DSC3001

Silicon NPN epitaxial planar type

For general amplification
Complementary to DSA3001
DSC9001 in SSSMini3 type package

■ Features

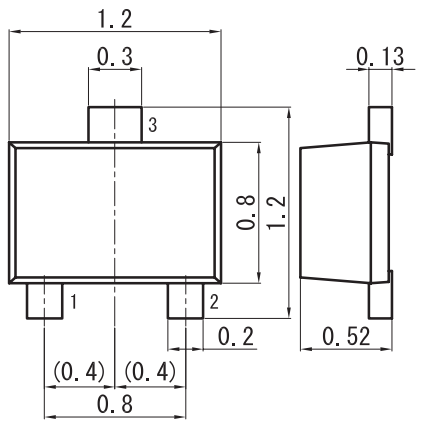
- High forward current transfer ratio h_{FE} with excellent linearity
- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Halogen-free / RoHS compliant
  (EU RoHS / UL-94 V-0 / MSL: Level 1 compliant)

■ Marking Symbol: C1

■ Packaging

DSC300100L Embossed type (Thermo-compression sealing): 10000 pcs / reel (standard)

Unit: mm



1: Base
2: Emitter
3: Collector

Panasonic	SSSMini3-F2-B
JEITA	SC-105AA
Code	SOT-723

■ Absolute Maximum Ratings $T_a = 25°C$

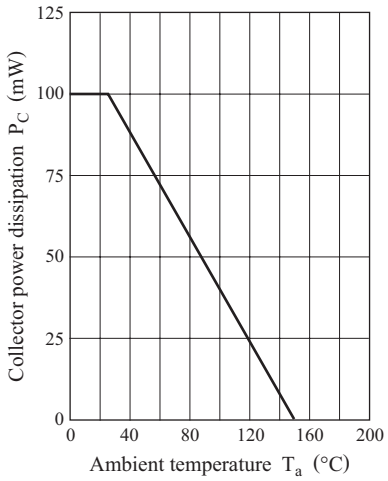
Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	60	V
Collector-emitter voltage (Base open)	V_{CEO}	50	V
Emitter-base voltage (Collector open)	V_{EBO}	7	V
Collector current	I_C	100	mA
Peak collector current	I_{CP}	200	mA
Collector power dissipation	P_C	100	mW
Junction temperature	T_j	150	°C
Operating ambient temperature	T_{opr}	–40 to +85	°C
Storage temperature	T_{stg}	–55 to +150	°C

■ Electrical Characteristics $T_a = 25°C \pm 3°C$

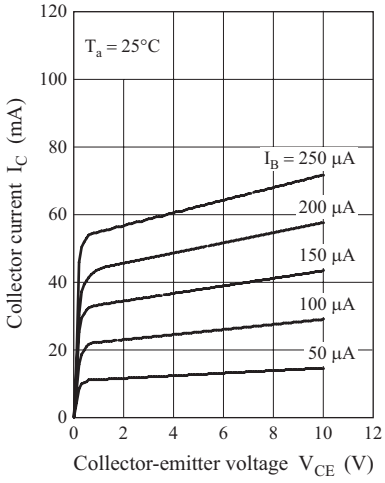
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = 10\ \mu A$, $I_E = 0$	60			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 2$ mA, $I_B = 0$	50			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 10\ \mu A$, $I_C = 0$	7			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 20$ V, $I_E = 0$			0.1	μA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = 10$ V, $I_B = 0$			100	μA
Forward current transfer ratio	h_{FE}	$V_{CE} = 10$ V, $I_C = 2$ mA	210		460	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100$ mA, $I_B = 10$ mA		0.13	0.3	V
Transition frequency	f_T	$V_{CE} = 10$ V, $I_C = 2$ mA		150		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = 10$ V, $I_E = 0$, f = 1 MHz		1.5		pF

