

2SC4576

Silicon NPN triple diffusion planar type

For high breakdown voltage high-speed switching

Features

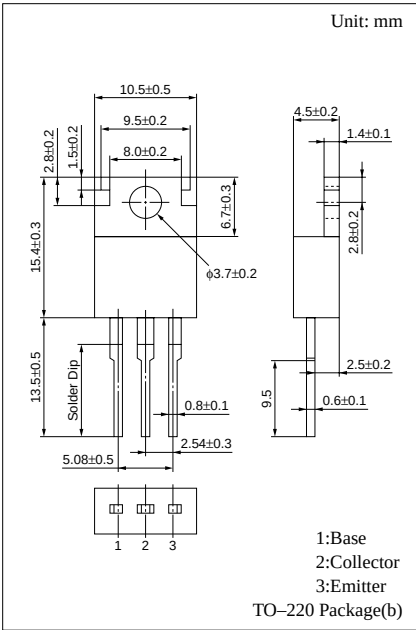
- High-speed switching
- High collector to base voltage V_{CBO}
- Wide area of safe operation (ASO)
- Satisfactory linearity of forward current transfer ratio h_{FE}

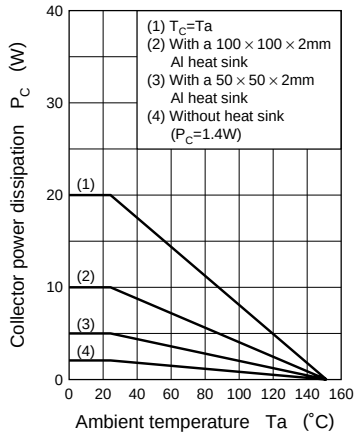
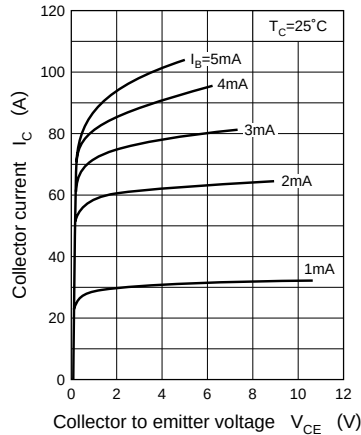
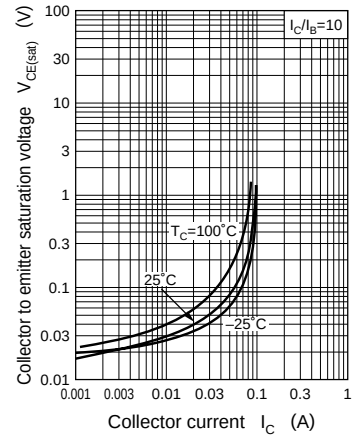
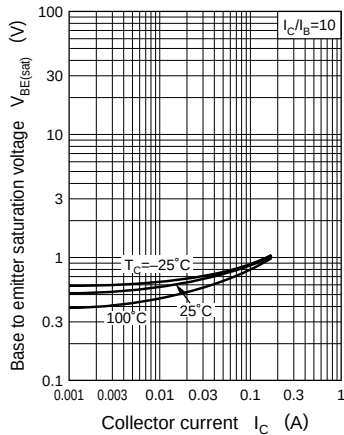
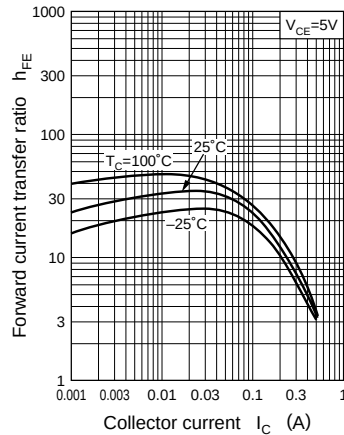
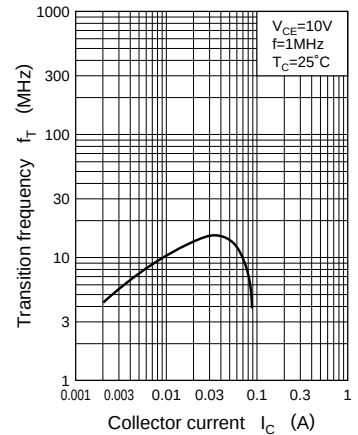
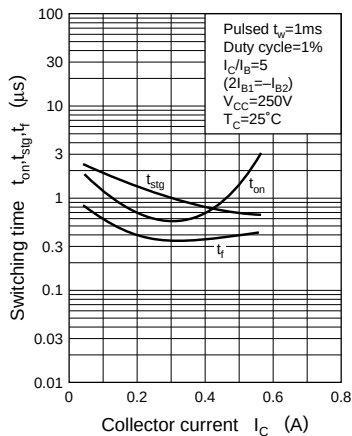
Absolute Maximum Ratings ($T_C=25^{\circ}C$)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	1400	V
Collector to emitter voltage	V_{CER}	1400	V
	V_{CEO}	700	V
Emitter to base voltage	V_{EBO}	5	V
Peak collector current	I_{CP}	1.0	A
Collector current	I_C	0.3	A
Collector power dissipation	P_C	20	W
		1.4	
Junction temperature	T_j	150	$^{\circ}C$
Storage temperature	T_{stg}	-55 to +150	$^{\circ}C$

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

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 1100V, I_E = 0$			10	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 4V, I_C = 0$			10	μA
Collector to emitter voltage	V_{CEO}	$I_C = 1mA, I_B = 0$	700			V
	V_{CER}	$I_C = 1mA, R_{BE} = 100\Omega$	1400			V
Emitter to base voltage	V_{EBO}	$I_E = 1mA, I_C = 0$	5			V
Forward current transfer ratio	h_{FE}	$V_{CE} = 5V, I_C = 30mA$	10		40	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 60mA, I_B = 6mA$			2	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 60mA, I_B = 6mA$			2	V
Transition frequency	f_T	$V_{CE} = 10V, I_C = 30mA, f = 1MHz$		12		MHz
Turn-on time	t_{on}	$I_C = 150mA, I_{B1} = 15mA, I_{B2} = -30mA, V_{CC} = 250V$			2	μs
Storage time	t_{stg}				3	μs
Fall time	t_f				1	μs



$P_C - T_a$  $I_C - V_{CE}$  $V_{CE(sat)} - I_C$  $V_{BE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_C$  $t_{on}, t_{stg}, t_f - I_C$ 

Area of safe operation (ASO)

