

# DRC2643T

## Silicon NPN epitaxial planar type

For digital circuits

### ■ 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 $T_a = 25^\circ\text{C}$

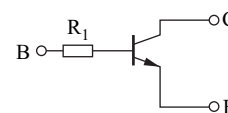
Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	$V_{CBO}$	30	V
Collector-emitter voltage (Base open)	$V_{CEO}$	20	V
Emitter-base voltage (Collector open)	$V_{EBO}$	5	V
Collector current	$I_C$	600	mA
Total power dissipation	$P_T$	200	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

### ■ Package

- Code  
Mini3-G3-B
- Pin Name  
1: Base  
2: Emitter  
3: Collector

### ■ Marking Symbol: TU

### ■ Internal Connection



Resistance value	$R_1$	4.7	k $\Omega$
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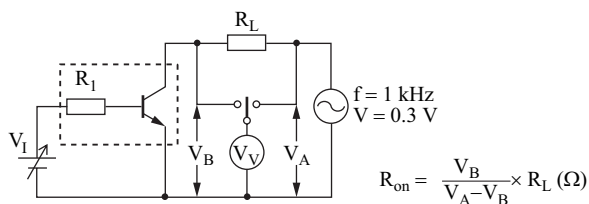
### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

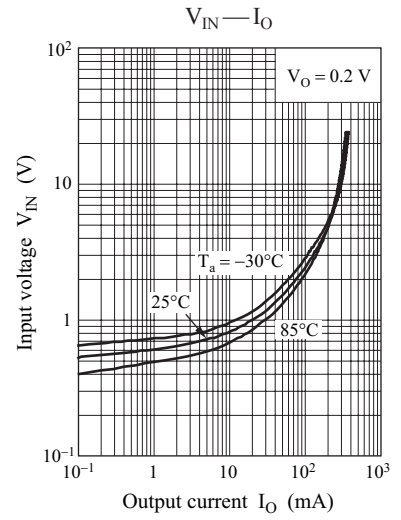
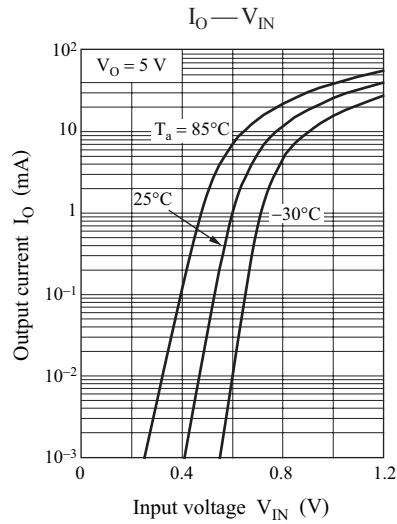
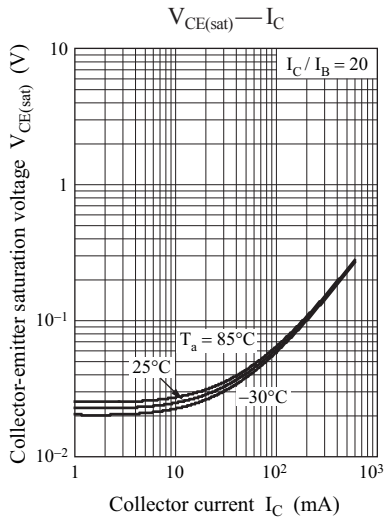
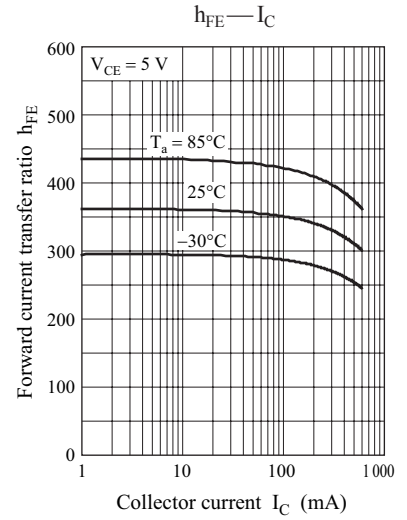
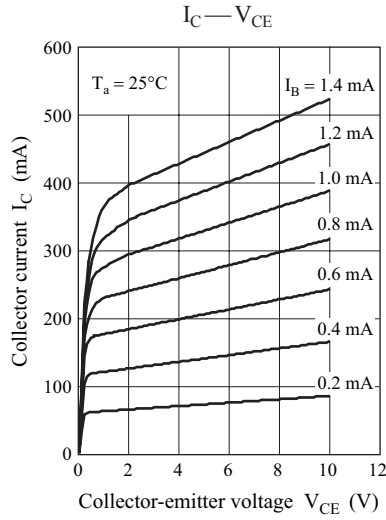
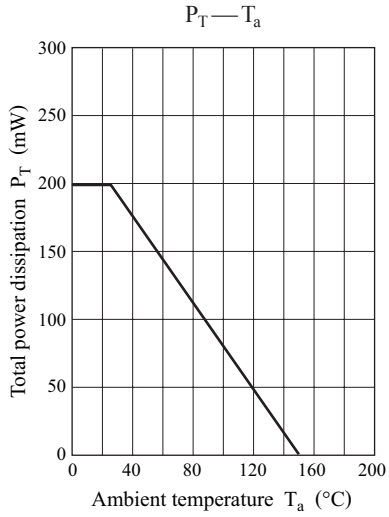
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	$V_{CBO}$	$I_C = 10 \mu\text{A}, I_E = 0$	30			V
Collector-emitter voltage (Base open)	$V_{CEO}$	$I_C = 1 \text{ mA}, I_B = 0$	20			V
Emitter-base voltage (Collector open)	$V_{EBO}$	$I_E = 10 \mu\text{A}, I_C = 0$	5			V
Collector-base cutoff current (Emitter open)	$I_{CBO}$	$V_{CB} = 30 \text{ V}, I_E = 0$			1	$\mu\text{A}$
Emitter-base cutoff current (Collector open)	$I_{EBO}$	$V_{EB} = 5 \text{ V}, I_C = 0$			1	$\mu\text{A}$
Forward current transfer ratio *1	$h_{FE}$	$V_{CE} = 5 \text{ V}, I_C = 50 \text{ mA}$	100		600	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 50 \text{ mA}, I_B = 2.5 \text{ mA}$			80	mV
Input resistance	$R_1$		-30%	4.7	+30%	k $\Omega$
ON resistance *2	$R_{on}$	$V_1 = 7 \text{ V}, R_L = 1 \text{ k}\Omega, f = 1 \text{ kHz}$		1.4		—

