



## DRA2L14Y0L

Silicon PNP epitaxial planar type

For digital circuits

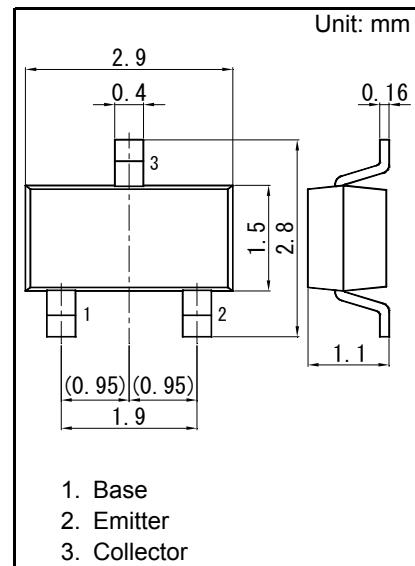
■ Features

- High forward current transfer ratio hFE
- Low collector-emitter saturation voltage  $V_{ce(sat)}$
- 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)

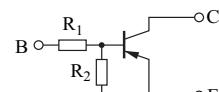


Panasonic	Mini3-G3-B
JEITA	SC-59A
Code	TO-236AA/SOT-23

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$

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	$PT$	200	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Operating ambient temperature	$T_{opr}$	-40 to +85	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

Internal Connection



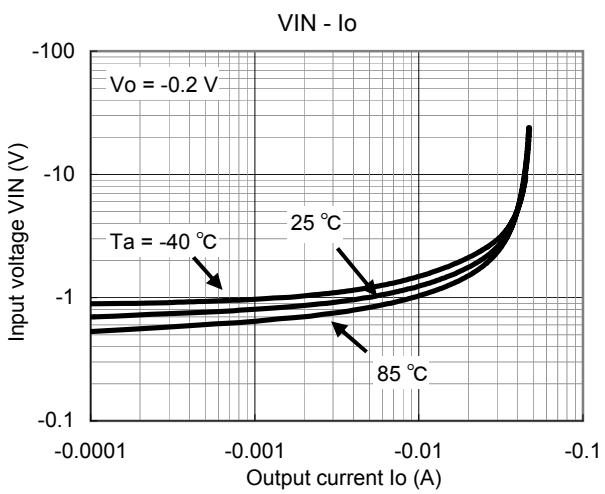
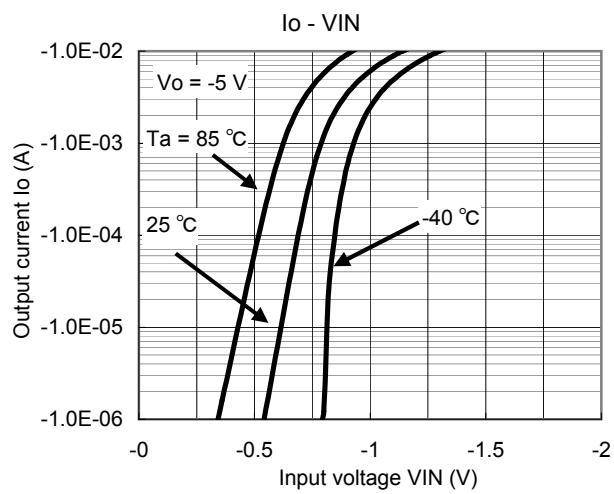
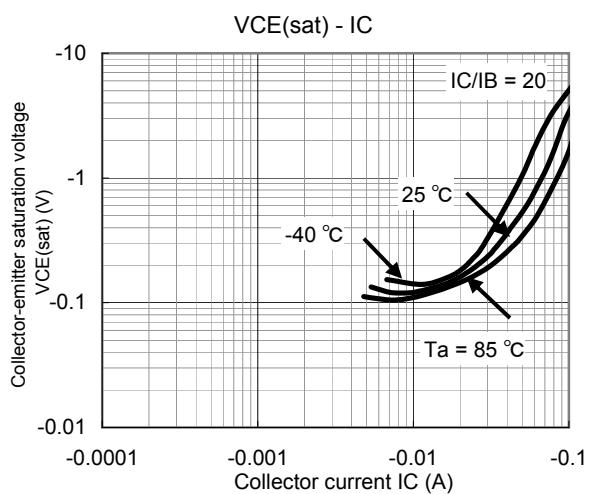
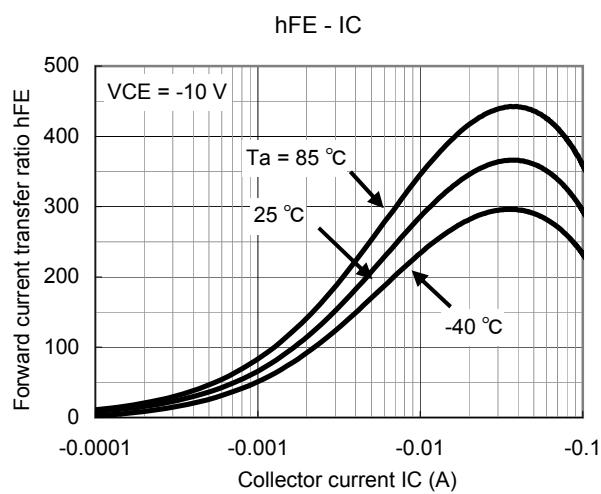
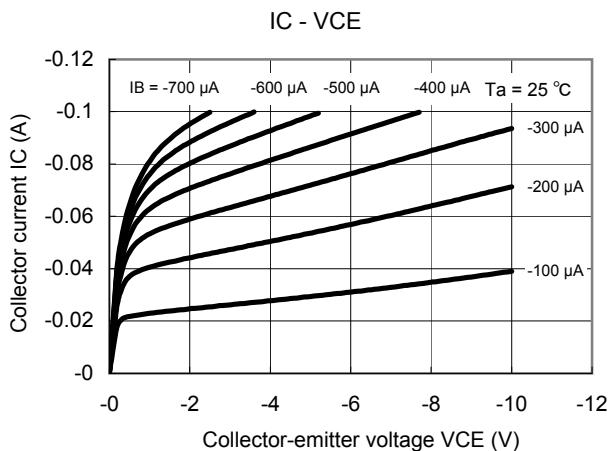
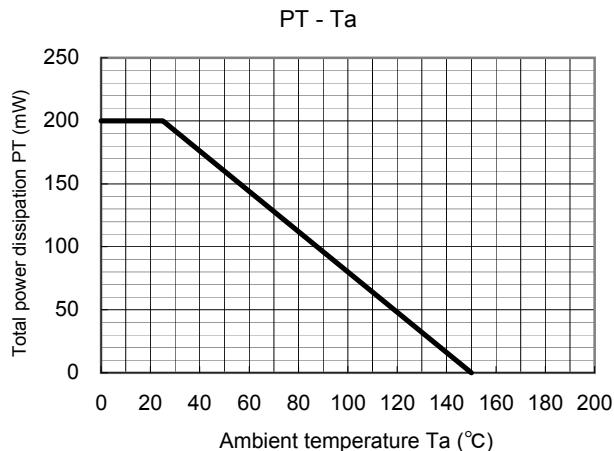
Resistance value	R1	10	k $\Omega$
	R2	47	k $\Omega$

