Panasonic

DRC5143Z0L

Silicon NPN epitaxial planar type

For digital circuits
Complementary to DRA5143Z
DRC2143Z in SMini3 type package

■ Features

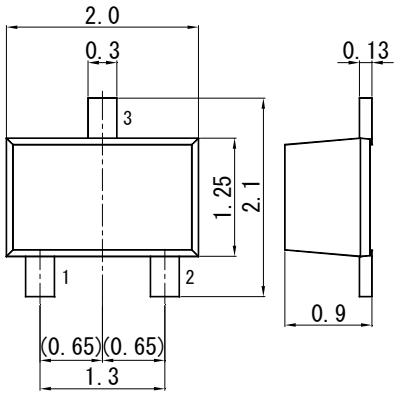
- High forward current transfer ratio hFE
- Low collector-emitter saturation voltage Vce(sat)
- Halogen-free / RoHS compliant
  (EU RoHS / UL-94 V-0 / MSL:Level 1 compliant)

■ Marking Symbol: N8

■ Packaging

Embossed type (Thermo-compression sealing) : 3 000 pcs / reel (standard)

Unit: mm



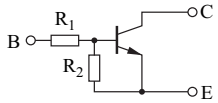
1. Base
2. Emitter
3. Collector

Panasonic	SMini3-F2-B
JEITA	SC-85
Code	—

■ Absolute Maximum Ratings Ta = 25 °C

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	VCBO	50	V
Collector-emitter voltage (Base open)	VCEO	50	V
Collector current	IC	100	mA
Total power dissipation	PT	150	mW
Junction temperature	Tj	150	°C
Operating ambient temperature	Topr	-40 to +85	°C
Storage temperature	Tstg	-55 to +150	°C

Internal Connection



Resistance value	R1	4.7	kΩ
	R2	47	kΩ

■ Electrical Characteristics Ta = 25 °C ± 3 °C

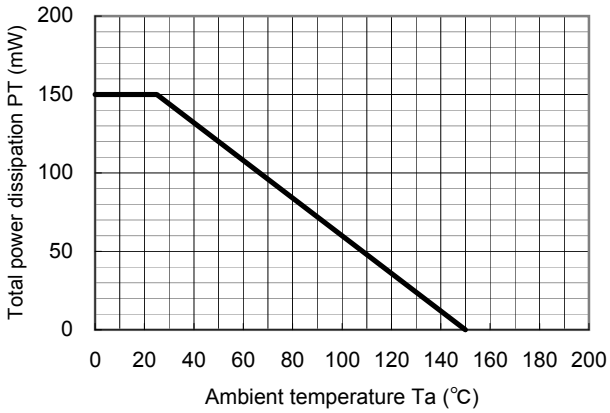
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	VCBO	IC = 10 µA, IE = 0	50			V
Collector-emitter voltage (Base open)	VCEO	IC = 2 mA, IB = 0	50			V
Collector-base cutoff current (Emitter open)	ICBO	VCB = 50 V, IE = 0			0.1	µA
Collector-emitter cutoff current (Base open)	ICEO	VCE = 50 V, IB = 0			0.5	µA
Emitter-base cutoff current (Collector open)	IEBO	VEB = 6 V, IC = 0			0.2	mA
Forward current transfer ratio	hFE	VCE = 10 V, IC = 5 mA	80		400	-
Collector-emitter saturation voltage	VCE(sat)	IC = 10 mA, IB = 0.5 mA			0.25	V
Input voltage	Vi(on)	VCE = 0.2 V, IC = 5 mA	1.3			V
	Vi(off)	VCE = 5 V, IC = 100 µA			0.4	V
Input resistance	R1		-30%	4.7	+30%	kΩ
Resistance ratio	R1/R2		0.08	0.10	0.12	-

