

2SD1474

Silicon NPN epitaxial planar type

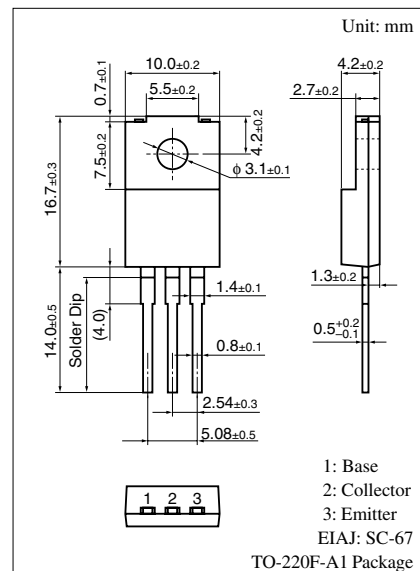
For power amplification with high forward current transfer ratio

■ Features

- High forward current transfer ratio h_{FE} which has satisfactory linearity
- High emitter to base voltage V_{EBO}
- Full-pack package which can be installed to the heat sink with one screw

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

Parameter	Symbol	Rating	Unit	
Collector to base voltage	V_{CBO}	100	V	
Collector to emitter voltage	V_{CEO}	60	V	
Emitter to base voltage	V_{EBO}	15	V	
Peak collector current	I_{CP}	12	A	
Collector current	I_C	6	A	
Base current	I_B	3	A	
Collector power dissipation	$T_C = 25^\circ\text{C}$	P_C	40	W
	$T_a = 25^\circ\text{C}$		2	
Junction temperature	T_j	150	$^\circ\text{C}$	
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$	

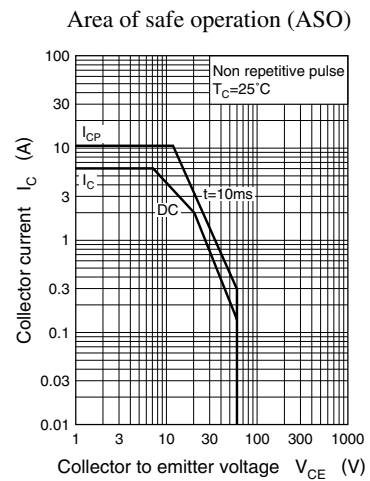
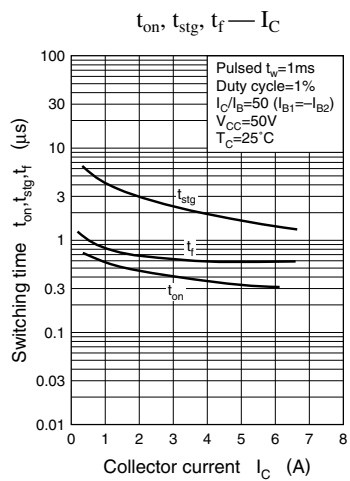
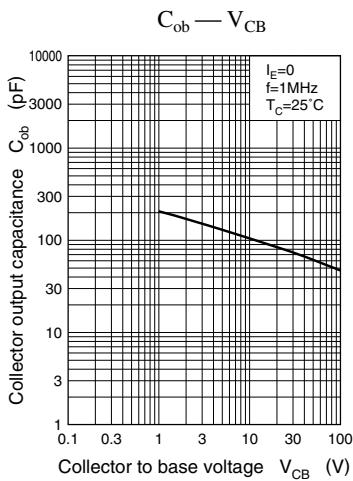
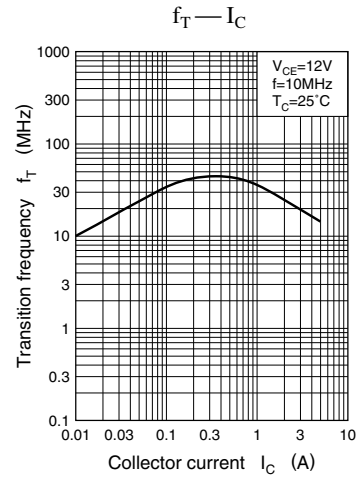
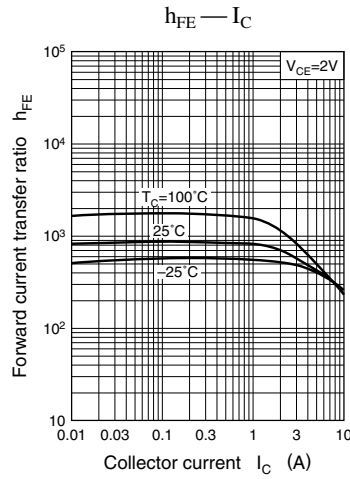
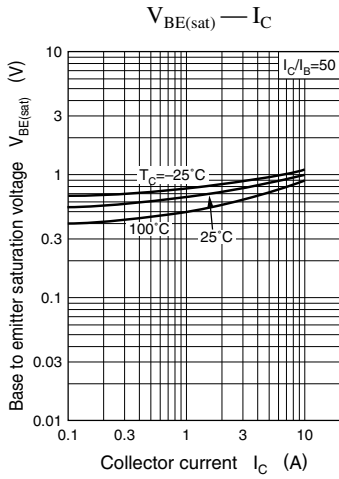
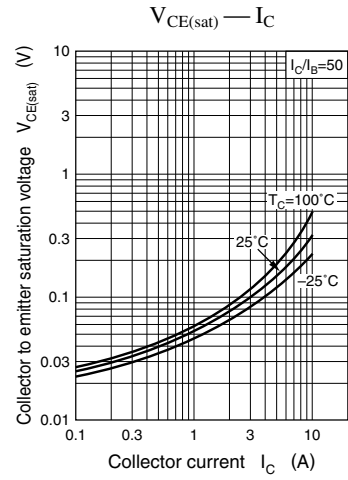
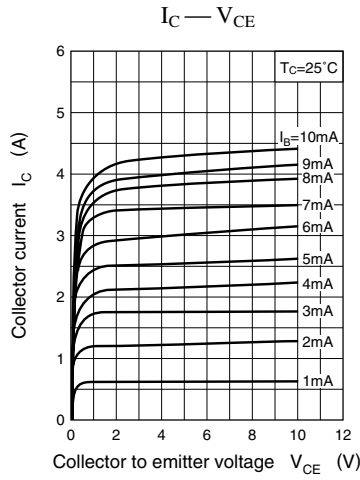
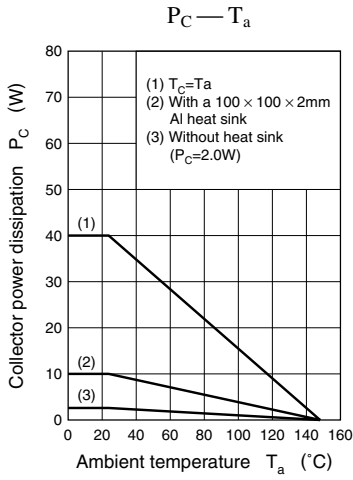


