

DRC5143X

Silicon NPN epitaxial planar type

For digital circuits

Complementary to DRA5143X

■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Contributes to miniaturization of sets, reduction of component count.
- Eco-friendly Halogen-free package

■ Packaging

Embossed type (Thermo-compression sealing): 3000 pcs / reel (standard)

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

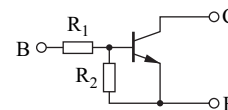
Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	50	V
Collector-emitter voltage (Base open)	V_{CEO}	50	V
Collector current	I_C	100	mA
Total power dissipation	P_T	150	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

■ Package

- Code
SMini3-F2-B
- Pin Name
1: Base
2: Emitter
3: Collector

■ Marking Symbol: N6

■ Internal Connection

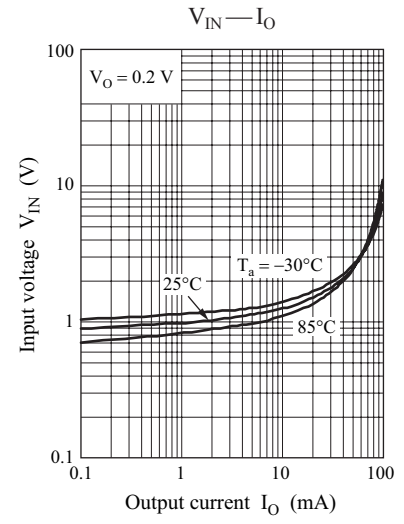
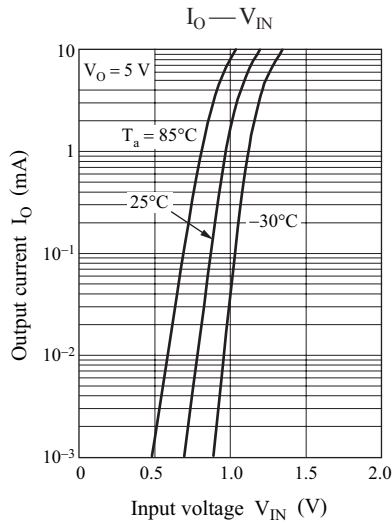
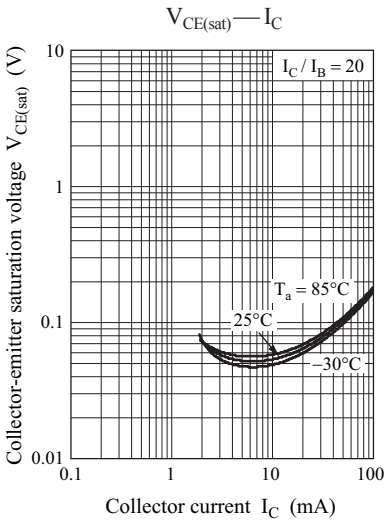
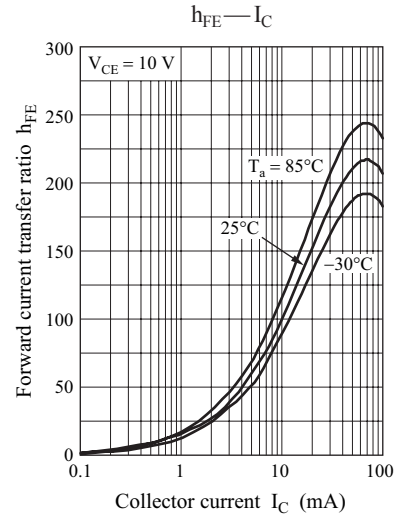
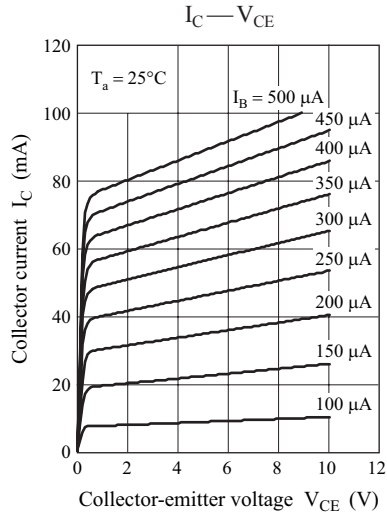
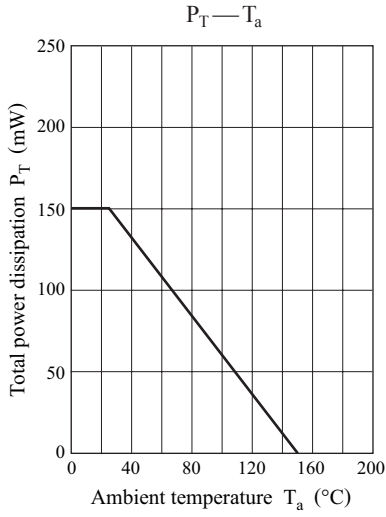


