

DSC7Q01

Silicon NPN epitaxial planar type darlington

For low frequency output amplification

DSC8Q01 in MiniP3 type package

■ Features

- Contributes to miniaturization of sets, reduction of component count.
- Eco-friendly Halogen-free package

■ Packaging

Embossed type (Thermo-compression sealing): 1000 pcs / reel (standard)

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

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	100	V
Collector-emitter voltage (Base open)	V_{CEO}	80	V
Emitter-base voltage (Collector open)	V_{EBO}	5	V
Collector current	I_{C}	1	A
Peak collector current	I_{CP}	1.5	A
Collector power dissipation	P_{C}	1	W
Junction temperature	T_{j}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

Absolute maximum rating without heat sink for P_{C} is 0.5 W

■ 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}	$I_{\text{C}} = 100 \mu\text{A}, I_{\text{E}} = 0$	100			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_{\text{C}} = 1 \text{ mA}, I_{\text{B}} = 0$	80			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_{\text{E}} = 100 \mu\text{A}, I_{\text{C}} = 0$	5			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{\text{CB}} = 25 \text{ V}, I_{\text{E}} = 0$			0.1	μA
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{\text{EB}} = 4 \text{ V}, I_{\text{C}} = 0$			0.1	μA
Forward current transfer ratio *1, 2	h_{FE}	$V_{\text{CE}} = 10 \text{ V}, I_{\text{C}} = 1 \text{ A}$	4000		40000	—
Collector-emitter saturation voltage *1	$V_{\text{CE(sat)}}$	$I_{\text{C}} = 1 \text{ A}, I_{\text{B}} = 1 \text{ mA}$			1.8	V
Base-emitter saturation voltage *1	$V_{\text{BE(sat)}}$	$I_{\text{C}} = 1 \text{ A}, I_{\text{B}} = 1 \text{ mA}$			2.2	V

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

2. *1: Pulse measurement

*2: Rank classification

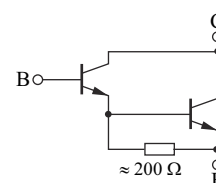
Code	Q	R	S	0
Rank	Q	R	S	No-rank
h_{FE}	4000 to 10000	8000 to 20000	16000 to 40000	4000 to 40000
Marking Symbol	5KQ	5KR	5KS	5K

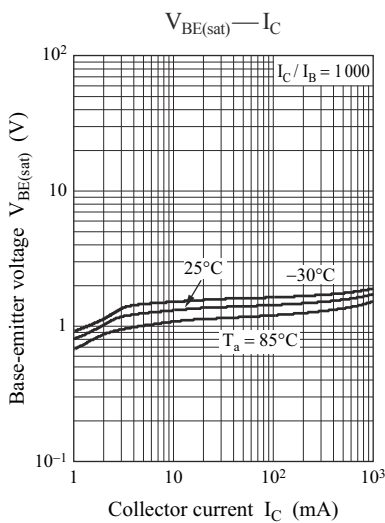
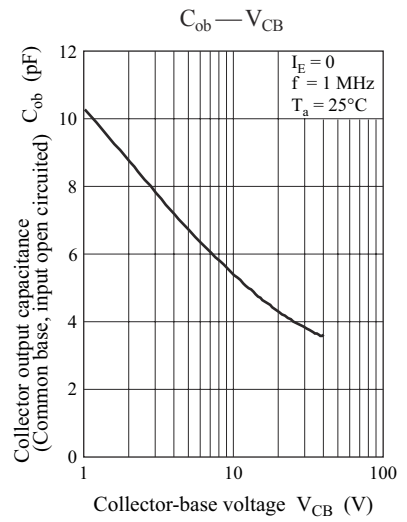
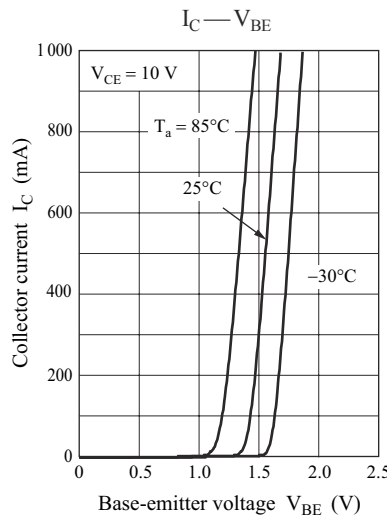
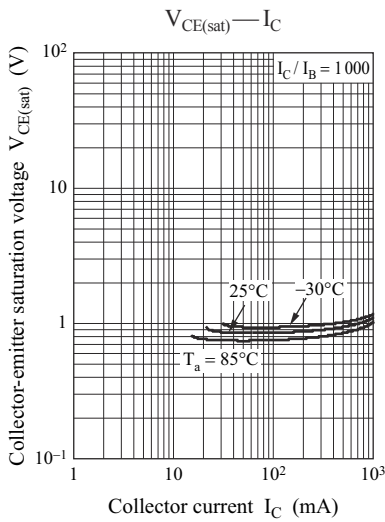
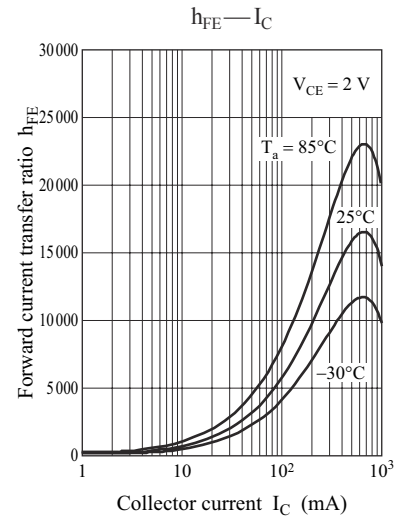
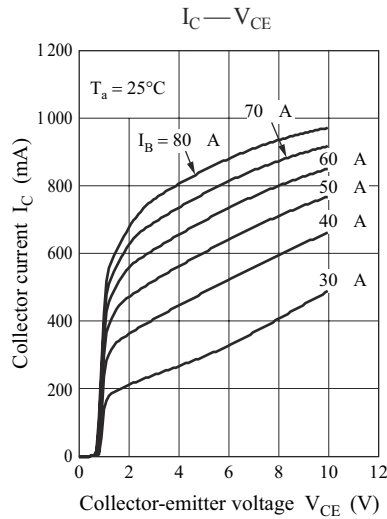
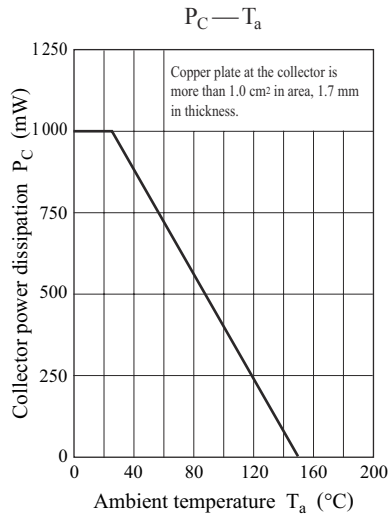
Product of no-rank is not classified and have no marking symbol for rank.

