Transistors with Built-in Resistor

DRA2123E0L

DRA2123E0L

Panasonic

Silicon PNP epitaxial planar type

For digital circuit Complementary to DRC2123E

■ Features

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

■ Marking Symbol: L2

■ Packaging

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

■ 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

Unit: mm 2.9 0.4 0.16 3 (0. 95) (0. 95) 1.9 1. Base 2. Emitter 3. Collector Panasonic Mini3-G3-B JEITA SC-59A TO-236AA/SOT-23 Code

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

Symbol	Conditions	Min	Тур	Max	Unit
VCBO	IC = -10 μA, IE = 0	-50			V
VCEO	IC = -2 mA, IB = 0	-50			V
ICBO	VCB = -50 V, IE = 0			-0.1	μA
ICEO	VCE = -50 V, IB = 0			-0.5	μA
IEBO	VEB = -6 V, IC = 0			-2.0	mA
hFE	VCE = -10 V, IC = -5 mA	6		20	•
VCE(sat)	IC = -10 mA, IB = -0.5 mA			-0.3	V
Vi(on)	VCE = -0.2 V, IC = -5 mA	1.8			V
Vi(off)	VCE = -5 V, IC = -100 μA			-0.8	V
R1		-30%	2.2	+30%	kΩ
R1/R2		8.0	1.0	1.2	-
)	VCBO VCEO ICBO ICEO IEBO hFE VCE(sat) Vi(on) Vi(off) R1	VCBO IC = -10 μA, IE = 0 VCEO IC = -2 mA, IB = 0 ICBO VCB = -50 V, IE = 0 ICEO VCE = -50 V, IB = 0 IEBO VEB = -6 V, IC = 0 hFE VCE = -10 V, IC = -5 mA VCE(sat) IC = -10 mA, IB = -0.5 mA Vi(on) VCE = -0.2 V, IC = -5 mA Vi(off) VCE = -5 V, IC = -100 μA R1	VCBO IC = -10 μA, IE = 0 -50 VCEO IC = -2 mA, IB = 0 -50 ICBO VCB = -50 V, IE = 0 ICEO VCE = -50 V, IB = 0 IEBO VEB = -6 V, IC = 0 hFE VCE = -10 V, IC = -5 mA 6 VCE(sat) IC = -10 mA, IB = -0.5 mA 1.8 Vi(on) VCE = -5 V, IC = -100 μA -30%	VCBO IC = -10 μA, IE = 0 -50 VCEO IC = -2 mA, IB = 0 -50 ICBO VCB = -50 V, IE = 0 -50 ICEO VCE = -50 V, IB = 0 -50 IEBO VEB = -6 V, IC = 0 -6 NFE VCE = -10 V, IC = -5 mA -6 VCE(sat) IC = -10 mA, IB = -0.5 mA -1.8 Vi(on) VCE = -5 V, IC = -100 μA -30% 2.2	VCBO IC = -10 μA, IE = 0 -50 VCEO IC = -2 mA, IB = 0 -50 ICBO VCB = -50 V, IE = 0 -0.1 ICEO VCE = -50 V, IB = 0 -0.5 IEBO VEB = -6 V, IC = 0 -2.0 hFE VCE = -10 V, IC = -5 mA 6 20 VCE(sat) IC = -10 mA, IB = -0.5 mA -0.3 Vi(on) VCE = -0.2 V, IC = -5 mA 1.8 Vi(off) VCE = -5 V, IC = -100 μA -0.8 R1 -30% 2.2 +30%

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

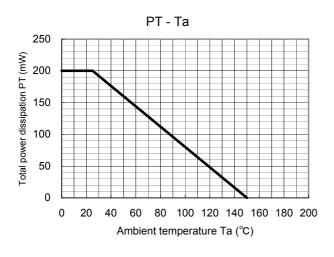
Established: 2009-10-29 Revised: 2014-01-22

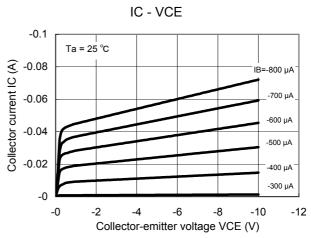
Transistors with Built-in Resistor

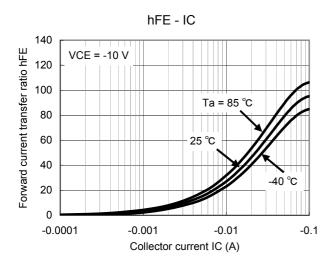
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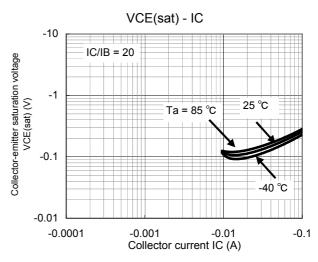
Panasonic

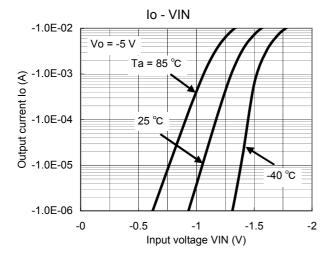
Technical Data (reference)

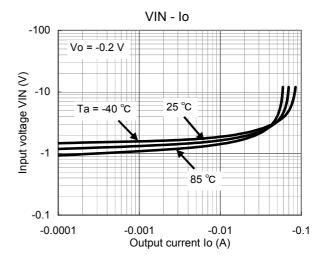












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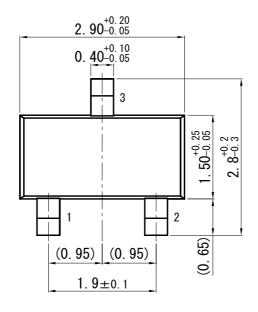
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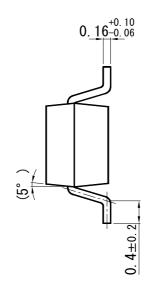
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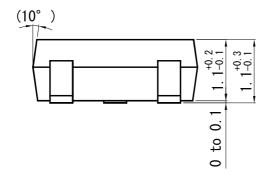
Mini3-G3-B

Panasonic

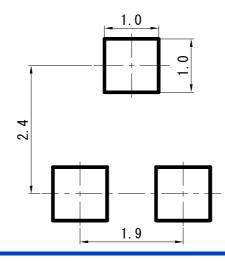
Unit: mm







■ Land Pattern (Reference) (Unit: mm)



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