

2SD2544

Silicon NPN triple diffusion planar type

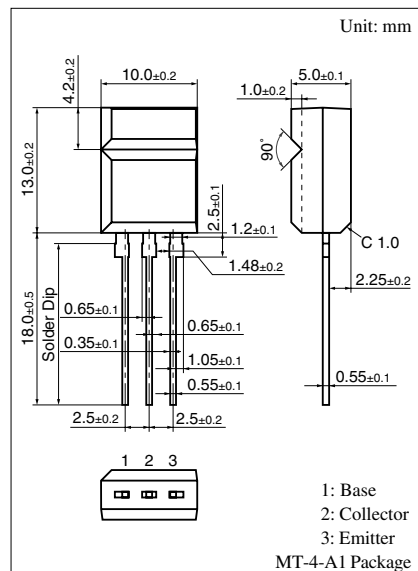
For power amplification with high forward current transfer ratio

■ Features

- High forward current transfer ratio h_{FE}
- Satisfactory linearity of forward current transfer ratio h_{FE}
- Allowing supply with the radial taping

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

Parameter	Symbol	Rating	Unit	
Collector to base voltage	V_{CBO}	60	V	
Collector to emitter voltage	V_{CEO}	60	V	
Emitter to base voltage	V_{EBO}	7	V	
Peak collector current	I_{CP}	8	A	
Collector current	I_C	4	A	
Collector power dissipation	$T_C = 25^\circ\text{C}$	P_C	15	W
	$T_a = 25^\circ\text{C}$		2	
Junction temperature	T_j	150	$^\circ\text{C}$	
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$	

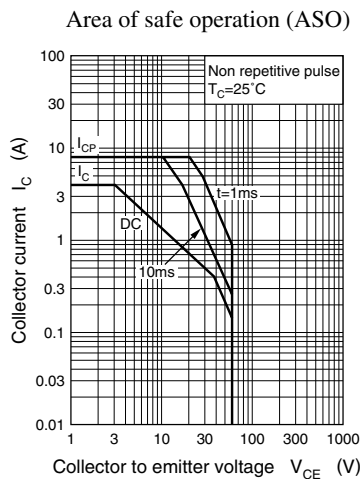
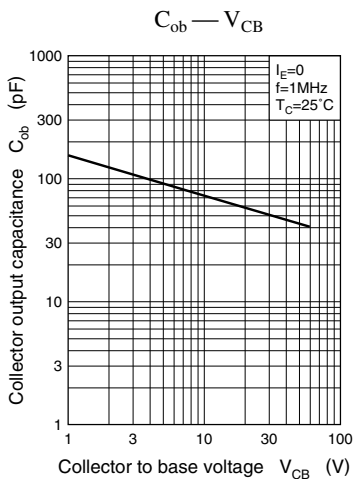
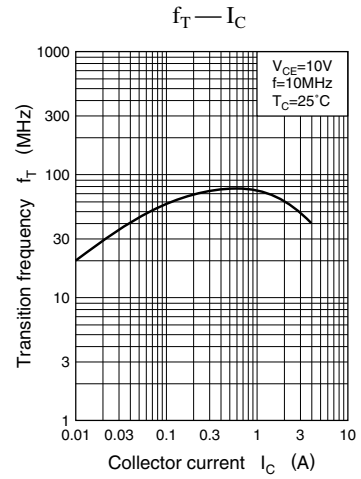
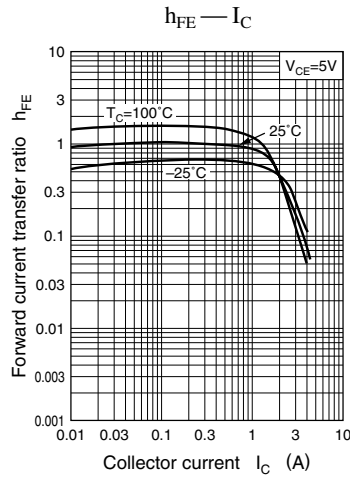
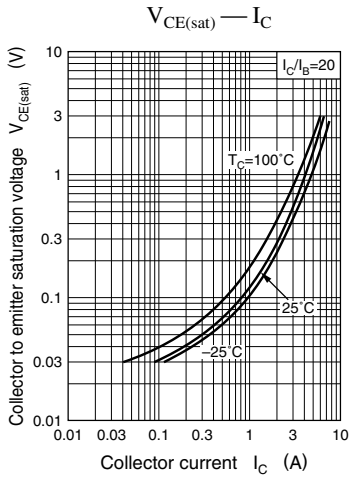
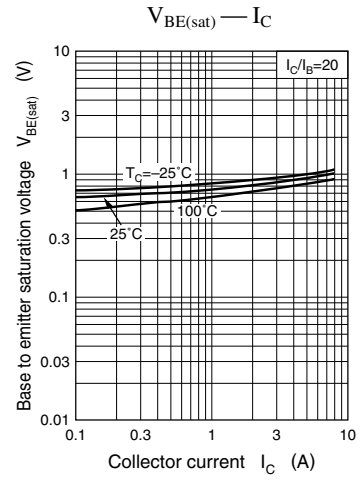
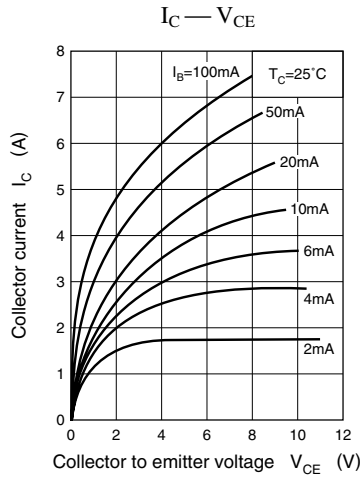
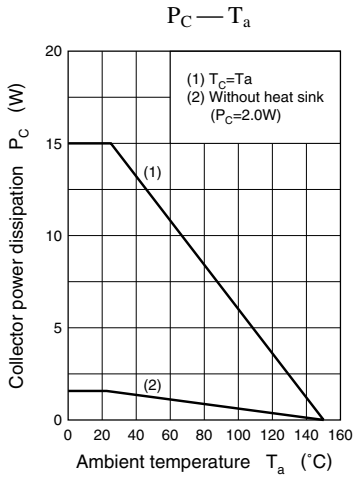


