



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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DRC2113Z0L

Silicon NPN epitaxial planar type

For digital circuits

Complementary to DRA2113Z

■ Features

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

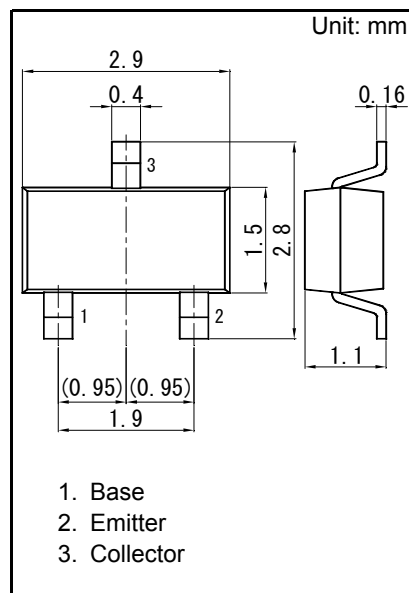
■ Marking Symbol: N1

■ Packaging

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

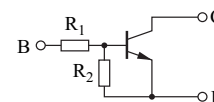
■ Absolute Maximum Ratings $T_a = 25\text{ }^\circ\text{C}$

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	200	mW
Junction temperature	Tj	150	°C
Operating ambient temperature	Topr	-40 to +85	°C
Storage temperature	Tstg	-55 to +150	°C



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

Internal Connection



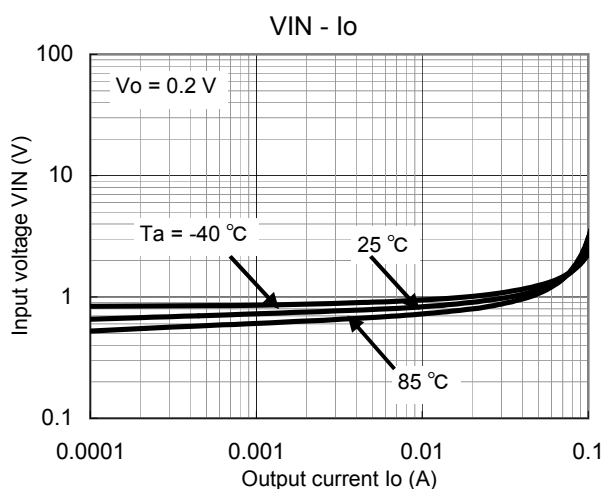
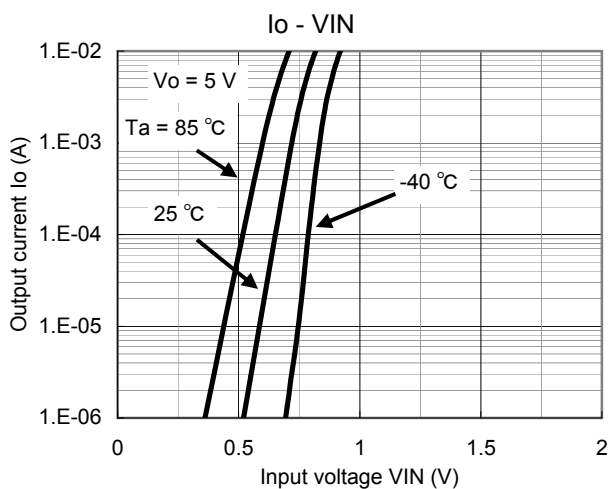
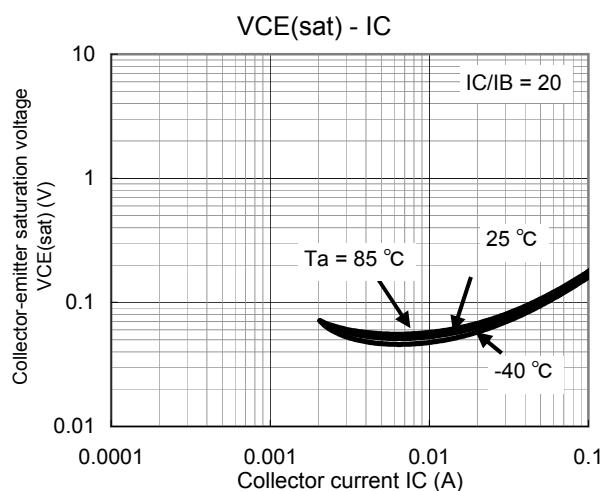
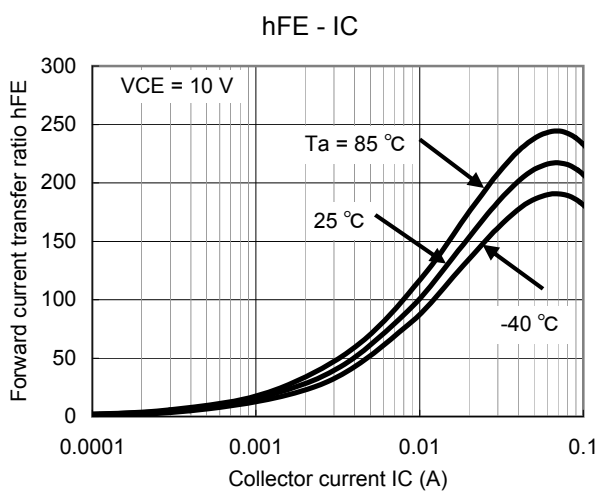
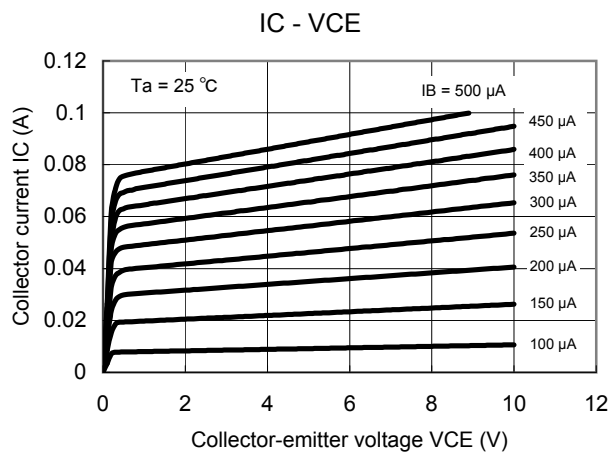
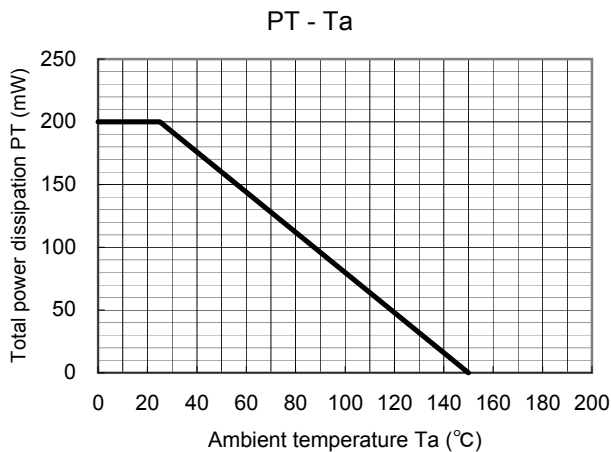
Resistance value	R1	1	kΩ
	R2	10	kΩ

