DSC2C01

Silicon NPN epitaxial planar type

For low frequency amplification

Features

- \bullet High forward current transfer ratio h_{FE} with excellent linearity
- \bullet Low collector-emitter saturation voltage $V_{CE(sat)}$
- Halogen-free / RoHS compliant (EU RoHS / UL-94 V-0 / MSL: Level 1 compliant)

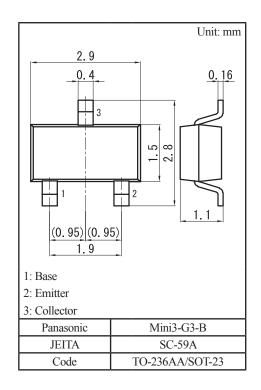
Marking Symbol: C9

Packaging

DSC2C01×0L Embossed type (Thermo-compression sealing): 3 000 pcs / reel (standard)

Absolute Maximum Ratings $T_a = 25^{\circ}C$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V _{CBO}	100	V
Collector-emitter voltage (Base open)	V _{CEO} 100		V
Emitter-base voltage (Collector open)	V _{EBO}	15	V
Collector current	I _C	20	mA
Peak collector current	I _{CP}	50	mA
Collector power dissipation	P _C	200	mW
Junction temperature	Tj	150	°C
Operating ambient temperature	T _{opr}	-40 to +85	°C
Storage temperature	T _{stg}	-55 to +150	°C



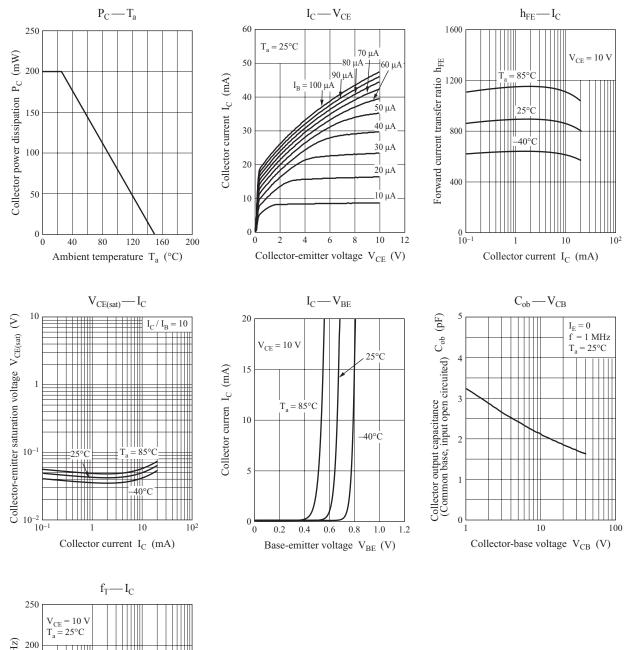
Electrical Characteristics $T_a = 25^{\circ}C \pm 3^{\circ}C$

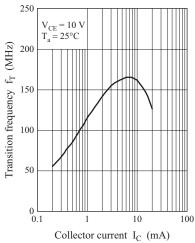
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	V _{CBO}	$I_{\rm C} = 10 \ \mu A, I_{\rm E} = 0$	100			V
Collector-emitter voltage (Base open)	V _{CEO}	$I_{\rm C} = 1 \text{ mA}, I_{\rm B} = 0$	100			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_{\rm E} = 10 \ \mu A, I_{\rm C} = 0$	15			V
Collector-base cutoff current (Emitter open)	I _{CBO}	$V_{CB} = 60 \text{ V}, I_E = 0$			0.1	μΑ
Collector-emitter cutoff current (Base open)	I _{CEO}	$V_{CE} = 60 \text{ V}, I_{B} = 0$			1	μΑ
Forward current transfer ratio *1	h _{FE}	$V_{CE} = 10 \text{ V}, I_C = 2 \text{ mA}$	400		1 200	
Collector-emitter saturation voltage	V _{CE(sat)}	$I_{\rm C} = 10 \text{ mA}, I_{\rm B} = 1 \text{ mA}$		0.05	0.20	V
Transition frequency	f_{T}	$V_{CE} = 10 \text{ V}, I_C = 2 \text{ mA}$		140		MHz

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

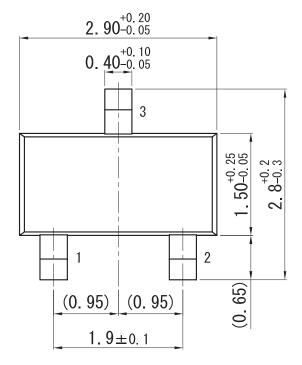
2. *1: Rank classification

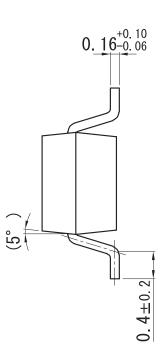
Code	R	S	
Rank	R	S	
$h_{\rm FE}$	400 to 800	600 to 1200	
Marking Symbol	C9R	C9S	

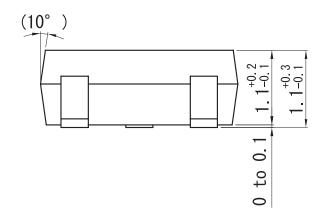




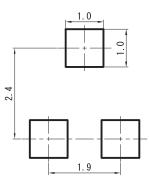
Mini3-G3-B







Land Pattern (Reference) (Unit: mm)



Ver. BED

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