

# 2SD1474

## Silicon NPN epitaxial planar type

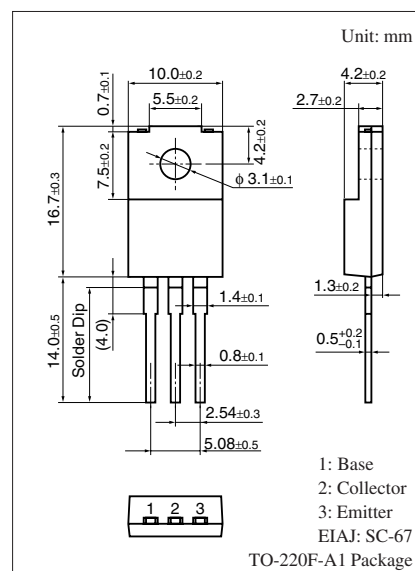
For power amplification with high forward current transfer ratio

### ■ 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 <sub>CBO</sub>	100	V
Collector-emitter voltage (Base open)		V <sub>CEO</sub>	60	V
Emitter-base voltage (Collector open)		V <sub>EBO</sub>	15	V
Collector current		I <sub>C</sub>	6	A
Peak collector current		I <sub>CP</sub>	12	A
Collector power dissipation	T <sub>a</sub> = 25°C	P <sub>C</sub>	40	W
			2.0	
Junction temperature		T <sub>j</sub>	150	°C
Storage temperature		T <sub>stg</sub>	−55 to +150	°C



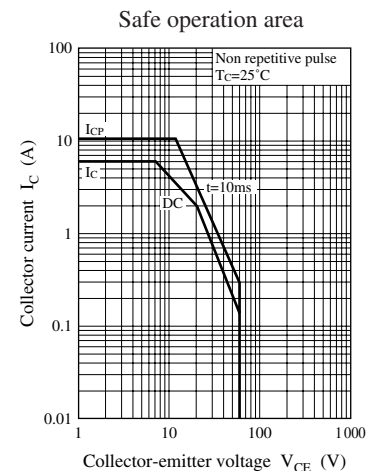
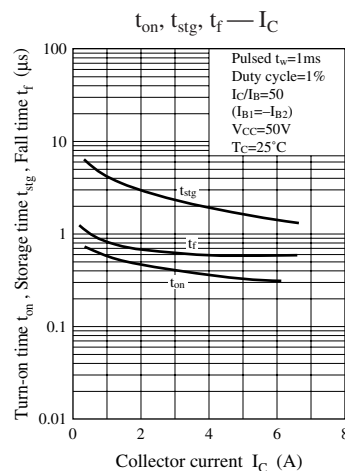
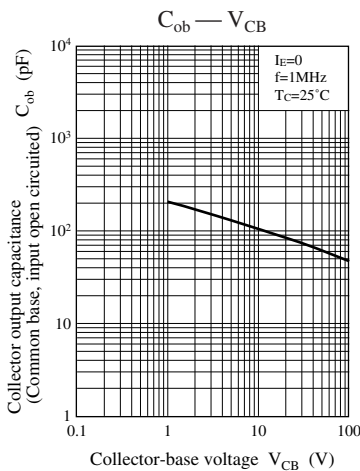
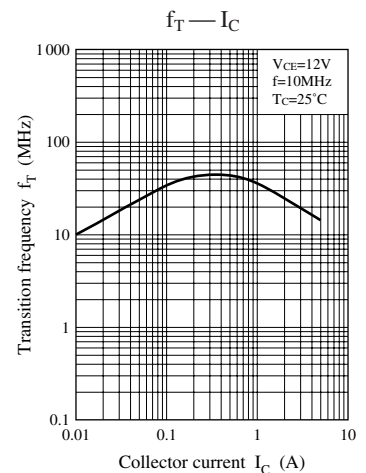
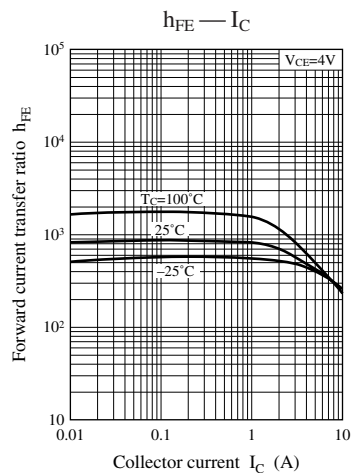
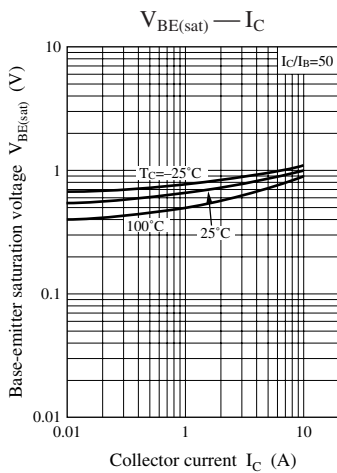
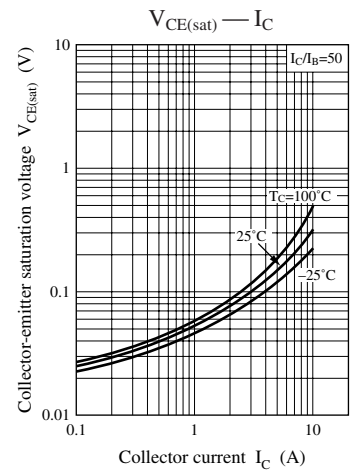
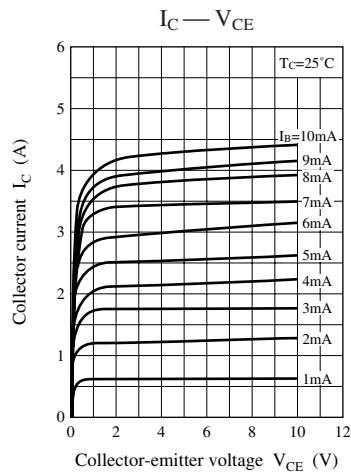
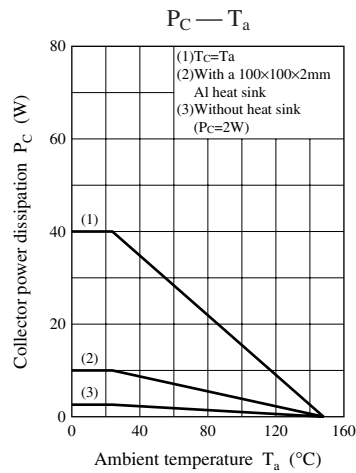
### ■ Electrical Characteristics $T_C = 25^\circ\text{C} \pm 3^\circ\text{C}$

