



# DRA5113Z0L

Silicon PNP epitaxial planar type

For digital circuits

Complementary to DRC5113Z

DRA2113Z in SMini3 type package

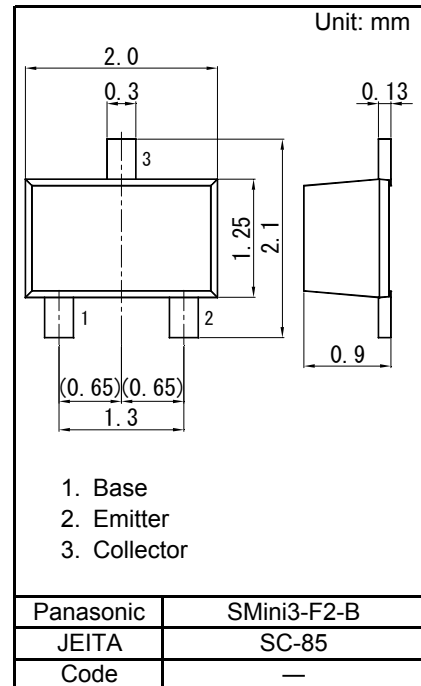
■ Features

- Low collector-emitter saturation voltage  $V_{ce(sat)}$
- Halogen-free / RoHS compliant  
 (EU RoHS / UL-94 V-0 / MSL:Level 1 compliant)

■ Marking Symbol: L1

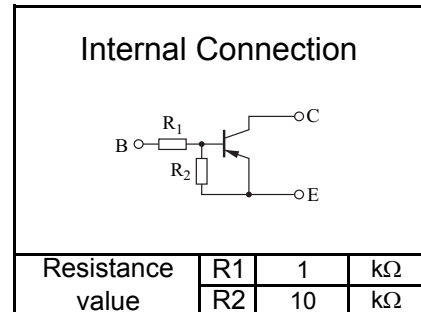
■ Packaging

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



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

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



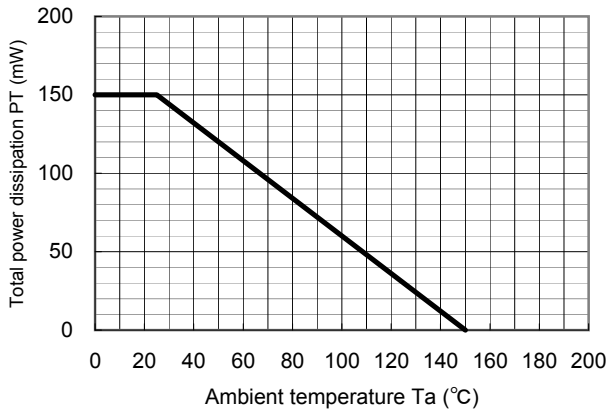
■ Electrical Characteristics  $T_a = 25\text{ }^\circ\text{C} \pm 3\text{ }^\circ\text{C}$

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			-1.5	mA
Forward current transfer ratio	hFE	VCE = -10 V, IC = -5 mA	30			-
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	-1.0			V
	Vi(off)	VCE = -5 V, IC = -100 μA			-0.4	V
Input resistance	R1		-30%	1	+30%	kΩ
Resistance ratio	R1/R2		0.08	0.1	0.12	-

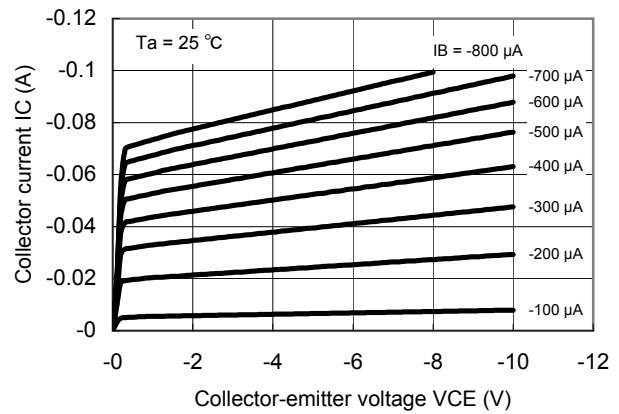
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 Measuring methods for transistors.