■ Package

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

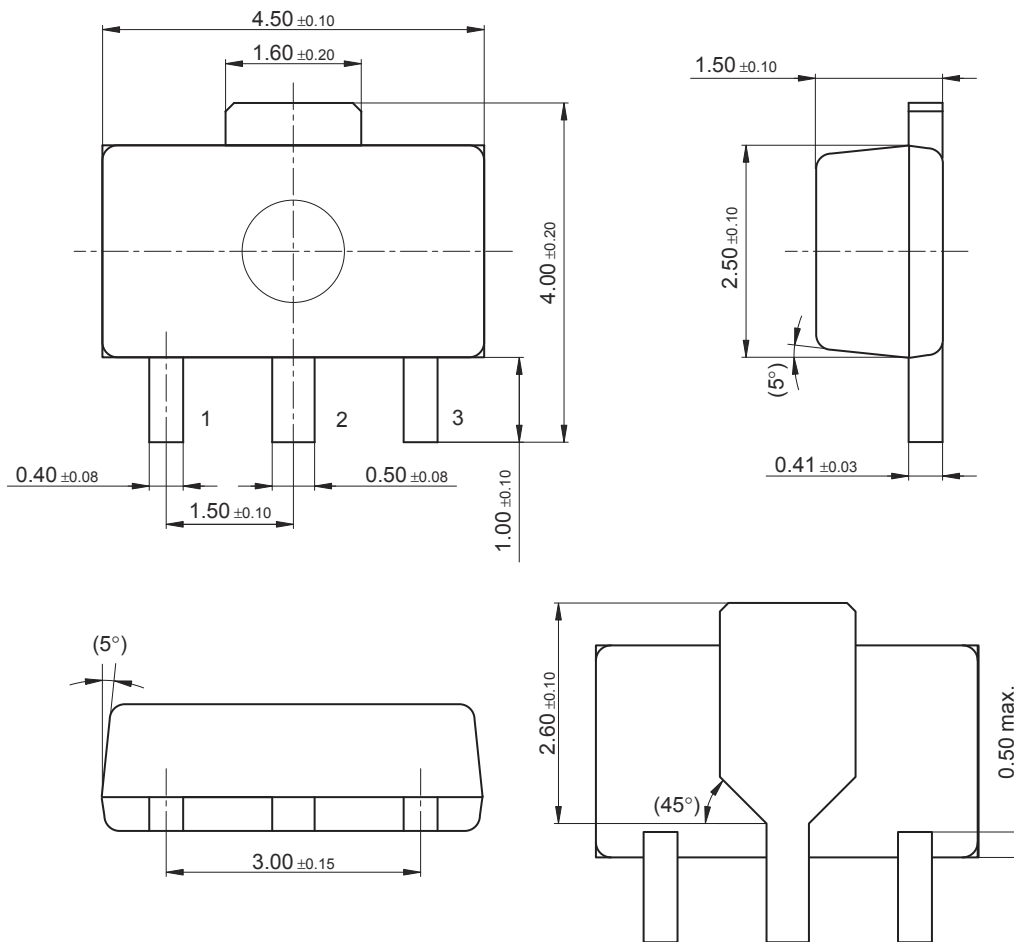
■ Marking Symbol: 5K





MiniP3-F2-B

Unit: mm



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