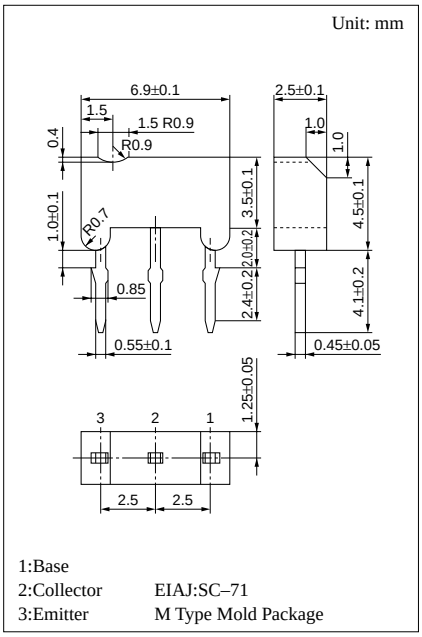
2SD1350, 2SD1350A

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	V_{CBO}	400	V
	2SD1350A		600	
Collector to emitter voltage	2SD1350	V_{CEO}	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

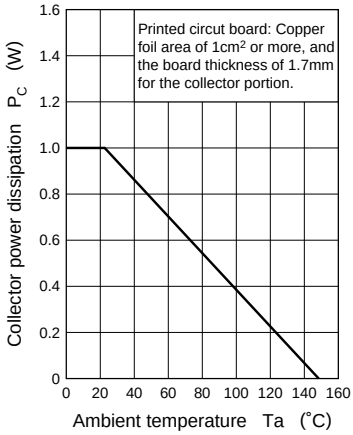
* Printed circuit board: Copper foil area of 1cm^2 or more, and the board thickness of 1.7mm for the collector portion

Electrical Characteristics (Ta=25˚C)

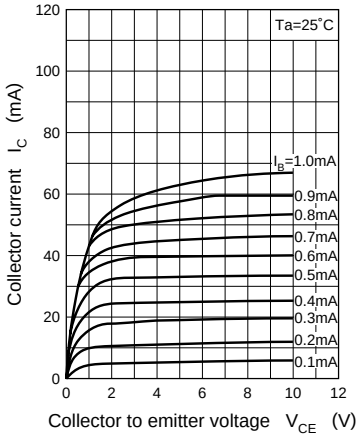
Parameter		Symbol	Conditions	min	typ	max	Unit
Collector to base voltage	2SD1350	V_{CBO}	I_C = 100µA, I_E = 0	400			V
	2SD1350A			600			
Collector to emitter voltage	2SD1350	V_{CEO}	I_C = 500µA, I_B = 0	400			V
	2SD1350A			500			
Emitter to base voltage		V_{EBO}	I_E = 100µA, I_C = 0	5			V
Forward current 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		0.4		µs
	2SD1350A		I_{B1} = 10mA, I_{B2} = –10mA		1.0		
Fall time	2SD1350	t_f	V_{CC} = 200V, I_C = 100mA		0.7		µs
	2SD1350A		I_{B1} = 10mA, I_{B2} = –10mA		1.0		
Storage time	2SD1350	t_{stg}	V_{CC} = 200V, I_C = 100mA		3.6		µs
	2SD1350A		I_{B1} = 10mA, I_{B2} = –10mA		4.0		

* Pulse measurement

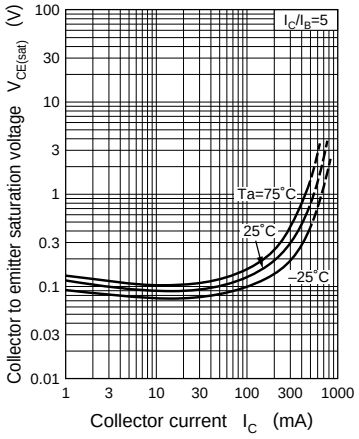
P_C — Ta



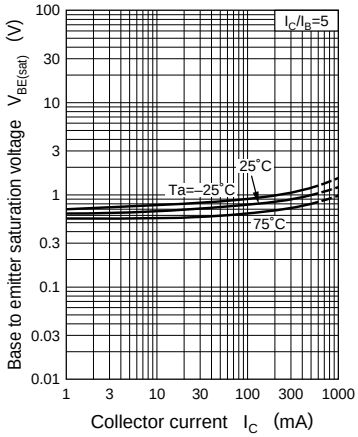
I_C — V_{CE}



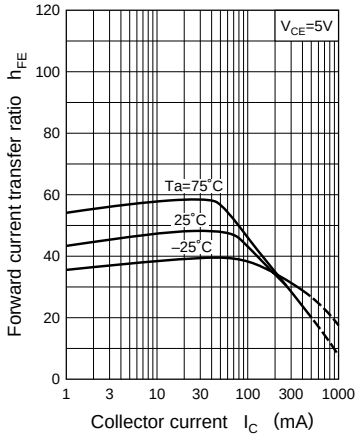
$V_{CE(sat)}$ — I_C



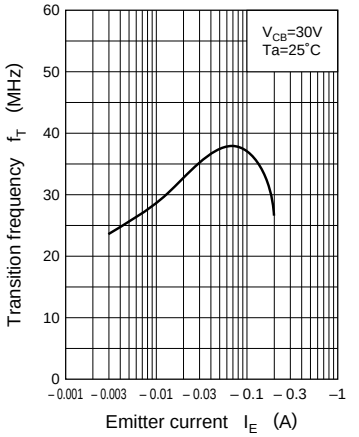
$V_{BE(sat)}$ — I_C



h_{FE} — I_C



f_T — I_E



C_{ob} — V_{CB}