

DMA56109

Silicon PNP epitaxial planar type

For digital circuits

DMA26109 in SMini5 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: P1

■ Basic Part Number

Dual DRA2113Z (Common emitter)

■ Packaging

DMA561090R Embossed type (Thermo-compression sealing): 3 000 pcs / reel (standard)

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

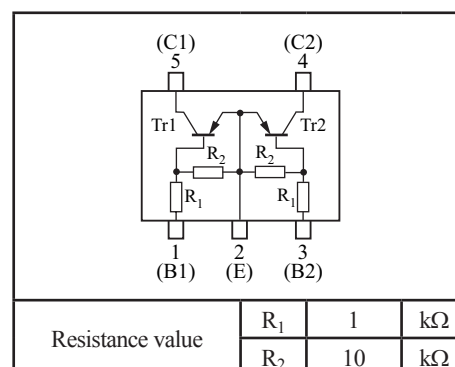
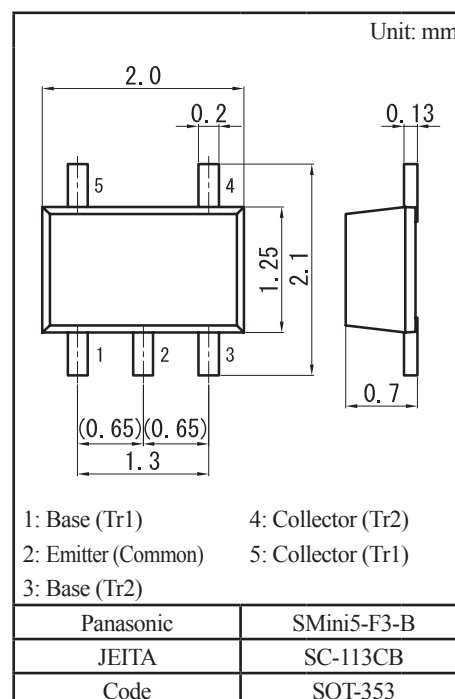
Parameter		Symbol	Rating	Unit
Tr1 Tr2	Collector-base voltage (Emitter open)	V_{CBO}	-50	V
	Collector-emitter voltage (Base open)	V_{CEO}	-50	V
	Collector current	I_C	-100	mA
Overall	Total power dissipation	P_T	150	mW
	Junction temperature	T_j	150	$^\circ\text{C}$
	Operating ambient temperature	T_{opr}	-40 to +85	$^\circ\text{C}$
	Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

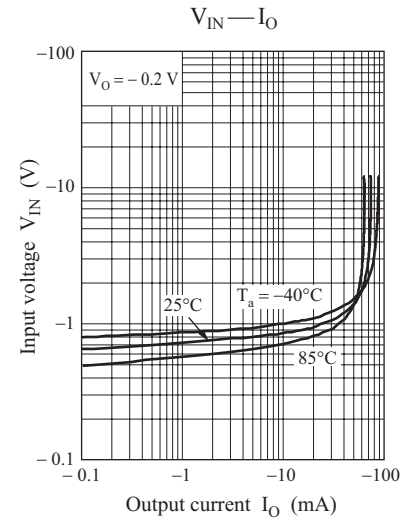
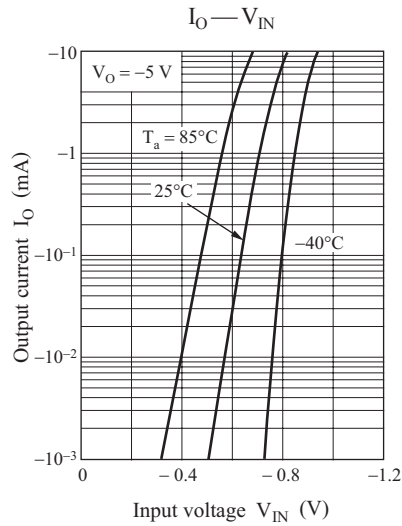
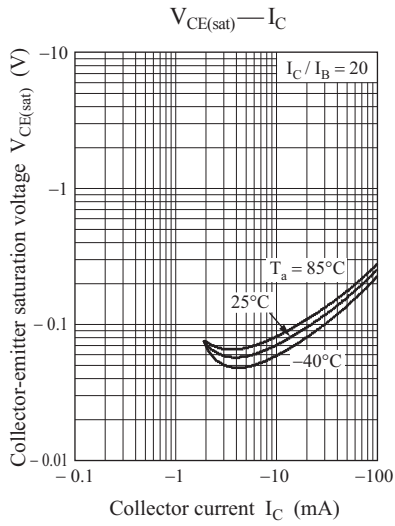
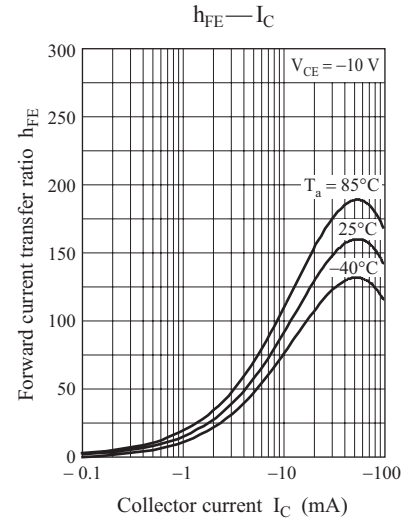
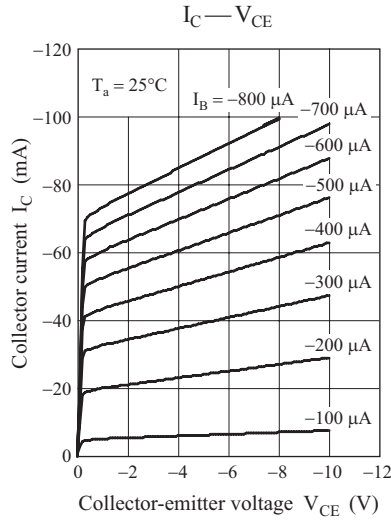
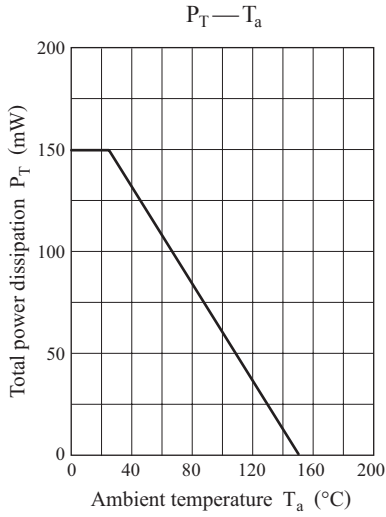
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = -10 \mu\text{A}, I_E = 0$	-50			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = -2 \text{mA}, I_B = 0$	-50			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = -50 \text{V}, I_E = 0$			-0.1	μA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = -50 \text{V}, I_B = 0$			-0.5	μA
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			—
h_{FE} ratio *1	h_{FE} (Small/Large)	$V_{CE} = -10 \text{V}, I_C = -5 \text{mA}$	0.50	0.99		—
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 Ω
Resistance ratio	R_1 / R_2		0.08	0.10	0.12	—

