DSC7Q0100L Datasheet

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DiGi Electronics Part Number	DSC7Q0100L-DG
Manufacturer	Panasonic Electronic Components
Manufacturer Product Number	DSC7Q0100L
Description	TRANS NPN DARL 80V 1A MINIP3
Detailed Description	Bipolar (BJT) Transistor NPN - Darlington 80 V 1 A 1 W Surface Mount MiniP3-F2-B

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RFQ Email: Info@DiGi-Electronics.com

Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
DSC7Q0100L	Panasonic Electronic Components
Series:	Product Status:
-	Discontinued at Digi-Key
Transistor Type:	Current - Collector (Ic) (Max):
NPN - Darlington	1 A
Voltage - Collector Emitter Breakdown (Max):	Vce Saturation (Max) @ Ib, Ic:
80 V	1.8V @ 1mA, 1A
Current - Collector Cutoff (Max):	DC Current Gain (hFE) (Min) @ Ic, Vce:
100nA (ICBO)	4000 @ 1A, 10V
Power - Max:	Frequency - Transition:
1 W	-
Operating Temperature:	Mounting Type:
150°C (TJ)	Surface Mount
Package / Case:	Supplier Device Package:
TO-243AA	MiniP3-F2-B
Base Product Number:	
DSC7Q01	

Environmental & Export classification

RoHS Status:	Moisture Sensitivity Level (MSL):
RoHS Compliant	1 (Unlimited)
ECCN:	HTSUS:
EAR99	8541.29.0095

Panasonic

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

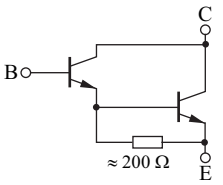
■ Packaging

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

■ Package

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

■ Marking Symbol: 5K



■ Absolute Maximum Ratings $T_a = 25°C$

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	°C
Storage temperature	T_{stg}	−55 to +150	°C

Note) Printed circuit board: Copper foil area of 1 cm^2 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 $T_a = 25°C \pm 3°C$

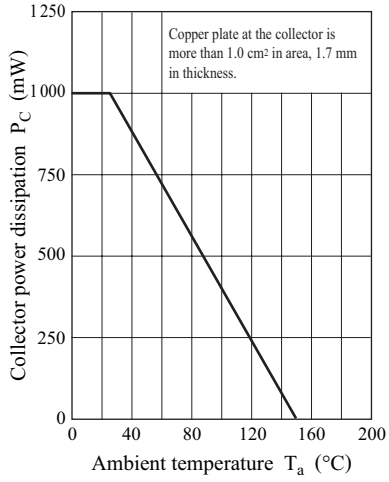
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	I_C = 100 μA, I_E = 0	100			V
Collector-emitter voltage (Base open)	V_{CEO}	I_C = 1 mA, I_B = 0	80			V
Emitter-base voltage (Collector open)	V_{EBO}	I_E = 100 μA, I_C = 0	5			V
Collector-base cutoff current (Emitter open)	I_{CBO}	V_{CB} = 25 V, I_E = 0			0.1	μA
Emitter-base cutoff current (Collector open)	I_{EBO}	V_{EB} = 4 V, I_C = 0			0.1	μA
Forward current transfer ratio *1, 2	h_{FE}	V_{CE} = 10 V, I_C = 1 A	4000		40000	—
Collector-emitter saturation voltage *1	$V_{CE(sat)}$	I_C = 1 A, I_B = 1 mA			1.8	V
Base-emitter saturation voltage *1	$V_{BE(sat)}$	I_C = 1 A, I_B = 1 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

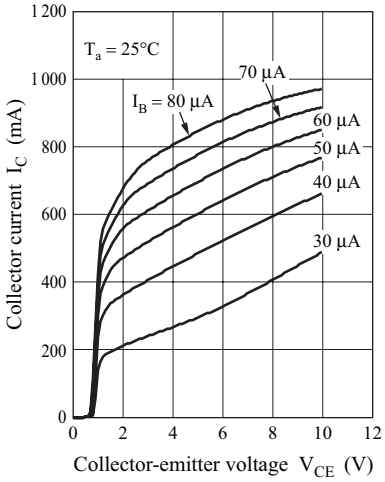
Code	Q	R	S	0
Rank	Q	R	S	No-rank
h_{FE}	4000 to 10000	8000 to 20000	16000 to 40000	4000 to 40000
Marking Symbol	5KQ	5KR	5KS	5K

