

# DRC5144T

## Silicon NPN epitaxial planar type

For digital circuits

Complementary to DRA5144T

### ■ Features

- 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 $T_a = 25^\circ\text{C}$

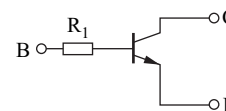
Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	$V_{\text{CBO}}$	50	V
Collector-emitter voltage (Base open)	$V_{\text{CEO}}$	50	V
Collector current	$I_{\text{C}}$	100	mA
Total power dissipation	$P_{\text{T}}$	150	mW
Junction temperature	$T_{\text{j}}$	150	$^\circ\text{C}$
Storage temperature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

### ■ Package

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

### ■ Marking Symbol: NP

### ■ Internal Connection

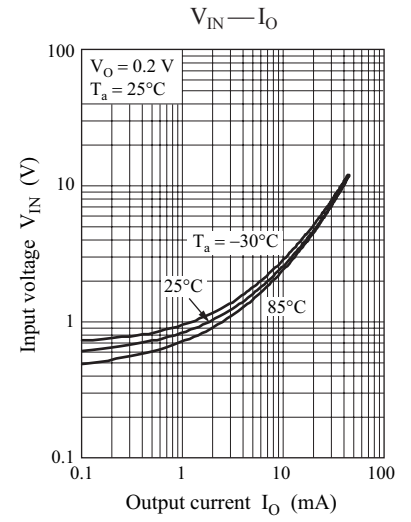
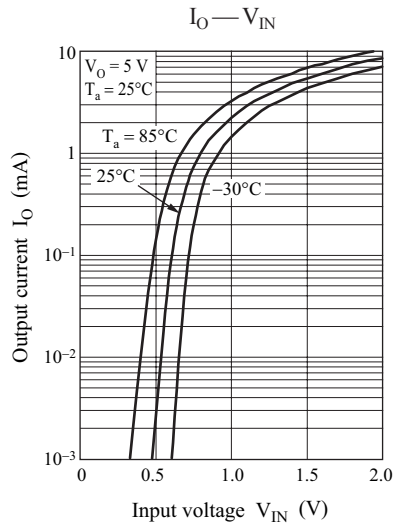
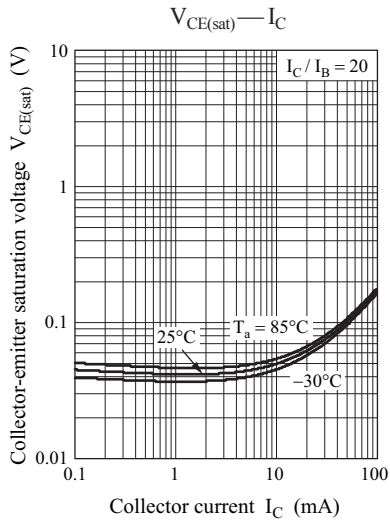
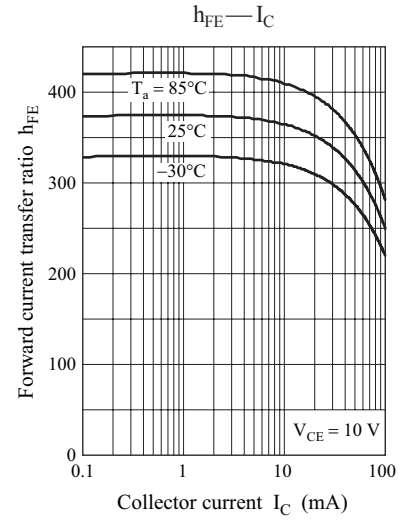
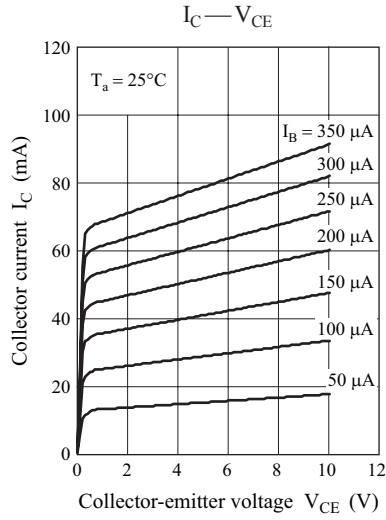
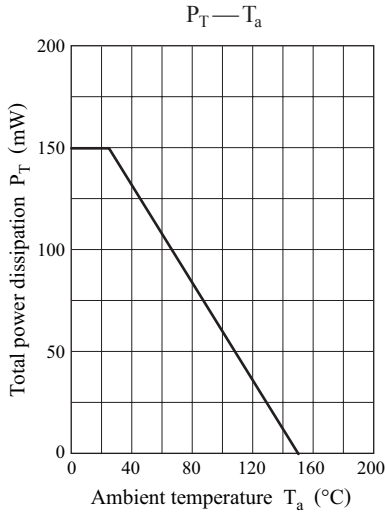


