

# 2SD1719

## Silicon NPN triple diffusion 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)  $V_{EBO}$
- N type package enabling direct soldering of the radiating fin to the printed circuit board, etc. of small electronic equipment.

### ■ 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
Base current	$I_B$	3	A
Collector power dissipation	$P_C$	40	W
$T_a = 25^{\circ}\text{C}$		1.3	
Junction temperature	$T_j$	150	$^{\circ}\text{C}$
Storage temperature	$T_{\text{stg}}$	-55 to +150	$^{\circ}\text{C}$

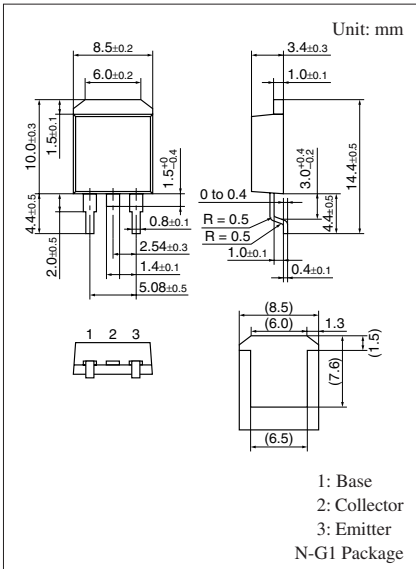
### ■ Electrical Characteristics $T_C = 25^\circ\text{C} \pm 3^\circ\text{C}$

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	$\mu\text{A}$
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	$t_{on}$	$I_C = 5\text{ A}$		0.3		$\mu\text{s}$
Storage time	$t_{stg}$	$I_{B1} = 0.1\text{ A}, I_{B2} = -0.1\text{ A}$		1.5		$\mu\text{s}$
Fall time	$t_f$	$V_{CC} = 50\text{ V}$		0.6		$\mu\text{s}$

