

2SD1350, 2SD1350A

Silicon NPN triple diffusion planer type

For high breakdown voltage switching

Features

- High collector to base voltage V_{CBO} .
- High collector to emitter voltage V_{CEO} .
- Large collector power dissipation P_C .
- Low collector to emitter saturation voltage $V_{CE(sat)}$.
- M type package allowing easy automatic and manual insertion as well as stand-alone fixing to the printed circuit board.

Absolute Maximum Ratings (Ta=25°C)

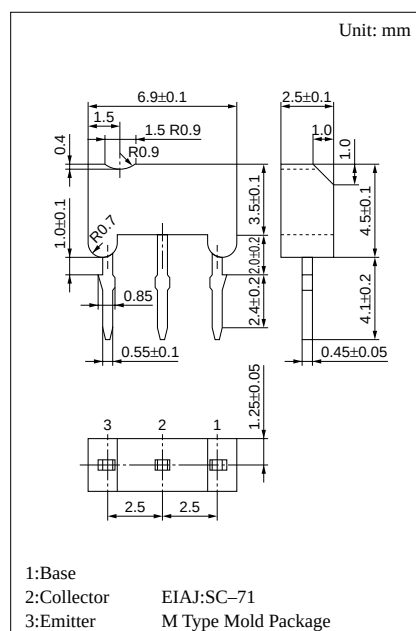
Parameter	Symbol	Ratings	Unit
Collector to base voltage	2SD1350	400	V
	2SD1350A	600	
Collector to emitter voltage	2SD1350	400	V
	2SD1350A	500	
Emitter to base voltage	V_{EBO}	5	V
Peak collector current	I_{CP}	1	A
Collector current	I_C	500	mA
Collector power dissipation	P_C^*	1	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 ~ +150	°C

* Printed circuit board: Copper foil area of 1cm² or more, and the board thickness of 1.7mm for the collector portion

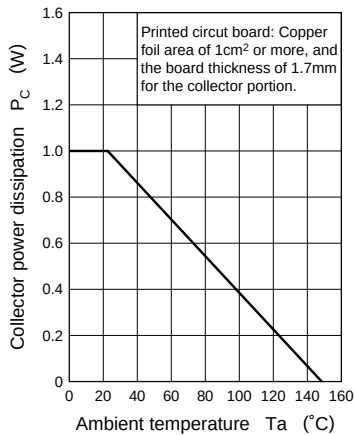
Electrical Characteristics (Ta=25°C)

Parameter		Symbol	Conditions	min	typ	max	Unit
Collector to base voltage	2SD1350	V_{CBO}	$I_C = 100\mu A, I_E = 0$	400			V
	2SD1350A			600			
Collector to emitter voltage	2SD1350	V_{CEO}	$I_C = 500\mu A, I_B = 0$	400			V
	2SD1350A			500			
Emitter to base voltage		V_{EBO}	$I_E = 100\mu A, I_C = 0$	5			V
Forward current transfer ratio		h_{FE}	$V_{CE} = 5V, I_C = 30mA$	30			
Collector to emitter saturation voltage		$V_{CE(sat)}$	$I_C = 250mA, I_B = 50mA^*$			1.5	V
Base to emitter saturation voltage		$V_{BE(sat)}$	$I_C = 250mA, I_B = 50mA^*$			1.5	V
Transition frequency		f_T	$V_{CB} = 30V, I_E = -20mA, f = 200MHz$		55		MHz
Collector output capacitance		C_{ob}	$V_{CB} = 30V, I_E = 0, f = 1MHz$			7	pF
Turn-on time	2SD1350	t_{on}	$V_{CC} = 200V, I_C = 100mA$ $I_{B1} = 10mA, I_{B2} = -10mA$		0.4		μs
	2SD1350A				1.0		
Fall time	2SD1350	t_f	$V_{CC} = 200V, I_C = 100mA$ $I_{B1} = 10mA, I_{B2} = -10mA$		0.7		μs
	2SD1350A				1.0		
Storage time	2SD1350	t_{stg}	$V_{CC} = 200V, I_C = 100mA$ $I_{B1} = 10mA, I_{B2} = -10mA$		3.6		μs
	2SD1350A				4.0		

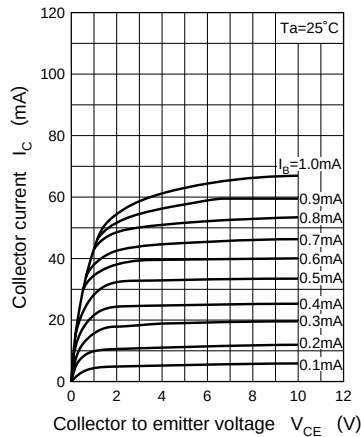
* Pulse measurement



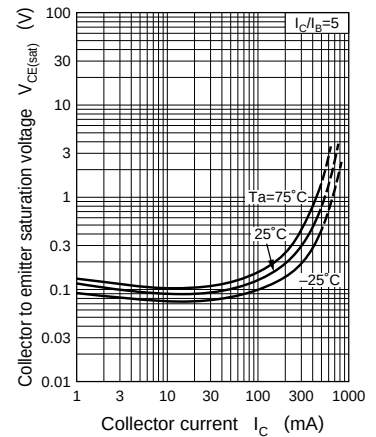
$P_C - T_a$



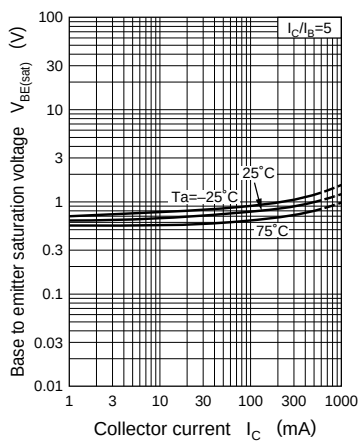
$I_C - V_{CE}$



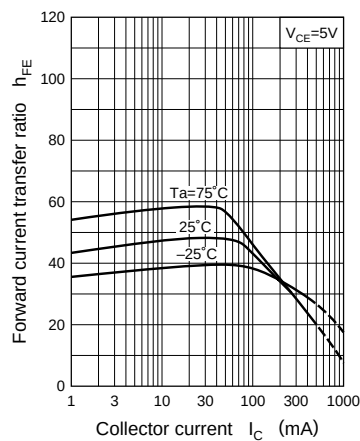
$V_{CE(sat)} - I_C$



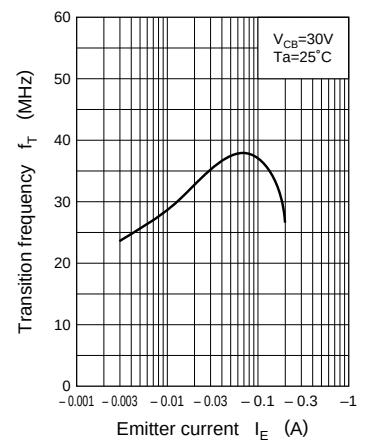
$V_{BE(sat)} - I_C$



$h_{FE} - I_C$



$f_T - I_E$



$C_{ob} - V_{CB}$