Resistance value	R_1	4.7	$\text{k}\Omega$
	R_2	10	$\text{k}\Omega$

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

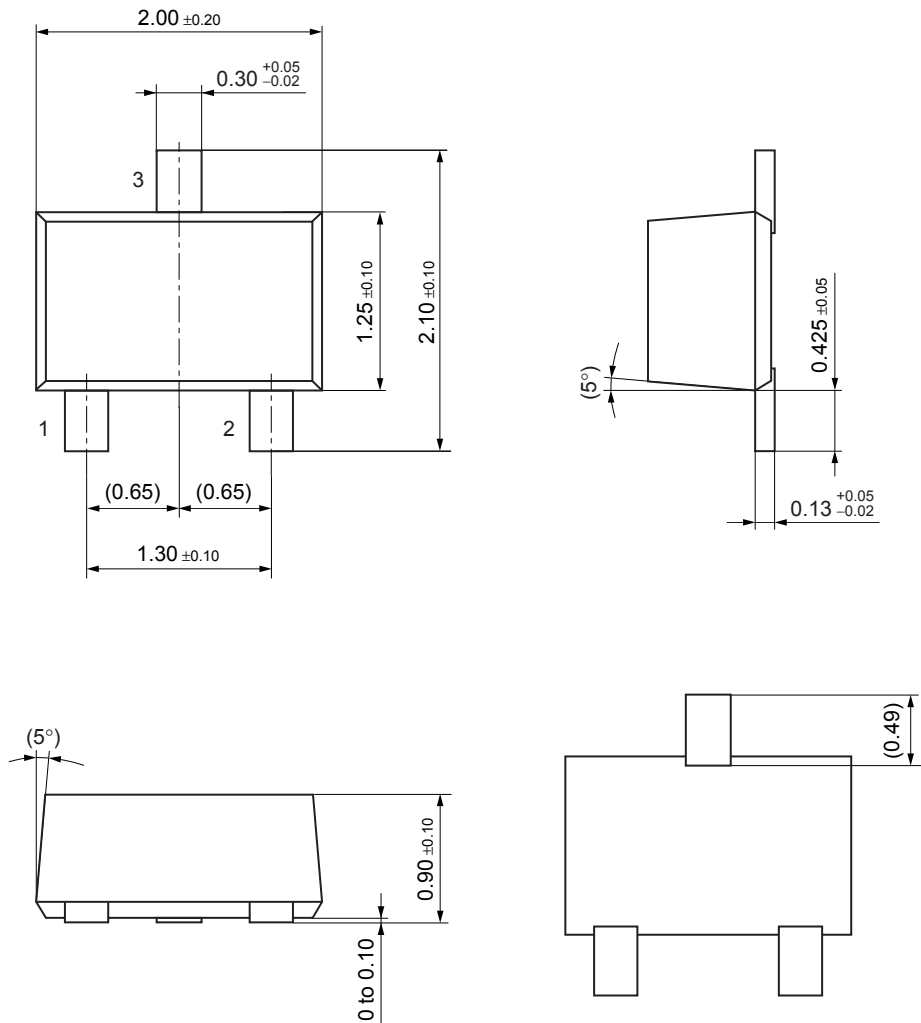
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = 10 \mu\text{A}, I_E = 0$	50			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 2 \text{mA}, I_B = 0$	50			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 50 \text{V}, I_E = 0$			0.1	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}	$V_{EB} = 6 \text{V}, I_C = 0$			1.0	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
Output voltage high-level	V_{OH}	$V_{CC} = 5 \text{V}, V_B = 0.5 \text{V}, R_L = 1 \text{k}\Omega$	4.9			V
Output voltage low-level	V_{OL}	$V_{CC} = 5 \text{V}, V_B = 2.5 \text{V}, R_L = 1 \text{k}\Omega$			0.2	V
Input resistance	R_1		-30%	4.7	+30%	$\text{k}\Omega$
Resistance ratio	R_1 / R_2		0.37	0.47	0.57	—

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



SMini3-F2-B

Unit: mm



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