2SD1119G

Silicon NPN epitaxial planar type

For low-frequency power amplification

■ Features

- ullet Low collector-emitter saturation voltage $V_{\text{CE(sat)}}$
- Satisfactory operation performances at high efficiency with the low-voltage power supply.
- Mini power type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

■ Absolute Maximum Ratings $T_a = 25$ °C

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	40	V
Collector-emitter voltage (Base open)	V _{CEO}	25	V
Emitter-base voltage (Collector open)	V_{EBO}	7	V
Collector current	I_{C}	3	A
Peak collector current	I_{CP}	5	A
Collector power dissipation *	P _C	1	W
Junction temperature	T_{j}	150	°C
Storage temperature	T_{stg}	-55 to +150	S°C

Note) *: Printed circuit board: Copper foil area of 1 cm² or more, and the board thickness of 1.7 mm for the collector portion

Package

- Code
 - MiniP3-F2
- Pin Name
 - 1: Base
 - 2: Collector
 - 3: Emitter

■ Marking Symbol: T

■ Electrical Characteristics T_a = 25°C ± 3°C

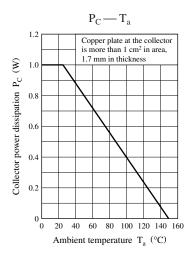
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 1 \text{ mA}, I_B = 0$	25			V
Emitter-base voltage (Collector open)	V _{EBO}	$I_E = 10 \mu\text{A}, I_C = 0$	7			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 10 \text{ V}, I_{E} = 0$			0.1	μΑ
Forward current transfer ratio *1	h _{FE1} *2	$V_{CE} = 2 \text{ V}, I_{C} = 0.5 \text{ A}$	230		600	_
	h _{FE2}	$V_{CE} = 2 \text{ V}, I_{C} = 2 \text{ A}$	150			
Collector-emitter saturation voltage *1	V _{CE(sat)}	$I_C = 3 A, I_B = 0.1 A$			1	V
Transition frequency	f_T	$V_{CB} = 6 \text{ V}, I_E = -50 \text{ mA}, f = 200 \text{ MHz}$		150		MHz
Collector output capacitance	C _{ob}	$V_{CB} = 20 \text{ V}, I_{E} = 0, f = 1 \text{ MHz}$			50	pF
(Common base, input open circuited)						

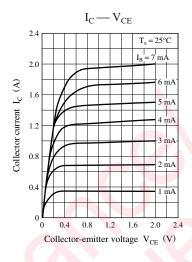
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

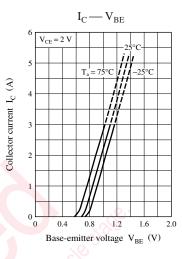
2. *1: Pulse measurement

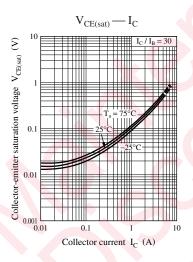
*2: Rank classification

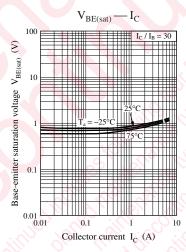
Rank	Q	R
h_{FE1}	230 to 380	340 to 600

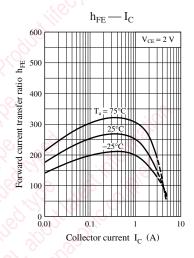


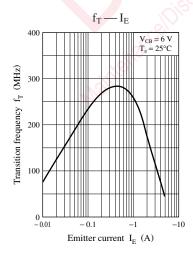


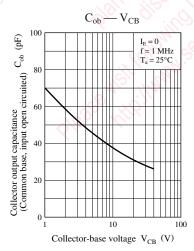






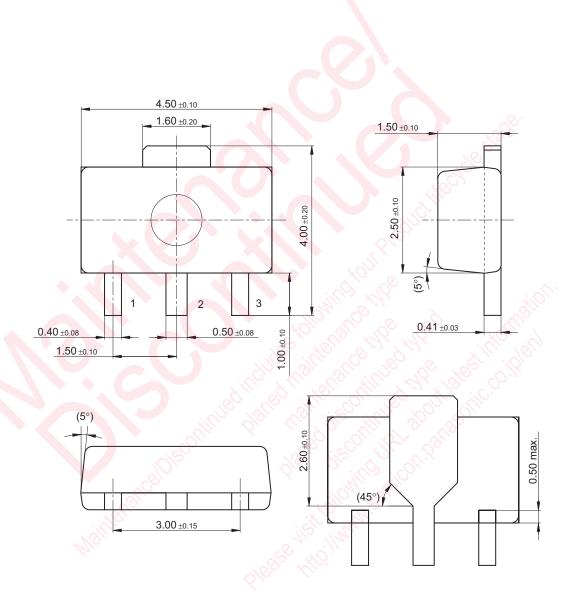






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MiniP3-F2 Unit: mm



SJD00339AED 3

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