Technical Data ( reference )

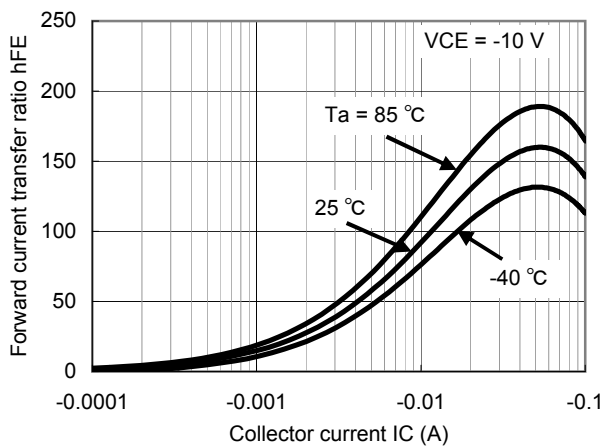
PT - Ta



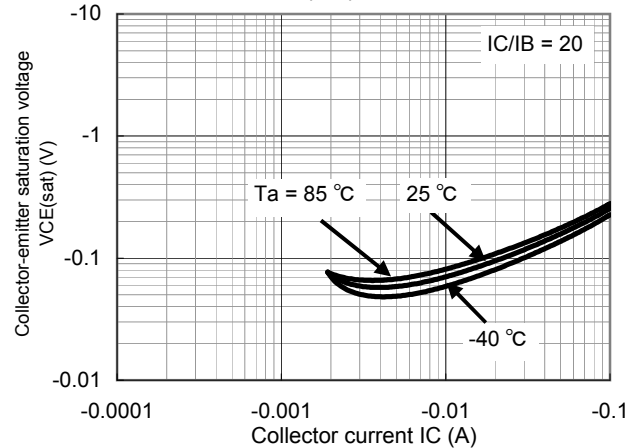
IC - VCE



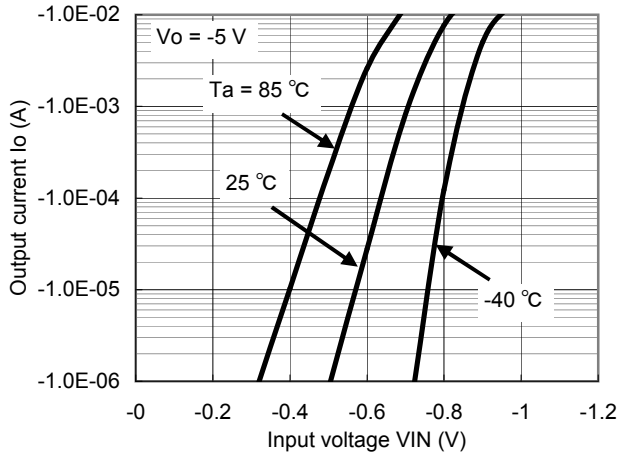
hFE - IC



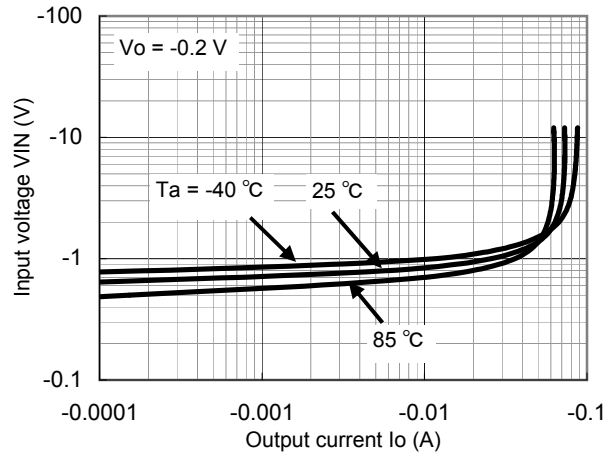
VCE(sat) - IC