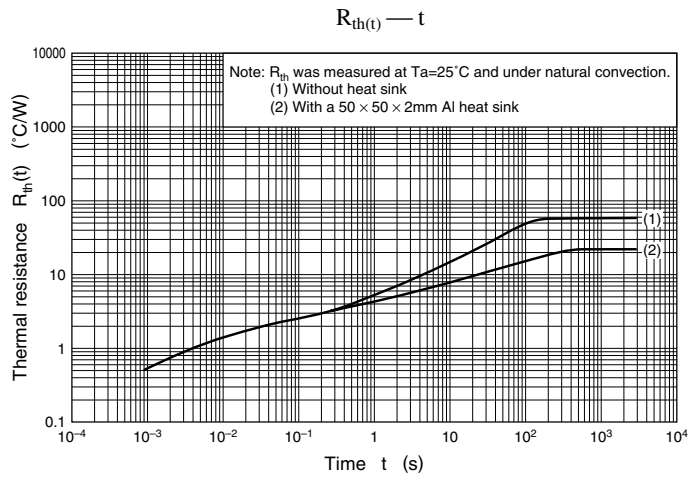
■ Electrical Characteristics $T_C = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 60\text{ V}, I_E = 0$			10	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 7\text{ V}, I_C = 0$			10	μA
Collector to emitter voltage	V_{CEO}	$I_C = 10\text{ mA}, I_B = 0$	60			V
Forward current transfer ratio	h_{FE1}^*	$V_{CE} = 2\text{ V}, I_C = 0.8\text{ A}$	500	1 000	2 000	
	h_{FE2}	$V_{CE} = 2\text{ V}, I_C = 2\text{ A}$	60			
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 2\text{ A}, I_B = 50\text{ mA}$			0.5	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 2\text{ A}, I_B = 50\text{ mA}$			1.5	V
Transition frequency	f_T	$V_{CE} = 10\text{ V}, I_C = 0.5\text{ A}, f = 10\text{ MHz}$		70		MHz
Turn-on time	t_{on}	$I_C = 2\text{ A}, I_{B1} = 50\text{ mA}, I_{B2} = -50\text{ mA}$		0.5		μs
Storage time	t_{stg}	$V_{CC} = 50\text{ V}$		3.6		μs
Fall time	t_f			1.1		μs

Note) *: Rank classification

Rank	Q	P
h_{FE1}	500 to 1 200	800 to 2 000





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