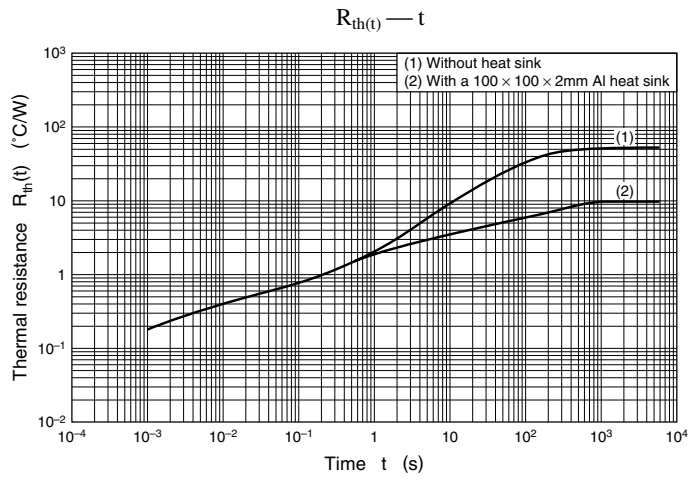
■ Electrical Characteristics $T_C = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 100\text{ V}, I_E = 0$			100	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 15\text{ V}, I_C = 0$			100	μA
Collector to emitter voltage	V_{CEO}	$I_C = 25\text{ mA}, I_B = 0$	60			V
Forward current transfer ratio *	h_{FE}	$V_{CE} = 4\text{ V}, I_C = 1\text{ A}$	300		2 000	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 5\text{ A}, I_B = 0.1\text{ A}$			0.5	V
Transition frequency	f_T	$V_{CE} = 12\text{ V}, I_C = 0.5\text{ A}, f = 10\text{ MHz}$		30		MHz
Turn-on time	t_{on}	$I_C = 5\text{ A}, I_{B1} = 0.1\text{ A}, I_{B2} = -0.1\text{ A}, V_{CC} = 50\text{ V}$		0.3		μs
Storage time	t_{stg}			1.5		μs
Fall time	t_f				0.6	μs

Note) *: Rank classification

Rank	Q	P
h_{FE}	300 to 1 200	800 to 2 000





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