Transistors with Built-in Resistor

DRA5L14Y0L

# **Panasonic**

# DRA5L14Y0L

# Silicon PNP epitaxial planar type

For digital circuits
DRA2L14Y 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: K4

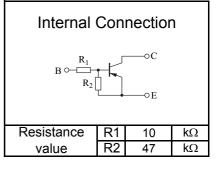
### ■ Packaging

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	-30	V
Collector-emitter voltage (Base open)	VCEO	-30	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

# Unit: mm 2. 0 0. 3 0. 13 (0. 65)(0. 65) 1. Base 2. Emitter 3. Collector Panasonic SMini3-F2-B JEITA SC-85 Code —



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

Established: 2010-04-22

: 2014-02-21

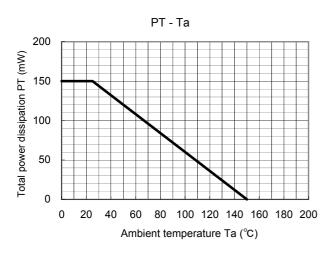
Revised

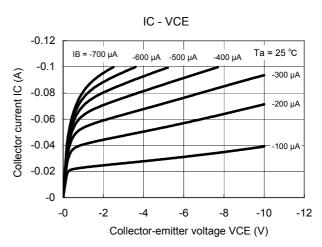
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	VCBO	IC = -10 μA, IE = 0	-30			V
Collector-emitter voltage (Base open)	VCEO	IC = -2 mA, IB = 0	-30			V
Collector-base cutoff current (Emitter open)	ICBO	VCB = -30 V, IE = 0			-0.1	μΑ
Collector-emitter cutoff current (Base open)	ICEO	VCE = -30 V, IB = 0			-0.5	μΑ
Emitter-base cutoff current (Collector open)	IEBO	VEB = -3 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 = -50 mA, IB = -0.33 mA		-0.6	-1.2	V
Input voltage	Vi(on)	VCE = -0.2 V, IC = -5 mA	-1.5			V
	Vi(off)	VCE = -5 V, IC = -100 μA			-0.5	V
Input resistance	R1		-30%	10	+30%	kΩ
Resistance ratio	R1/R2		0.16	0.213	0.27	-

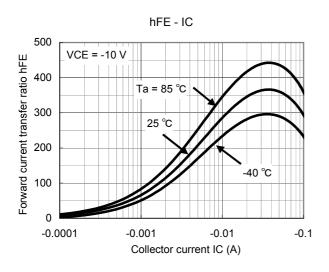
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 Measuring methods for transistors.

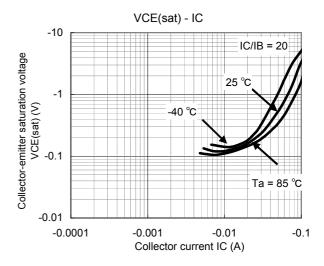
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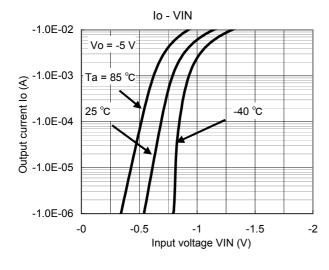
# Technical Data (reference)

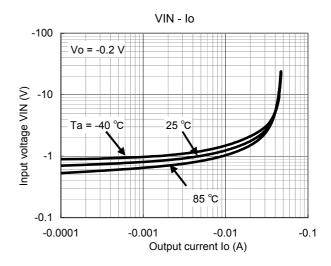












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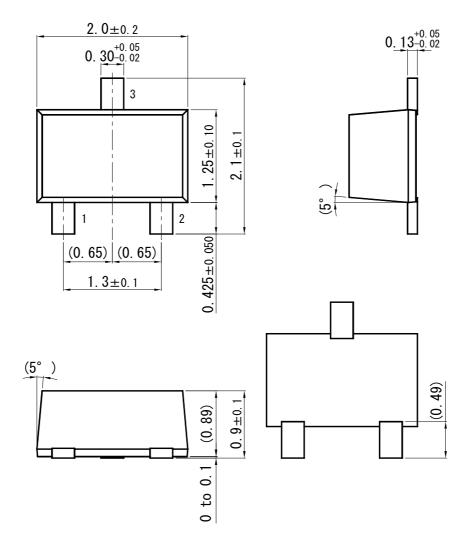
Transistors with Built-in Resistor

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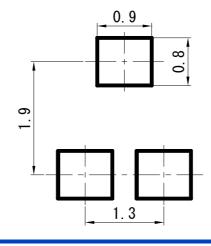
# SMini3-F2-B

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Unit: mm



# ■ Land Pattern (Reference) (Unit: mm)



Established: 2010-04-22 Revised: 2014-02-21

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