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

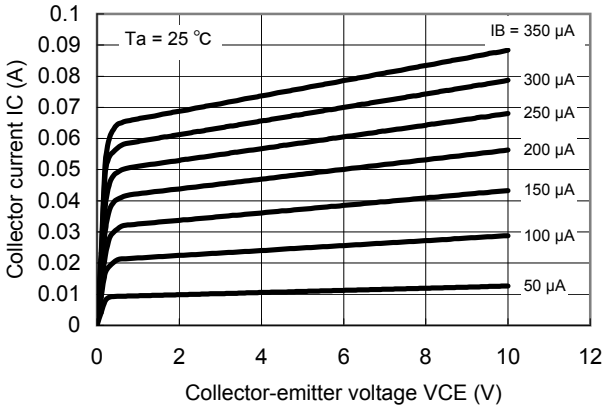
Established : 2009-09-08
Revised : 2014-03-14

Technical Data (reference)

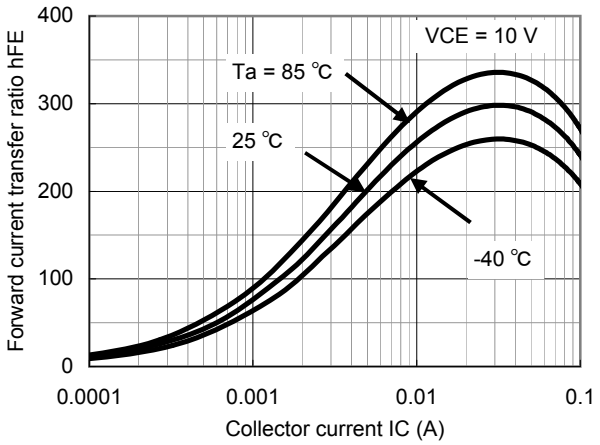
PT - Ta



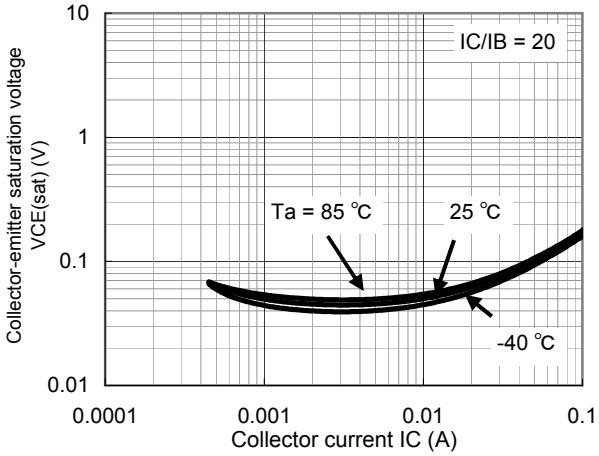
IC - VCE



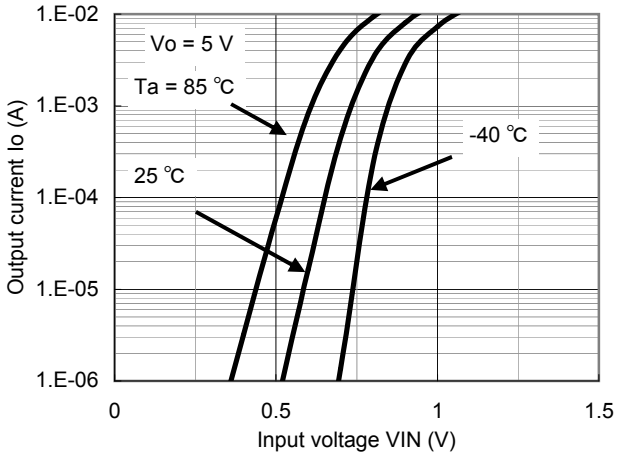
hFE - IC



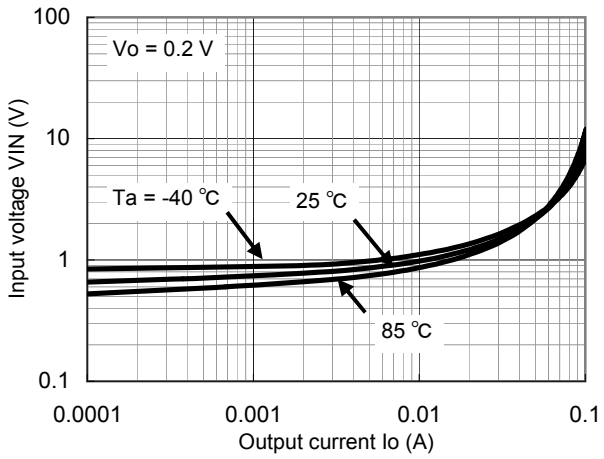