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

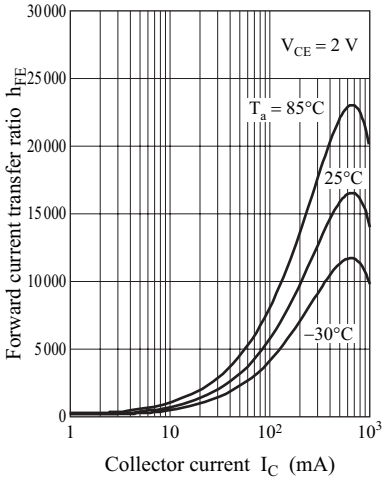
P_C — T_a



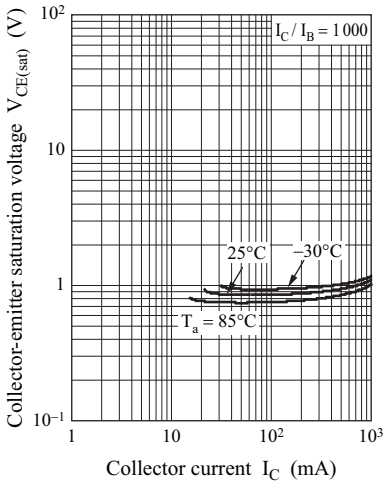
I_C — V_{CE}



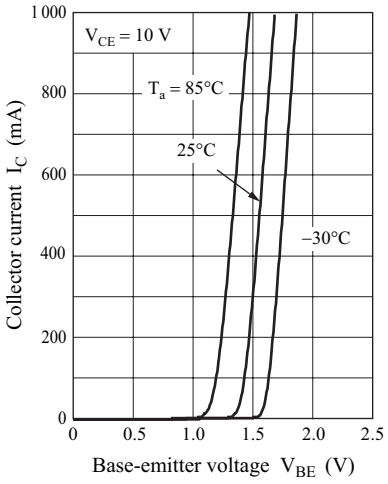
h_{FE} — I_C



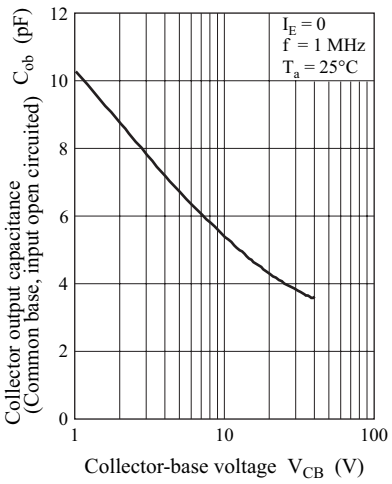
$V_{CE(sat)}$ — I_C



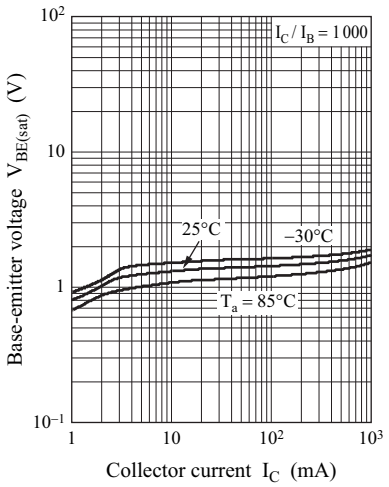
I_C — V_{BE}



C_{ob} — V_{CB}

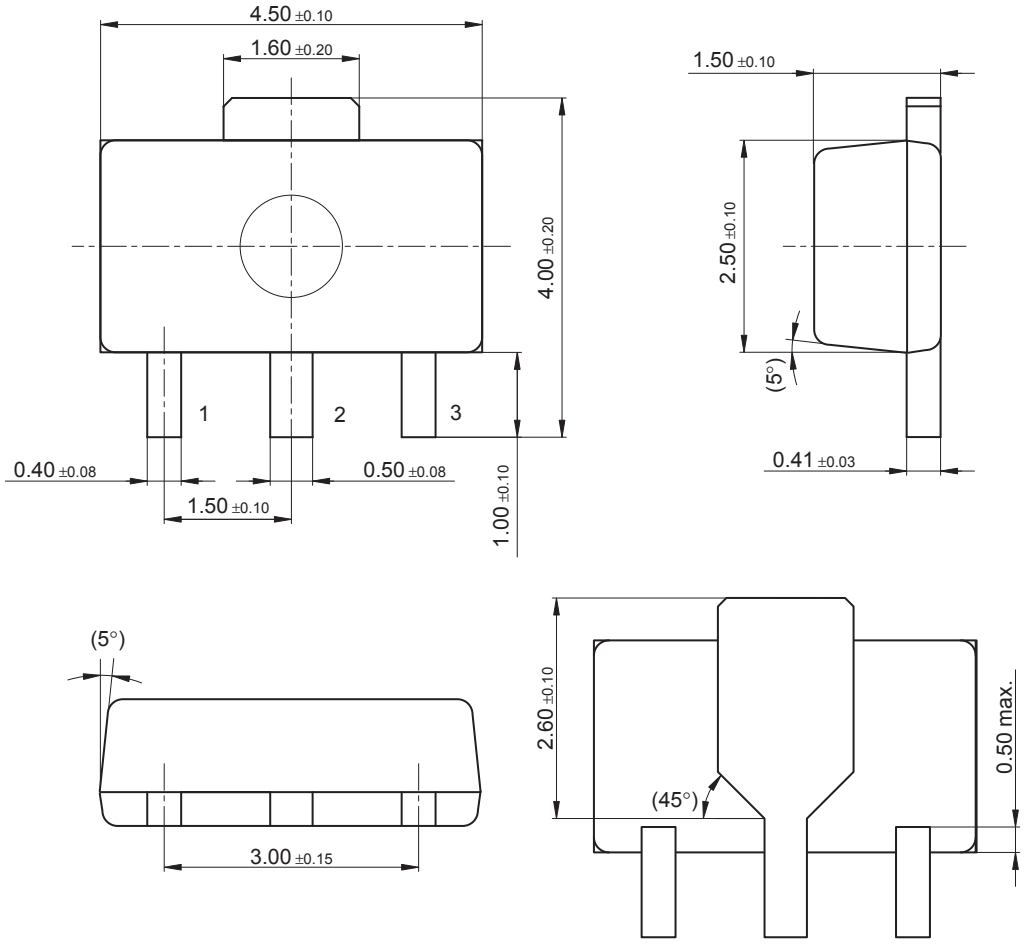


$V_{BE(sat)}$ — I_C



MiniP3-F2-B

Unit: mm



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