■ Electrical Characteristics  $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	$VCBO$	$IC = -10 \mu\text{A}$ , $IE = 0$	-30			V
Collector-emitter voltage (Base open)	$VCEO$	$IC = -2 \text{ mA}$ , $IB = 0$	-30			V
Collector-base cutoff current (Emitter open)	$ICBO$	$VCB = -30 \text{ V}$ , $IE = 0$			-0.1	$\mu\text{A}$
Collector-emitter cutoff current (Base open)	$ICEO$	$VCE = -30 \text{ V}$ , $IB = 0$			-0.5	$\mu\text{A}$
Emitter-base cutoff current (Collector open)	$IEBO$	$VEB = -3 \text{ V}$ , $IC = 0$			-0.1	mA
Forward current transfer ratio	$hFE$	$VCE = -10 \text{ V}$ , $IC = -5 \text{ mA}$	80			-
Collector-emitter saturation voltage	$V_{ce(sat)}$	$IC = -50 \text{ mA}$ , $IB = -0.33 \text{ mA}$		-0.6	-1.2	V
Input voltage	$V_{i(on)}$	$VCE = -0.2 \text{ V}$ , $IC = -5 \text{ mA}$	-1.5			V
	$V_{i(off)}$	$VCE = -5 \text{ V}$ , $IC = -100 \mu\text{A}$			-0.5	V
Input resistance	R1		-30%	10	+30%	k $\Omega$
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.

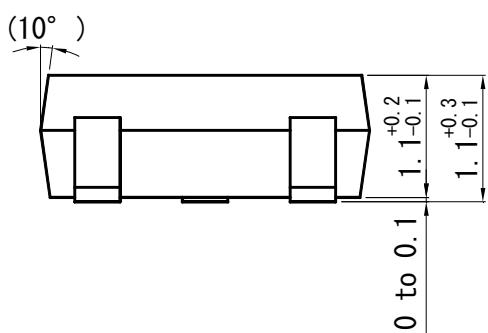
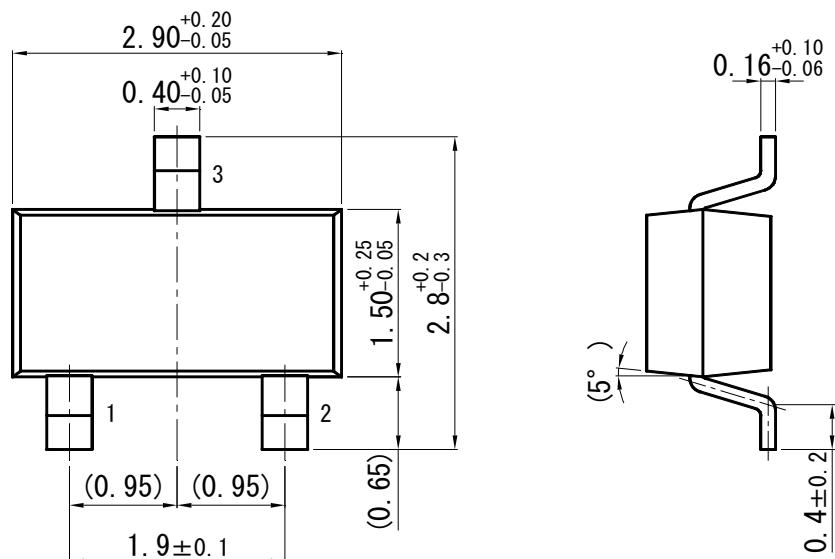
Technical Data ( reference )



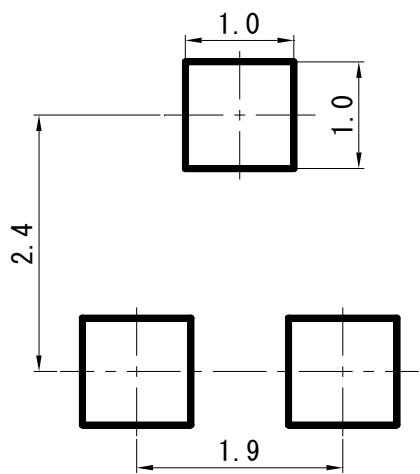
**Panasonic**

Mini3-G3-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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