBO}
- Wide area of safe operation (ASO)
- Satisfactory linearity of forward current transfer ratio h_{FE}

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

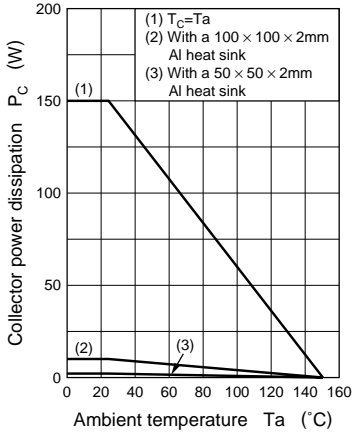
Parameter	Symbol	Rated	Unit	
Collector to base voltage	V_{CBO}	1500	V	
Collector to emitter voltage	V_{CES}	1500	V	
	V_{CEO}	700	V	
Emitter to base voltage	V_{EBO}	7	V	
Peak collector current	I_{CP}	22	A	
Collector current	I_C	10	A	
Base current	I_B	3.5	A	
Collector power dissipation	P_C	$T_C=25^\circ\text{C}$	150	W
		$T_a=25^\circ\text{C}$	3.5	
Junction temperature	T_j	150	$^\circ\text{C}$	
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$	

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

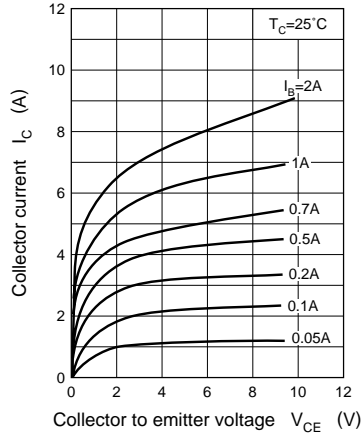
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 750\text{V}, I_E = 0$			10	μA
		$V_{CB} = 1500\text{V}, I_E = 0$			1	mA
Emitter to base voltage	V_{EBO}	$I_C = 1\text{mA}, I_B = 0$	7			V
Forward current transfer ratio	h_{FE1}	$V_{CE} = 5\text{V}, I_C = 1\text{A}$	5			
	h_{FE2}	$V_{CE} = 5\text{V}, I_C = 7\text{A}$	3		8	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 7\text{A}, I_B = 2.5\text{A}$			5	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 7\text{A}, I_B = 2.5\text{A}$			1.5	V
Transition frequency	f_T	$V_{CE} = 10\text{V}, I_C = 1\text{A}, f = 0.5\text{MHz}$		2		MHz
Storage time	t_{stg}	$I_C = 6\text{A}, L_{leak} = 5\mu\text{H}$			12	μs
Fall time	t_f	$I_{B1} = 1.7\text{A}, I_{B2} = -1.7\text{A}$			0.6	μs



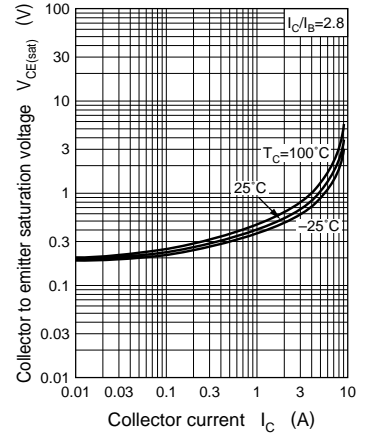
$P_C - T_a$



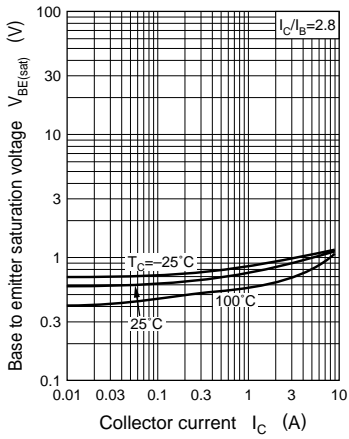
$I_C - V_{CE}$



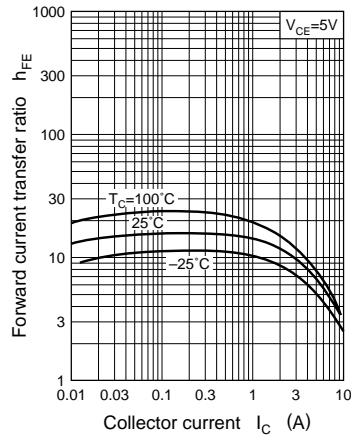
$V_{CE(sat)} - I_C$



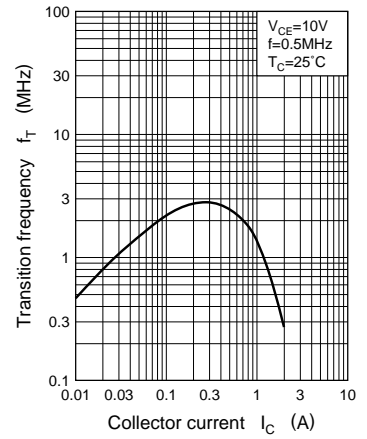
$V_{BE(sat)} - I_C$



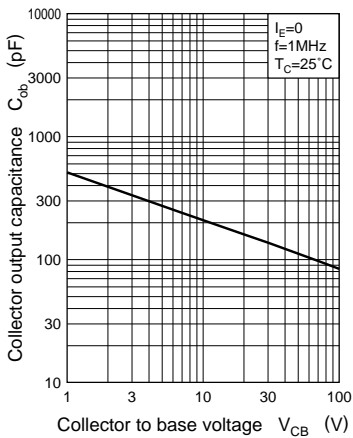
$h_{FE} - I_C$



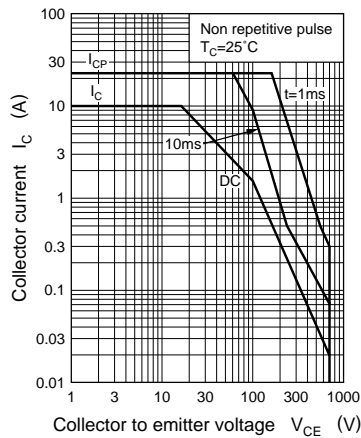
$f_T - I_C$



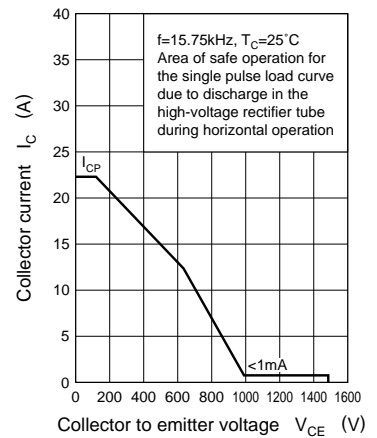
$C_{ob} - V_{CB}$



Area of safe operation (ASO)



Area of safe operation, horizontal operation ASO



$$R_{th(t)} - t$$

