Panasonic

DRA2144E0L

Silicon PNP epitaxial planar type

For digital circuit
Complementary to DRC2144E

■ Features

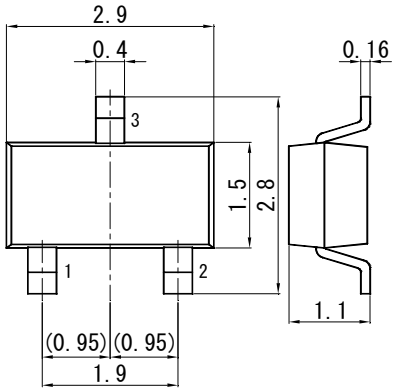
- Low collector-emitter saturation voltage Vce(sat)
- Halogen-free / RoHS compliant
  (EU RoHS / UL-94 V-0 / MSL:Level 1 compliant)

■ Marking Symbol: LL

■ Packaging

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

Unit: mm



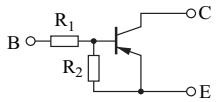
1. Base
2. Emitter
3. Collector

Panasonic	Mini3-G3-B
JEITA	SC-59A
Code	TO-236AA/SOT-23

■ 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	200	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	47	kΩ
	R2	47	kΩ

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

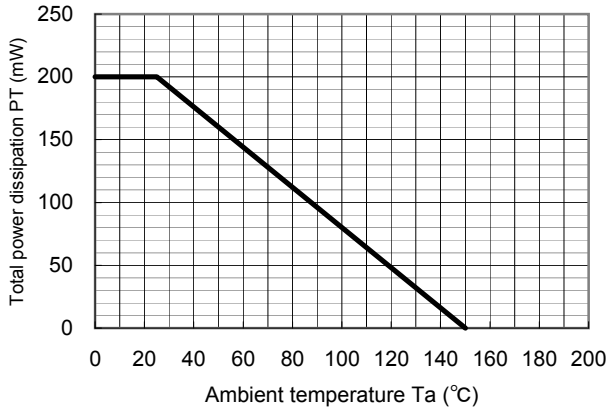
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	VCBO	IC = -10 µA, IE = 0	-50			V
Collector-emitter voltage (Base open)	VCEO	IC = -2 mA, IB = 0	-50			V
Collector-base cutoff current (Emitter open)	ICBO	VCB = -50 V, IE = 0			-0.1	µA
Collector-emitter cutoff current (Base open)	ICEO	VCE = -50 V, IB = 0			-0.5	µA
Emitter-base cutoff current (Collector open)	IEBO	VEB = -6 V, IC = 0			-0.1	mA
Forward current transfer ratio	hFE	VCE = -10 V, IC = -5 mA	80			-
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	-3.6			V
	Vi(off)	VCE = -5 V, IC = -100 µA			-0.8	V
Input resistance	R1		-30%	47	+30%	kΩ
Resistance ratio	R1/R2		0.8	1.0	1.2	-

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

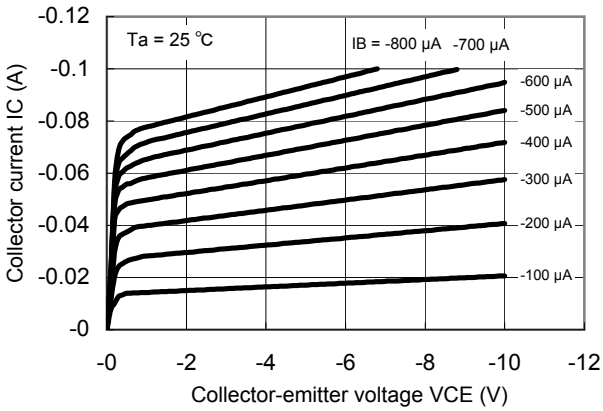
Established : 2009-10-29
Revised : 2014-01-22

Technical Data (reference)

