

2SD1474

Silicon NPN epitaxial planar type

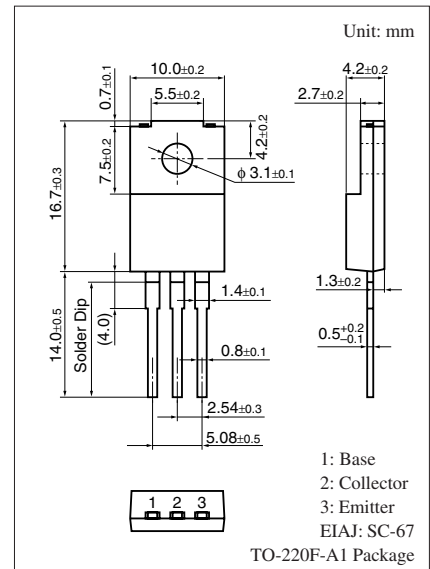
For power amplification with high forward current transfer ratio

■ Features

- High forward current transfer ratio h_{FE} which has satisfactory linearity
- High emitter-base voltage (Collector open) 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-base voltage (Emitter open)	V_{CBO}	100	V
Collector-emitter voltage (Base open)	V_{CEO}	60	V
Emitter-base voltage (Collector open)	V_{EBO}	15	V
Collector current	I_C	6	A
Peak collector current	I_{CP}	12	A
Collector power dissipation	P_C	40	W
	$T_a = 25^\circ\text{C}$	2.0	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$



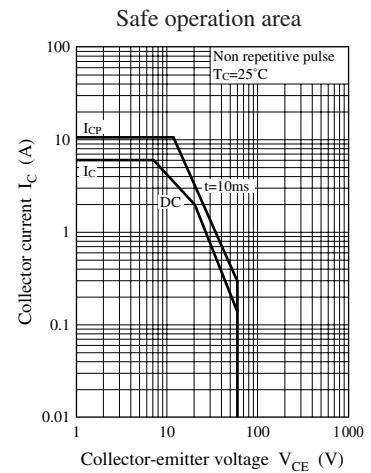
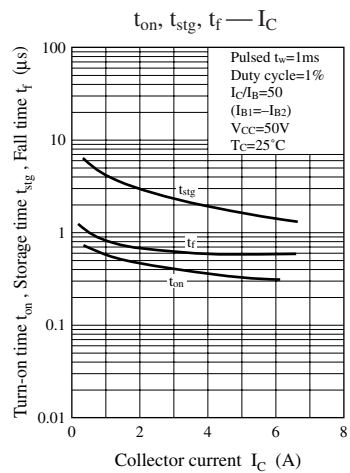
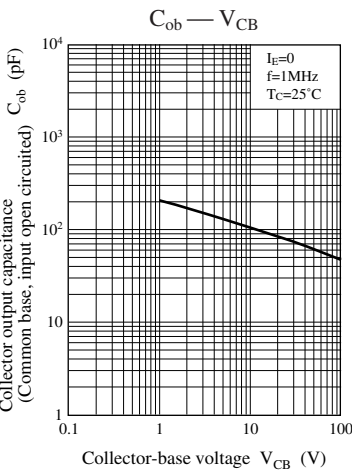
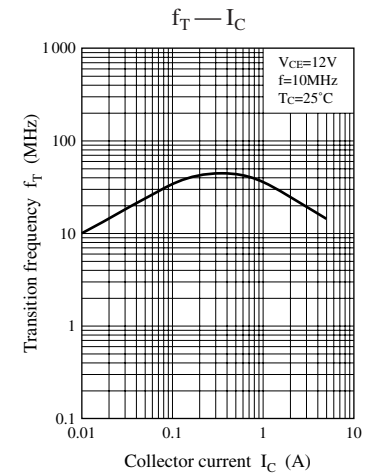
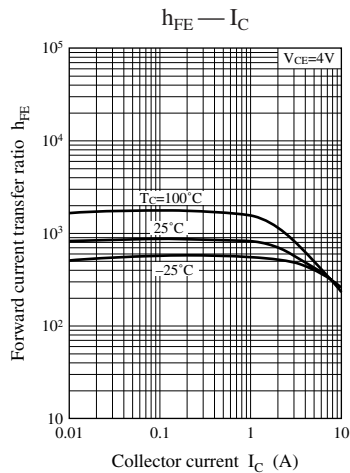
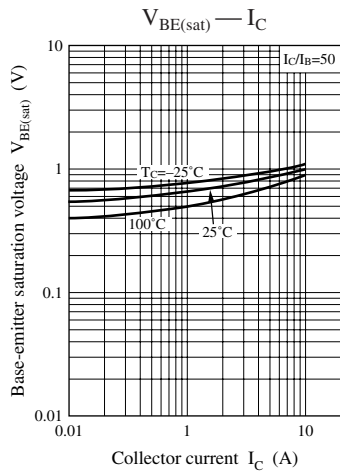
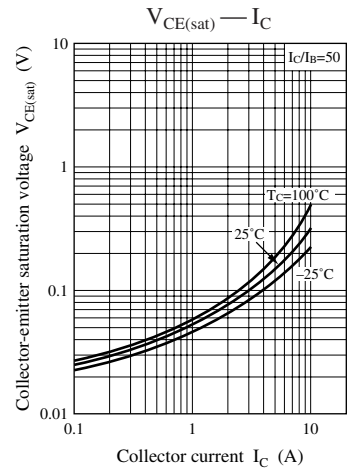
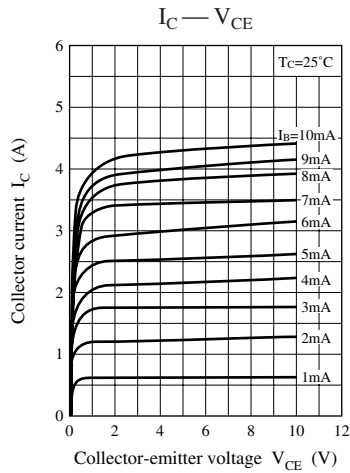
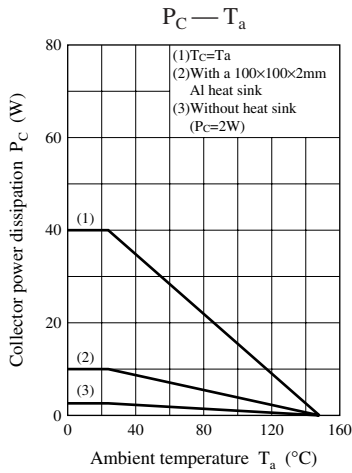
■ Electrical Characteristics $T_C = 25^\circ\text{C} \pm 3^\circ\text{C}$