VCE(sat) - IC



Io - VIN



VIN - Io



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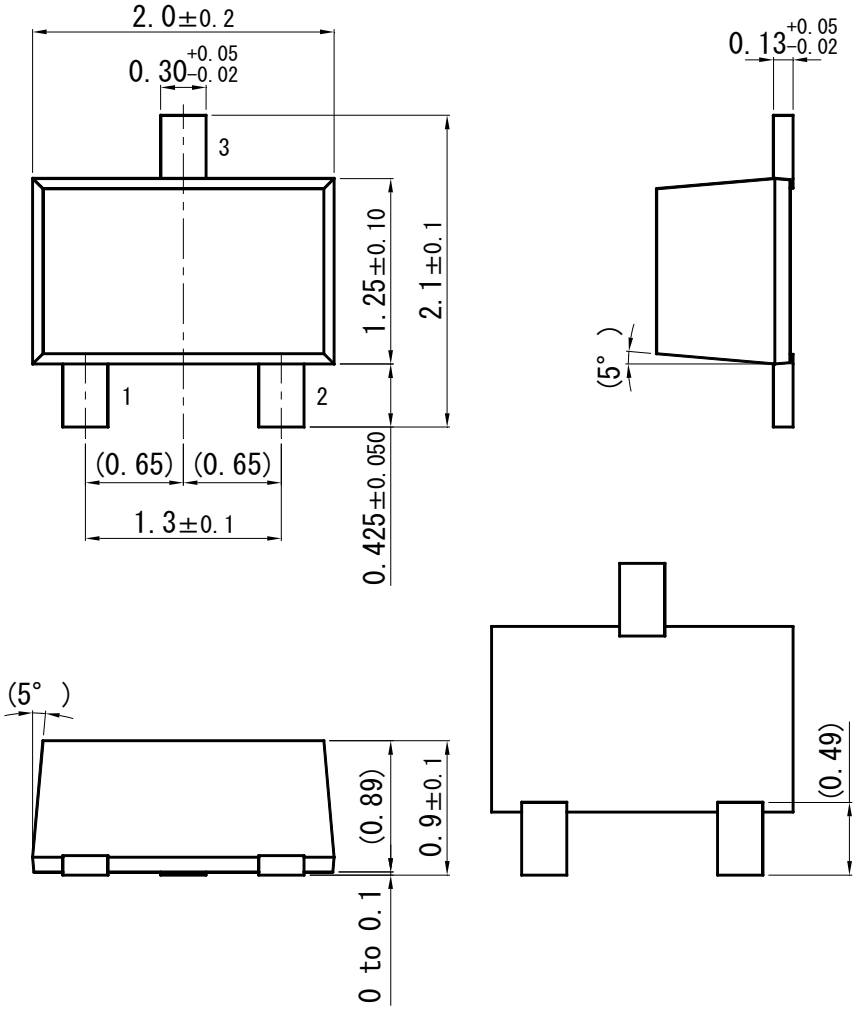
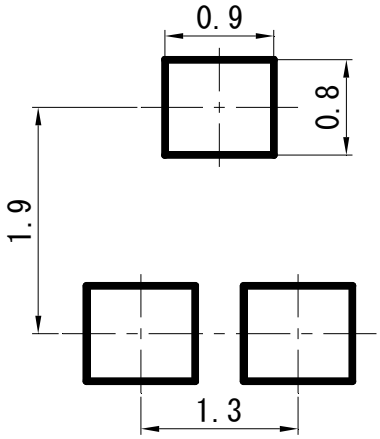
SMini3-F2-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



Established : 2009-09-08
Revised : 2014-03-14

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