Resistance value	$R_1$	47	$\text{k}\Omega$
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### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

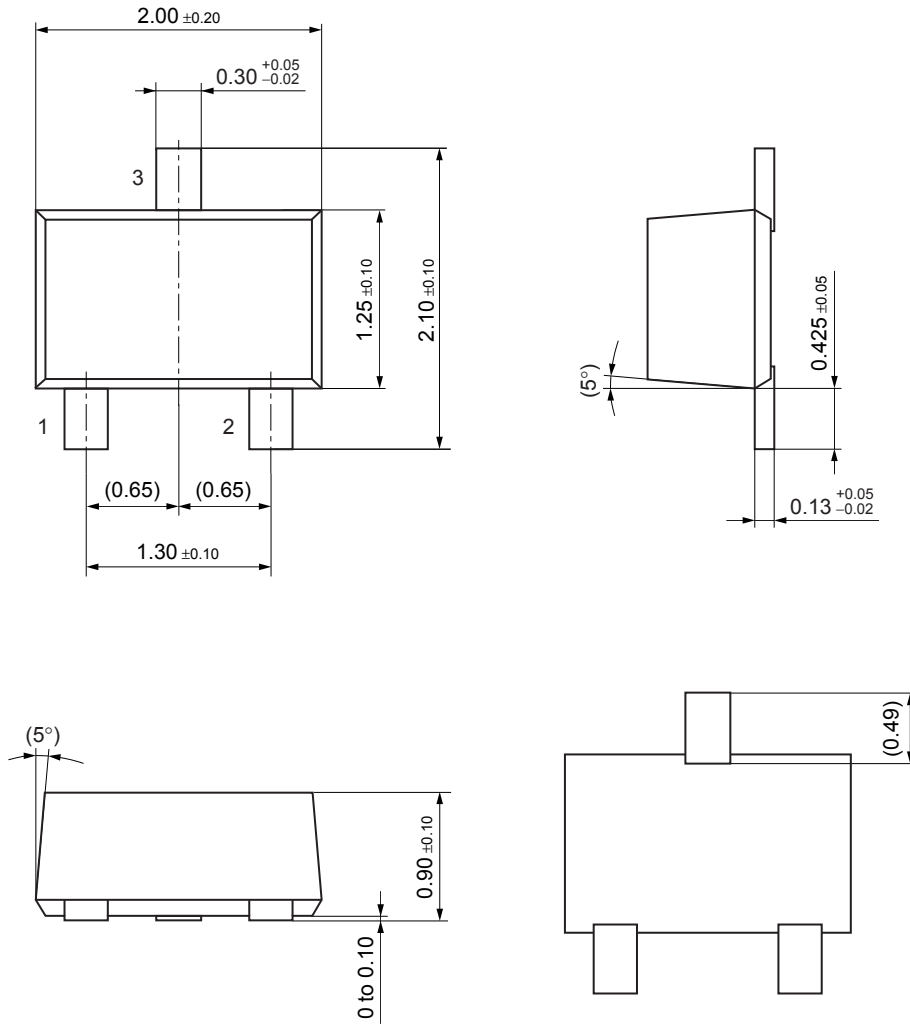
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	$V_{\text{CBO}}$	$I_{\text{C}} = 10 \mu\text{A}, I_{\text{E}} = 0$	50			V
Collector-emitter voltage (Base open)	$V_{\text{CEO}}$	$I_{\text{C}} = 2 \text{mA}, I_{\text{B}} = 0$	50			V
Collector-base cutoff current (Emitter open)	$I_{\text{CBO}}$	$V_{\text{CB}} = 50 \text{V}, I_{\text{E}} = 0$			0.1	$\mu\text{A}$
Collector-emitter cutoff current (Base open)	$I_{\text{CEO}}$	$V_{\text{CE}} = 50 \text{V}, I_{\text{B}} = 0$			0.5	$\mu\text{A}$
Emitter-base cutoff current (Collector open)	$I_{\text{EBO}}$	$V_{\text{EB}} = 6 \text{V}, I_{\text{C}} = 0$			0.01	mA
Forward current transfer ratio	$h_{\text{FE}}$	$V_{\text{CE}} = 10 \text{V}, I_{\text{C}} = 5 \text{mA}$	160		460	—
Collector-emitter saturation voltage	$V_{\text{CE(sat)}}$	$I_{\text{C}} = 10 \text{mA}, I_{\text{B}} = 0.5 \text{mA}$			0.25	V
Input voltage (ON)	$V_{\text{I(on)}}$	$V_{\text{CE}} = 0.2 \text{V}, I_{\text{C}} = 5 \text{mA}$	2.8			V
Input voltage (OFF)	$V_{\text{I(off)}}$	$V_{\text{CE}} = 5 \text{V}, I_{\text{C}} = 100 \mu\text{A}$			0.4	V
Input resistance	$R_1$		-30%	47	+30%	$\text{k}\Omega$

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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