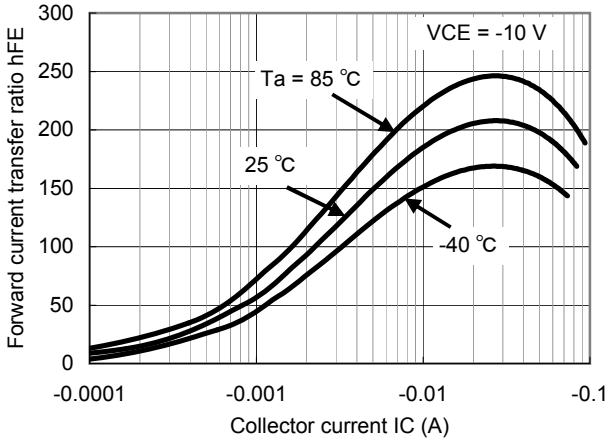
PT - Ta



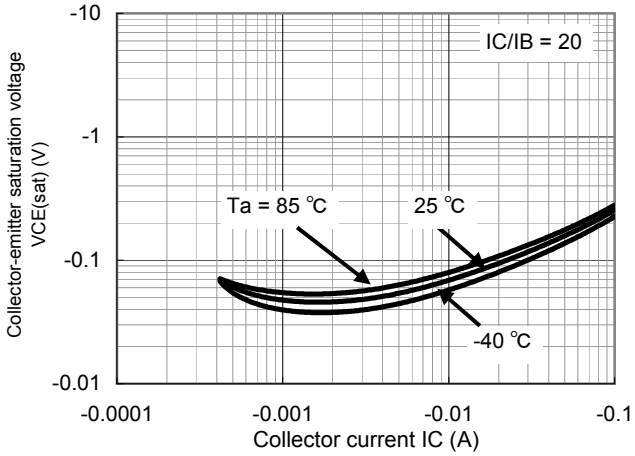
IC - VCE



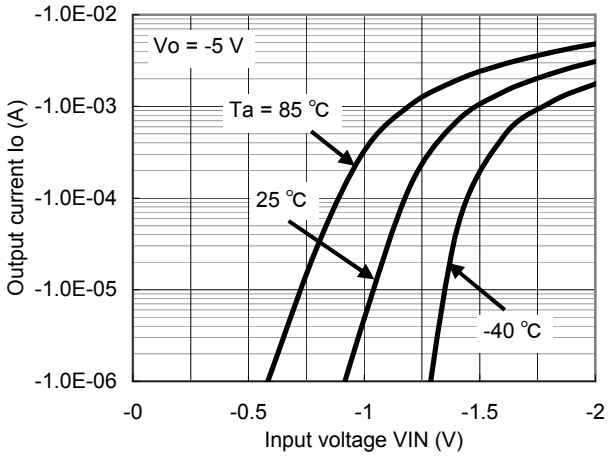
hFE - IC



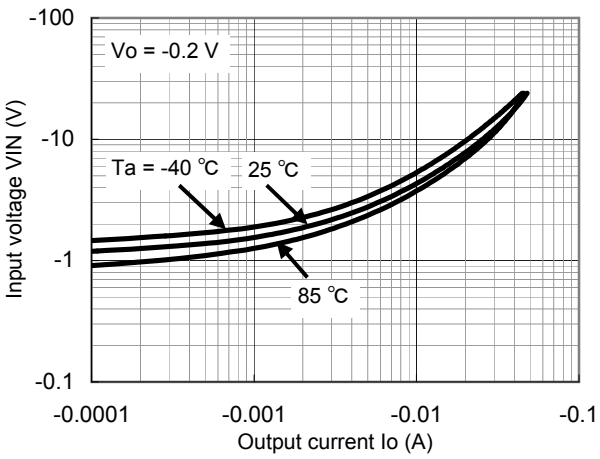
VCE(sat) - IC



Io - VIN



VIN - Io



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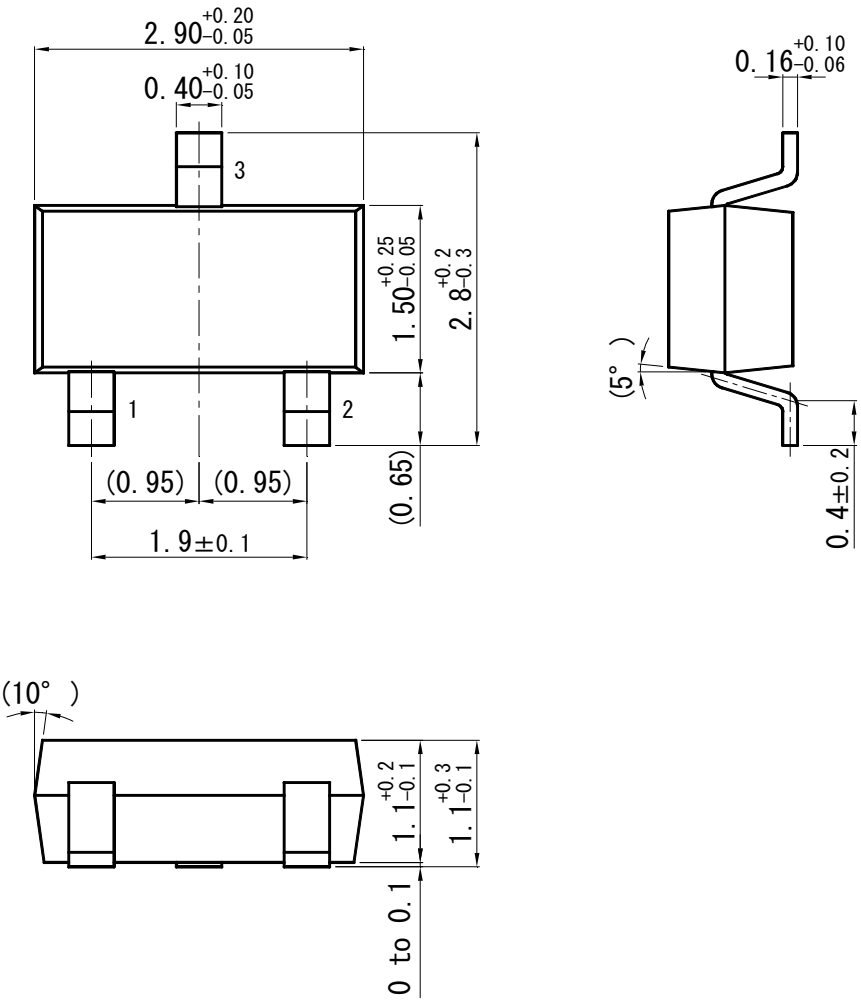
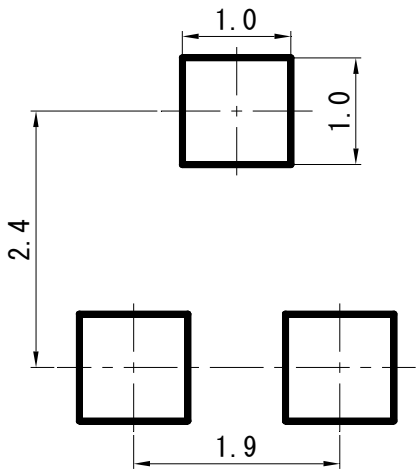
Mini3-G3-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



Established : 2009-10-29
Revised : 2014-01-22

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