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

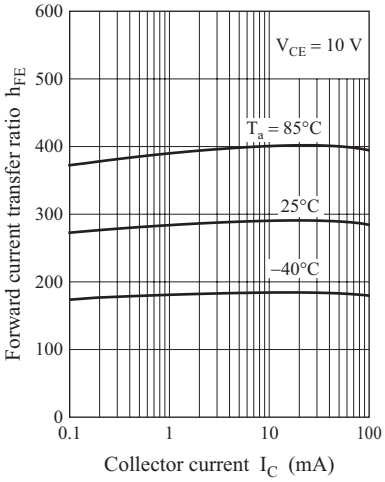
P_C — T_a



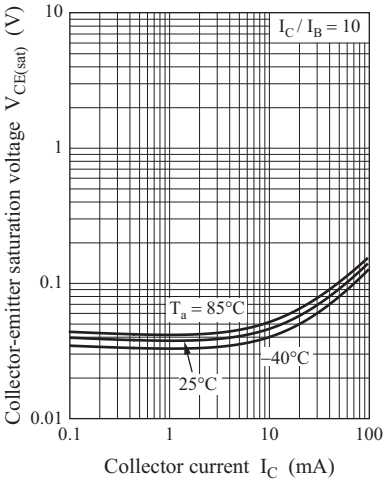
I_C — V_{CE}



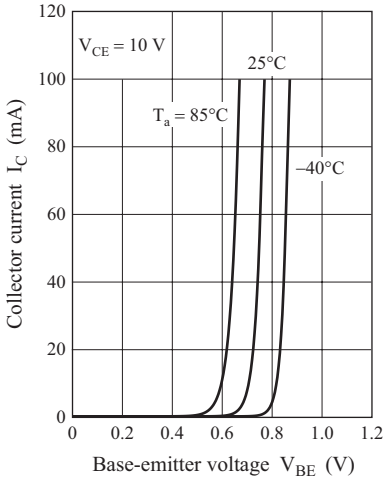
h_{FE} — I_C



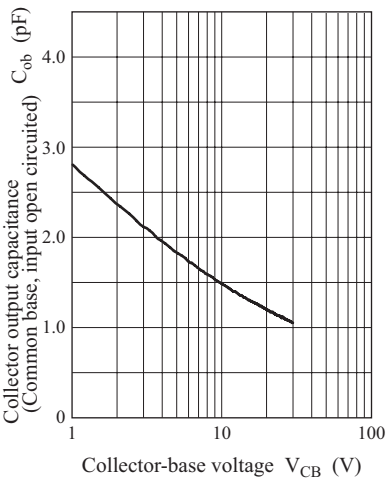
$V_{CE(sat)}$ — I_C



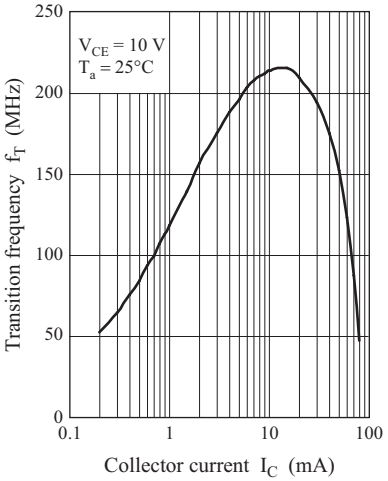
I_C — V_{BE}



C_{ob} — V_{CB}

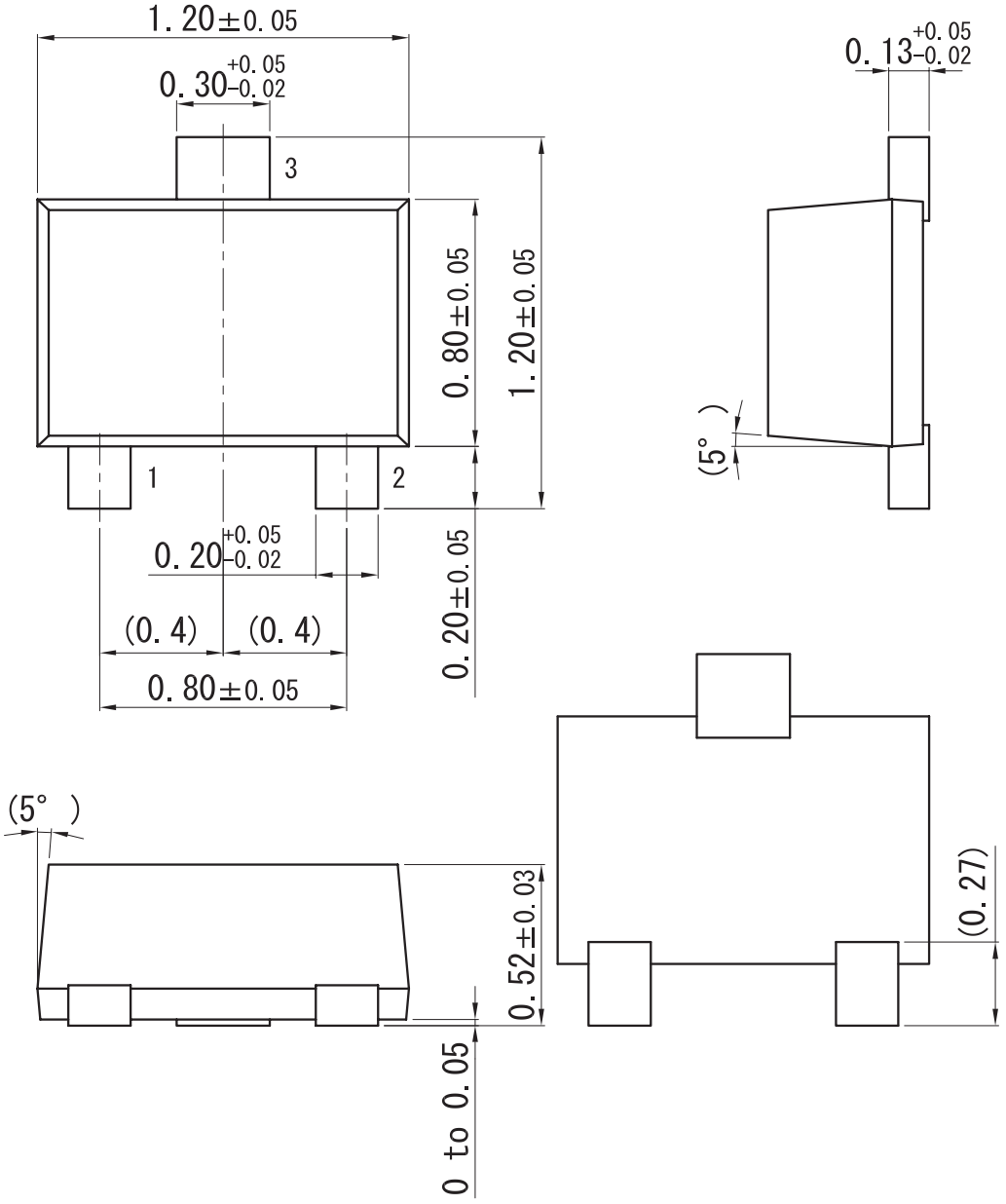


f_T — I_C

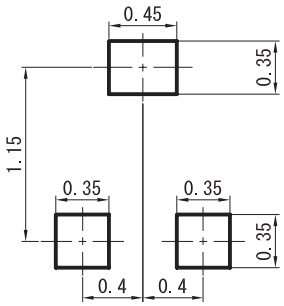


SSSMini3-F2-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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