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

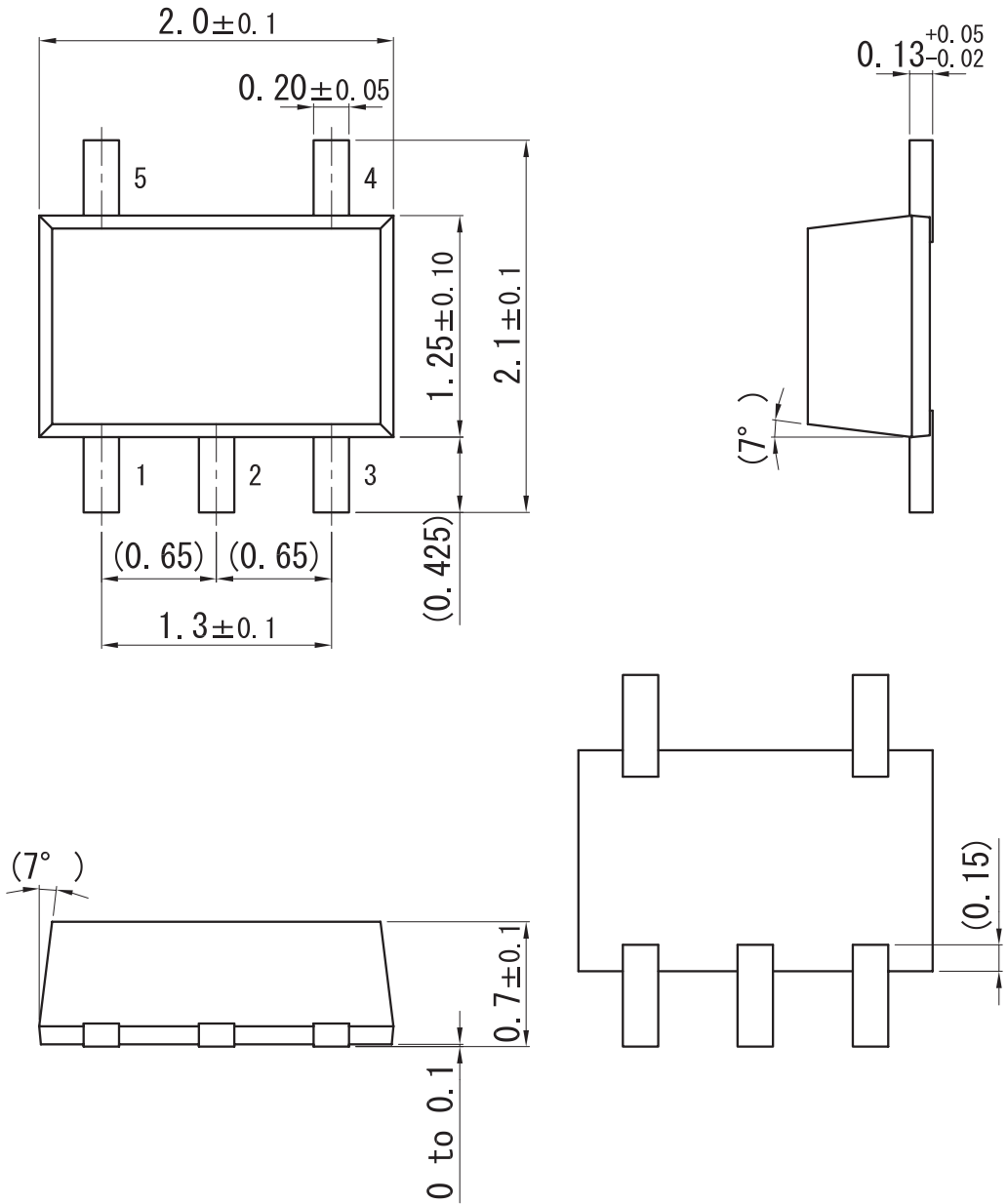
2. *1: Ratio between 2 elements





SMini5-F3-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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