Io - VIN



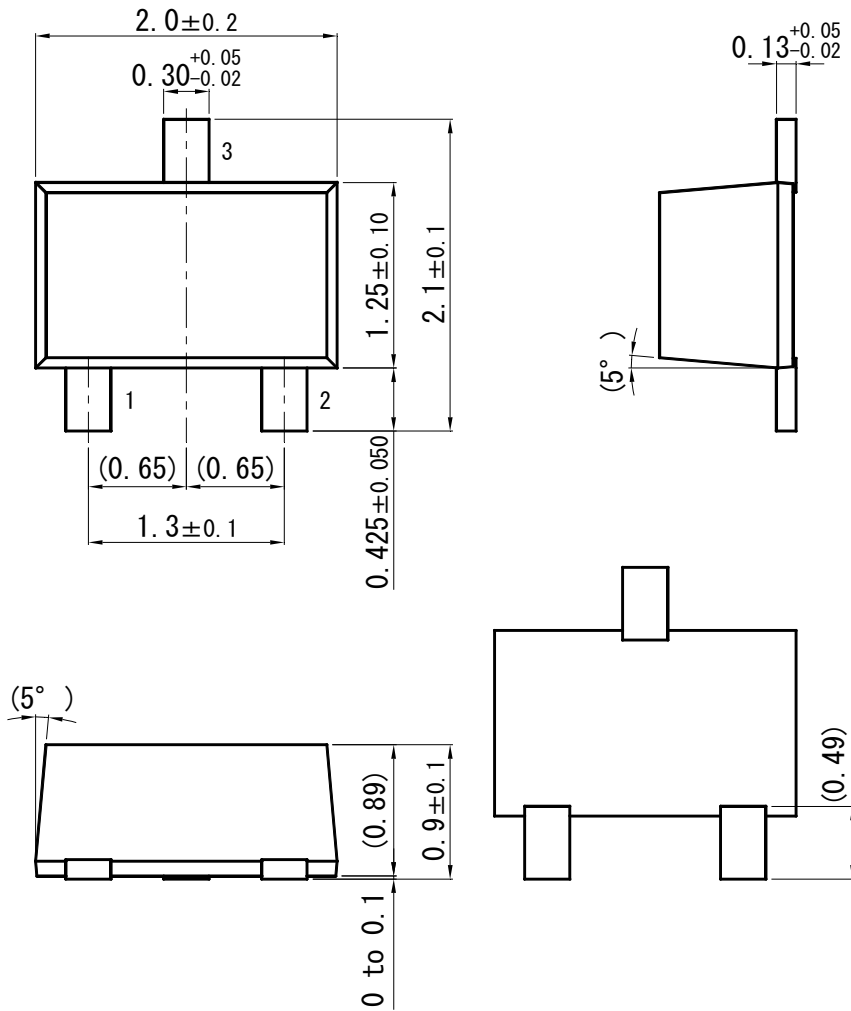
VIN - Io



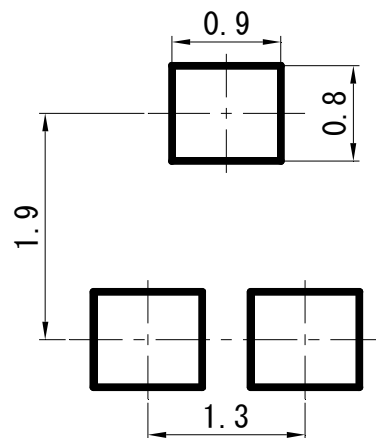


### SMini3-F2-B

Unit: mm



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



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