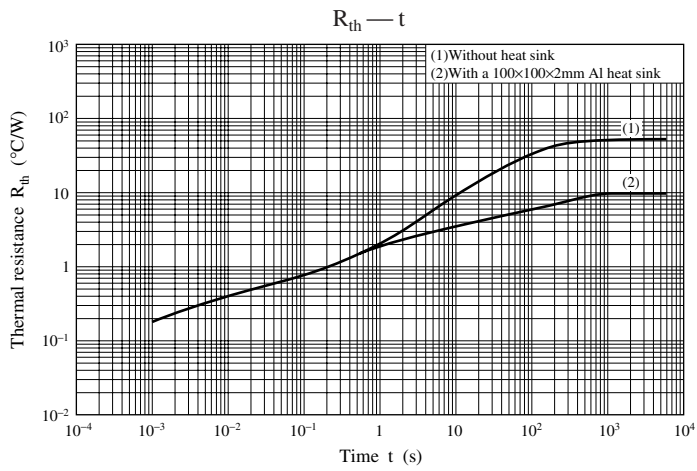
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 25 \text{ mA}, I_B = 0$	60			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 100 \text{ V}, I_E = 0$			100	μA
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = 15 \text{ V}, I_C = 0$			100	μA
Forward current transfer ratio *	h_{FE}	$V_{CE} = 4 \text{ V}, I_C = 1 \text{ A}$	300		2000	—
Collector-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}	$I_C = 5 \text{ A}, I_{B1} = 0.1 \text{ A}, I_{B2} = -0.1 \text{ A}$		0.3		μs
Storage time	t_{stg}	$V_{CC} = 50 \text{ V}$		1.5		μs
Fall time	t_f			0.6		μs

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *: Rank classification

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





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