

DSC4002 (Tentative)

Silicon NPN epitaxial planar type

For general amplification

■ Packaging

Radial type : 5000 pcs / carton

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

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	60	V
Collector-emitter voltage (Base open)	V_{CEO}	50	V
Emitter-base voltage (Collector open)	V_{EBO}	5	V
Collector current	I_{C}	0.5	A
Peak collector current	I_{CP}	1	A
Collector power dissipation	P_{C}	300	mW
Junction temperature	T_{j}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

■ Package

- Code
NS-B1-B
- Pin Name
 1. Emitter
 2. Collector
 3. Base

■ Marking Symbol: C2

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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_{\text{C}} = 10 \mu\text{A}, I_{\text{E}} = 0$	60			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_{\text{C}} = 2 \text{ mA}, I_{\text{B}} = 0$	50			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_{\text{E}} = 10 \mu\text{A}, I_{\text{C}} = 0$	5			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{\text{CB}} = 20 \text{ V}, I_{\text{E}} = 0$			0.1	μA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{\text{CE}} = 20 \text{ V}, I_{\text{E}} = 0$			1	μA
Forward current transfer ratio *1	h_{FE1} *2	$V_{\text{CE}} = 10 \text{ V}, I_{\text{C}} = 150 \text{ mA}$	120		340	—
	h_{FE2}	$V_{\text{CE}} = 10 \text{ V}, I_{\text{C}} = 500 \text{ mA}$	40			
Collector-emitter saturation voltage *1	$V_{\text{CE(sat)}}$	$I_{\text{C}} = 300 \text{ mA}, I_{\text{B}} = 30 \text{ mA}$		0.1	0.6	V
Transition frequency	f_{T}	$V_{\text{CE}} = 10 \text{ V}, I_{\text{C}} = 50 \text{ mA}$		160		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{\text{CB}} = 10 \text{ V}, I_{\text{E}} = 0, f = 1 \text{ MHz}$		(TBD)	(TBD)	pF

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

2. *1: Pulse measurement

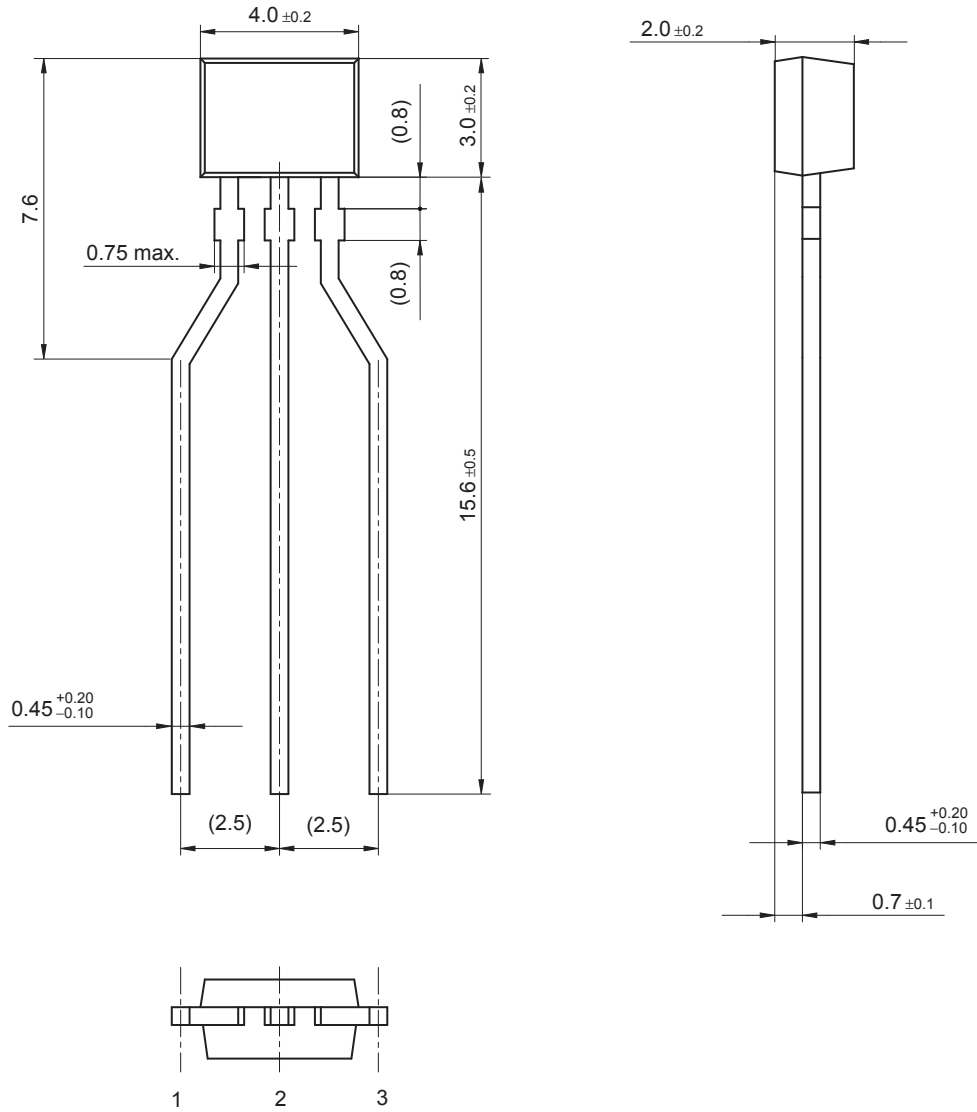
*2: Rank classification

Code	R	S	0
Rank	R	S	No-rank
h_{FE}	120 to 240	170 to 340	120 to 340
Marking Symbol	C2R	C2S	C2

Product of no-rank is not classified and have no marking symbol for rank.

NS-B1-B

Unit: mm



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