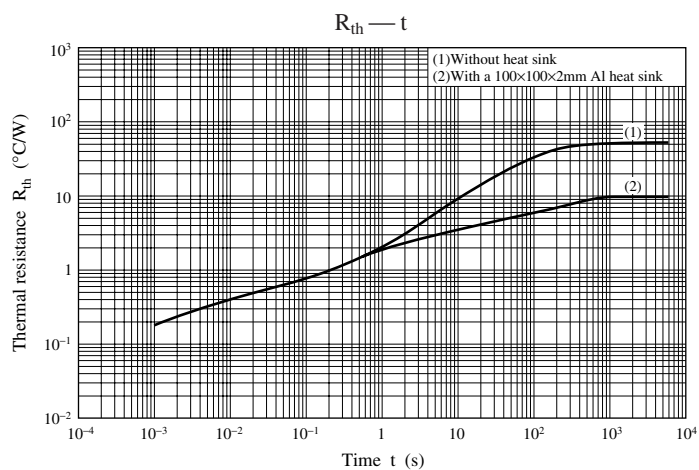
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	$V_{CEO}$	$I_C = 25\text{ mA}$ , $I_B = 0$	60			V
Collector-base cutoff current (Emitter open)	$I_{CBO}$	$V_{CB} = 100\text{ V}$ , $I_E = 0$			100	$\mu\text{A}$
Emitter-base cutoff current (Collector open)	$I_{EBO}$	$V_{EB} = 15\text{ V}$ , $I_C = 0$			100	$\mu\text{A}$
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	$t_{on}$	$I_C = 5\text{ A}$ , $I_{B1} = 0.1\text{ A}$ , $I_{B2} = -0.1\text{ A}$ $V_{CC} = 50\text{ V}$		0.3		$\mu\text{s}$
Storage time	$t_{stg}$			1.5		$\mu\text{s}$
Fall time	$t_f$			0.6		$\mu\text{s}$

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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