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

2. \*1: Pulse measurement

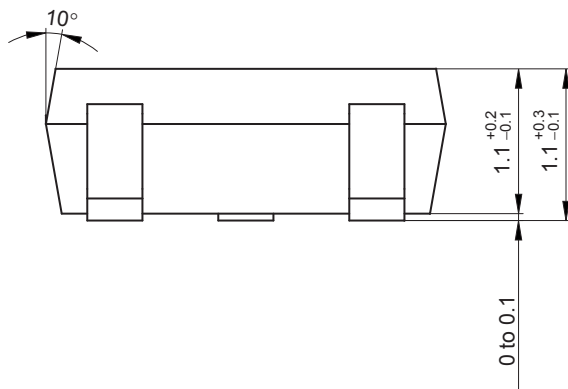
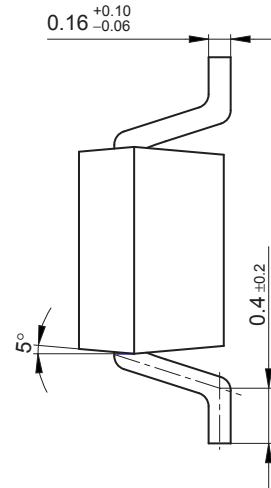
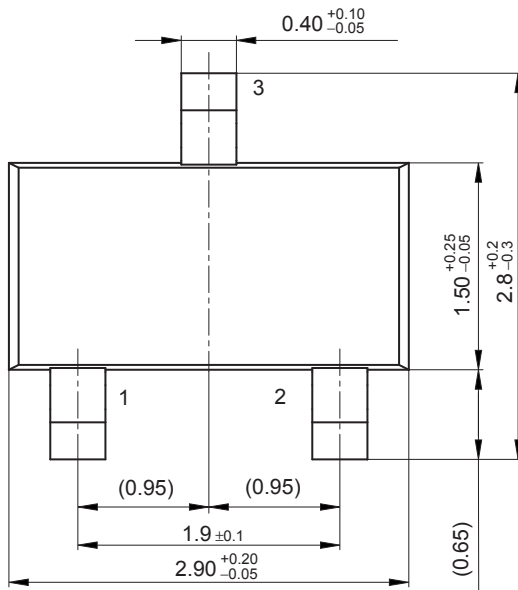
\*2:  $R_{on}$  measurement circuit





Mini3-G3-B

Unit: mm



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