

# DRA4113Z (Tentative)

## Silicon PNP epitaxial planar type

For digital circuits

■ Packaging

Radial type: 5000 pcs / carton

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

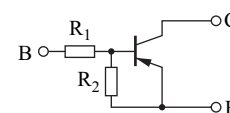
Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	$V_{CB0}$	-50	V
Collector-emitter voltage (Base open)	$V_{CE0}$	-50	V
Collector current	$I_C$	-100	mA
Total power dissipation	$P_T$	300	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

■ Package

- Code  
NS-B1-B
- Pin Name  
1: Emitter  
2: Collector  
3: Base

■ Marking Symbol: L1

■ Internal Connection



Resistance value	$R_1$	1	$k\Omega$
	$R_2$	10	10

■ 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)	$V_{CB0}$	$I_C = -10 \mu\text{A}, I_E = 0$	-50			V
Collector-emitter voltage (Base open)	$V_{CE0}$	$I_C = -2 \text{ mA}, I_B = 0$	-50			V
Collector-base cutoff current (Emitter open)	$I_{CB0}$	$V_{CB} = -50 \text{ V}, I_E = 0$			-0.1	$\mu\text{A}$
Collector-emitter cutoff current (Base open)	$I_{CE0}$	$V_{CE} = -50 \text{ V}, I_B = 0$			-0.5	$\mu\text{A}$
Emitter-base cutoff current (Collector open)	$I_{EBO}$	$V_{EB} = -6 \text{ V}, I_C = 0$			-1.5	mA
Forward current transfer ratio	$h_{FE}$	$V_{CE} = -10 \text{ V}, I_C = -5 \text{ mA}$	30			—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -10 \text{ mA}, I_B = -0.5 \text{ mA}$			-0.25	V
Input voltage (ON)	$V_{I(on)}$	$V_{CE} = -0.2 \text{ V}, I_C = -5 \text{ mA}$	-1.0			V
Input voltage (OFF)	$V_{I(off)}$	$V_{CE} = -5 \text{ V}, I_C = -100 \mu\text{A}$			-0.4	V
Input resistance	$R_1$		-30%	1	+30%	$k\Omega$
Resistance ratio	$R_1 / R_2$		0.08	0.10	0.12	—

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



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