■ 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.

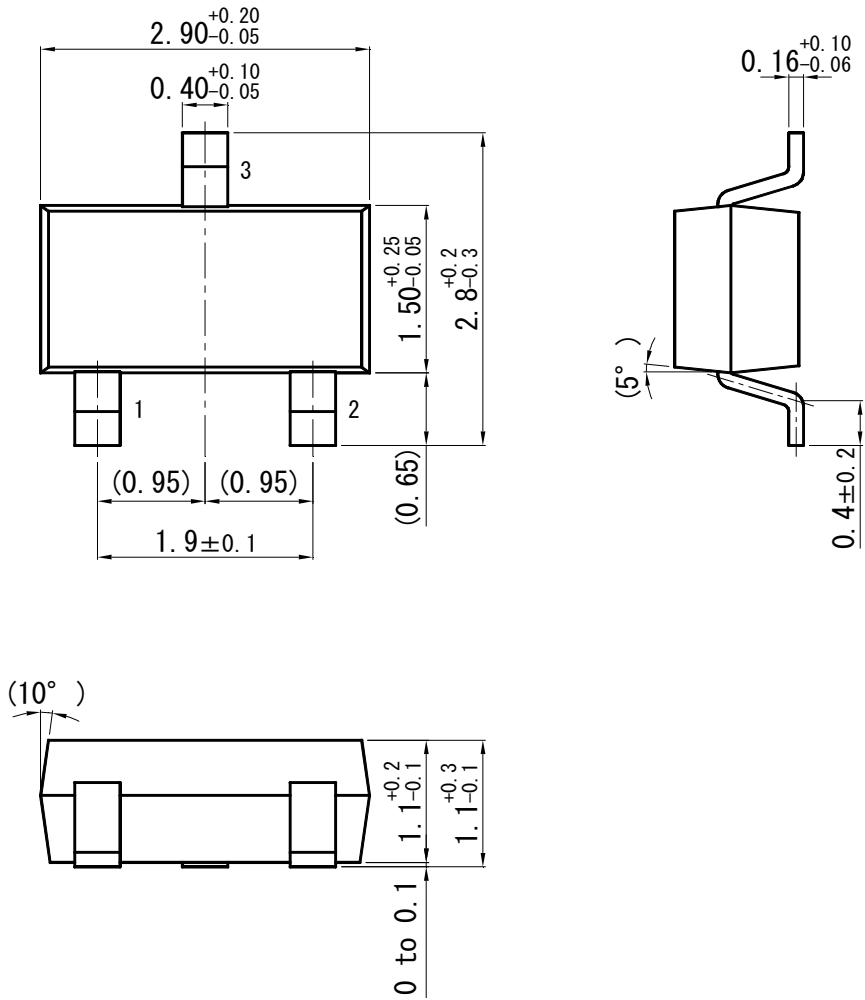
Technical Data (reference)



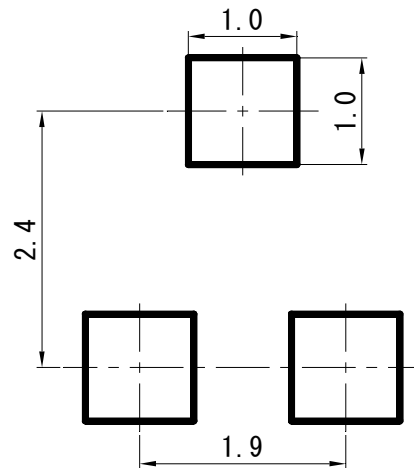


Mini3-G3-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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