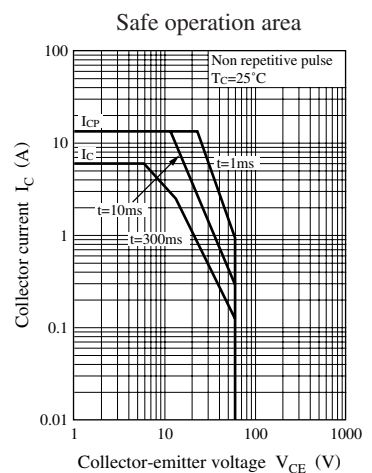
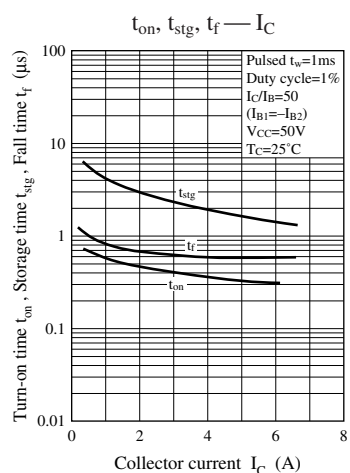
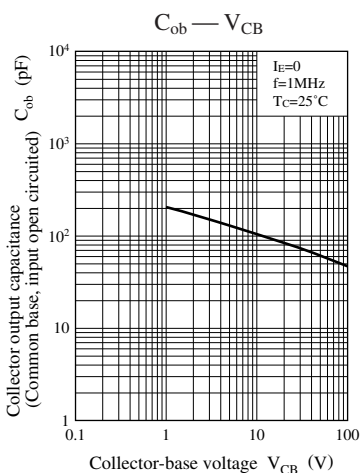
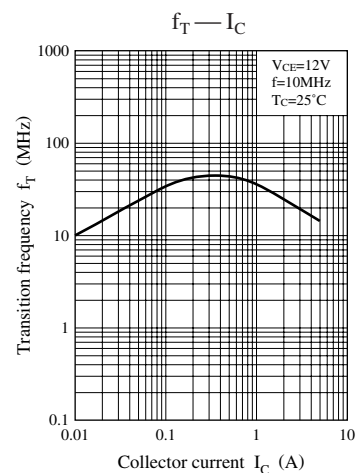
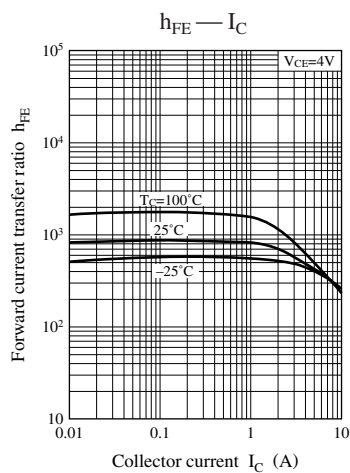
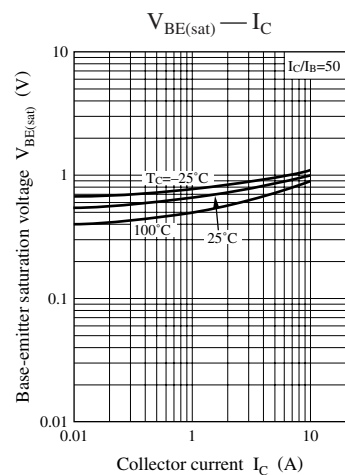
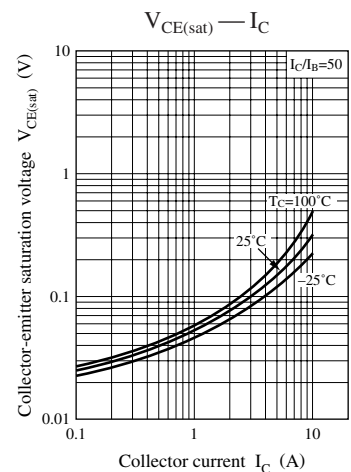
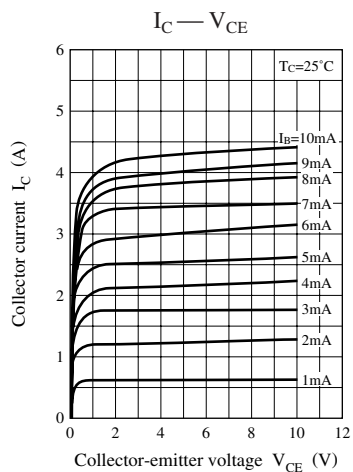
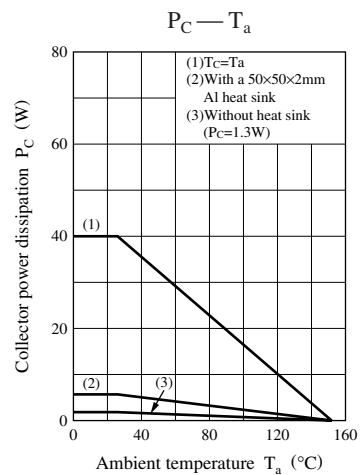
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

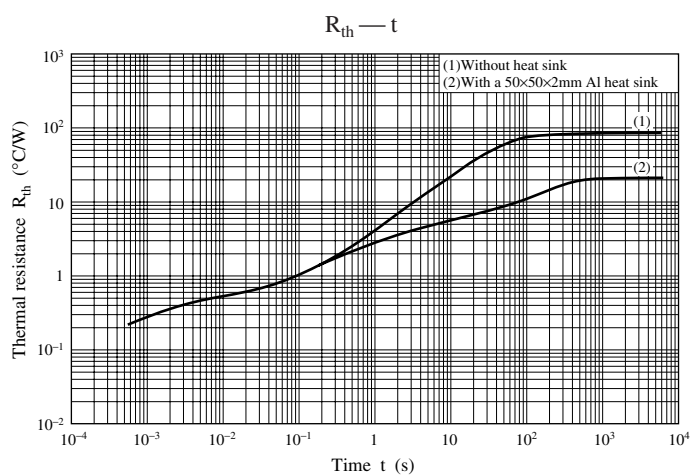
2. \*: Rank classification

Rank	Q	P
$h_{FE}$	300 to 1200	800 to 2000



Note) Self-supported type package is also prepared.





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