# 2SD1719

## Silicon NPN triple diffusion planar type

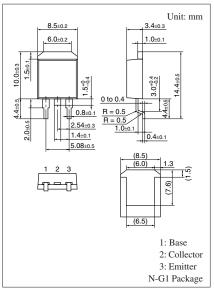
For power amplification with high forward current transfer ratio

#### ■ Features

- $\bullet$  High forward current transfer ratio  $h_{FE}$  which has satisfactory linearity
- ullet 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 $T_C = 25$ °C

Parameter	Symbol	Rating	Unit	
Collector-base voltage (Em	$V_{CBO}$	100	V	
Collector-emitter voltage (I	$V_{CEO}$	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
	$T_a = 25^{\circ}C$		1.3	
Junction temperature		$T_{j}$	150	°C
Storage temperature		$T_{stg}$	-55 to +150	°C



Note) Self-supported type package is also prepared.

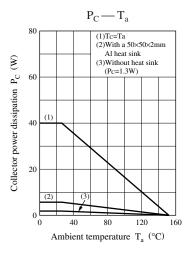
### ■ Electrical Characteristics $T_C = 25^{\circ}C \pm 3^{\circ}C$

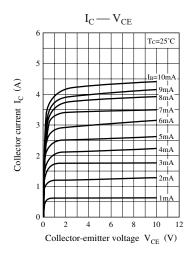
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	$I_C = 25 \text{ mA}, I_B = 0$	60			V
Collector-base cutoff current (Emitter open)	$I_{CBO}$	$V_{CB} = 100 \text{ V}, I_{E} = 0$			100	μΑ
Emitter-base cutoff current (Collector open)	$I_{EBO}$	$V_{EB} = 15 \text{ V}, I_{C} = 0$			100	μΑ
Forward current transfer ratio *	h <sub>FE</sub>	$V_{CE} = 4 \text{ V}, I_{C} = 1 \text{ A}$	300		2000	_
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	$I_C = 5 \text{ A}, I_B = 0.1 \text{ A}$			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 <sub>on</sub>	$I_C = 5 \text{ A}$		0.3		μs
Strage time	t <sub>stg</sub>	$I_{B1} = 0.1 \text{ A}, I_{B2} = -0.1 \text{ A}$		1.5		μs
Fall time	$t_{\rm f}$	$V_{CC} = 50 \text{ V}$		0.6		μs

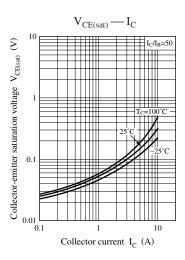
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

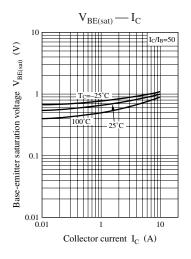
#### 2. \*: Rank classification

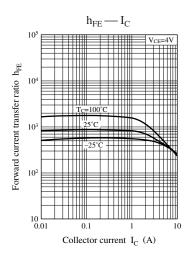
Rank	Q	Р		
$h_{FE}$	300 to 1200	800 to 2000		

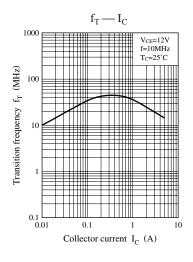


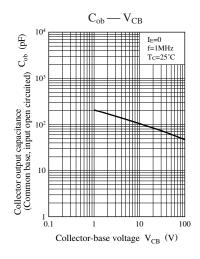


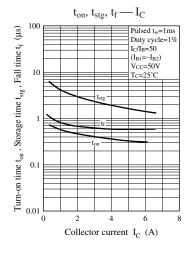


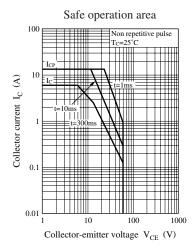


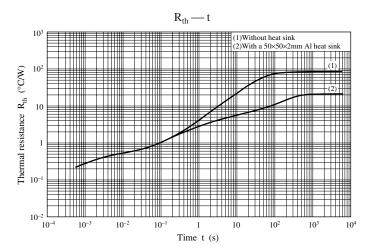












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