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Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





# DRC5643T0L

Silicon NPN epitaxial planar type

For digital circuits / Muting  
 DRC2643T in SMini3 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)

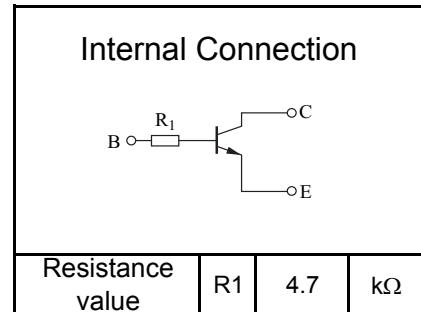
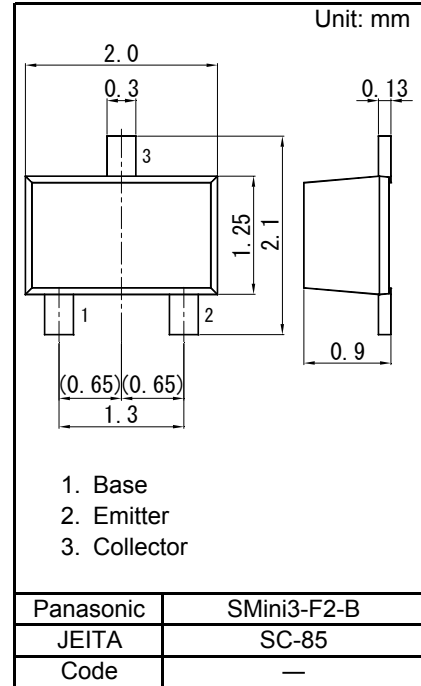
■ Marking Symbol: TU

■ Packaging

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

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

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	VCBO	30	V
Collector-emitter voltage (Base open)	VCEO	20	V
Emitter-base voltage (Collector open)	VEBO	5	V
Collector current	IC	600	mA
Total power dissipation	PT	150	mW
Junction temperature	Tj	150	°C
Operating ambient temperature	Topr	-40 to +85	°C
Storage temperature	Tstg	-55 to +150	°C





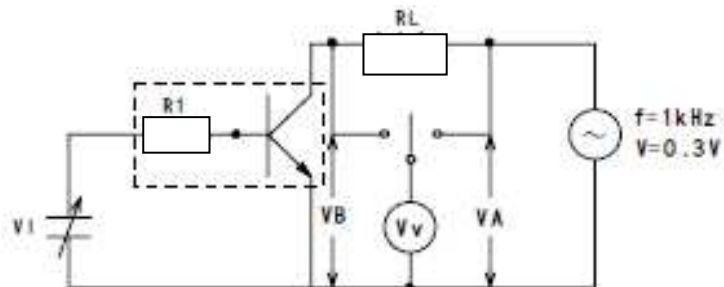
■ Electrical Characteristics Ta = 25 °C ± 3 °C

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	VCBO	IC = 10 μA, IE = 0	30			V
Collector-emitter voltage (Base open)	VCEO	IC = 1 mA, IB = 0	20			V
Emitter-base voltage (Collector open)	VEBO	IE = 10 μA, IC = 0	5			V
Collector-base cutoff current (Emitter open)	ICBO	VCB = 30 V, IE = 0			1	μA
Emitter-base cutoff current (Collector open)	IEBO	VEB = 5 V, IC = 0			1	μA
Forward current transfer ratio *1	hFE	VCE = 5 V, IC = 50 mA	100		600	-
Collector-emitter saturation voltage	VCE(sat)	IC = 50 mA, IB = 2.5 mA			80	mV
Input resistance	R1		-30%	4.7	+30%	kΩ
On resistanc *2	Ron	VI = 7 V, RL = 1 kΩ, f = 1 kHz		1.4		Ω

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

2. \*1 Pulse Test

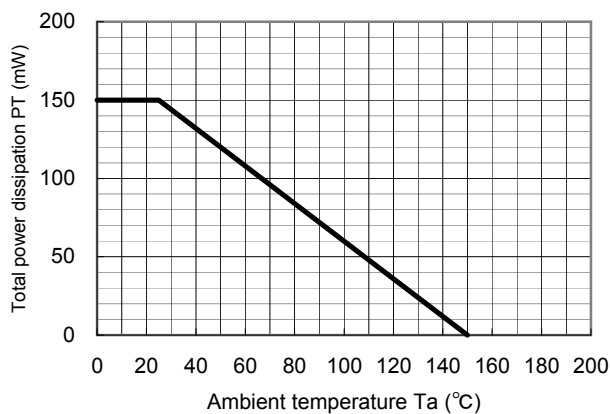
\*2 On resistance test circuit



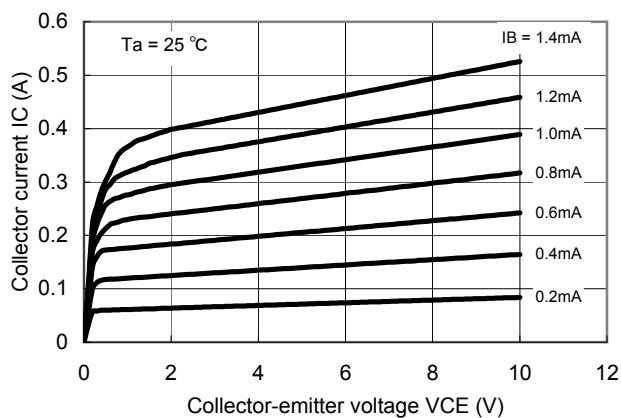
$$R_{on} = \frac{V_B}{V_A - V_B} \times R_L \quad (\Omega)$$

Technical Data ( reference )

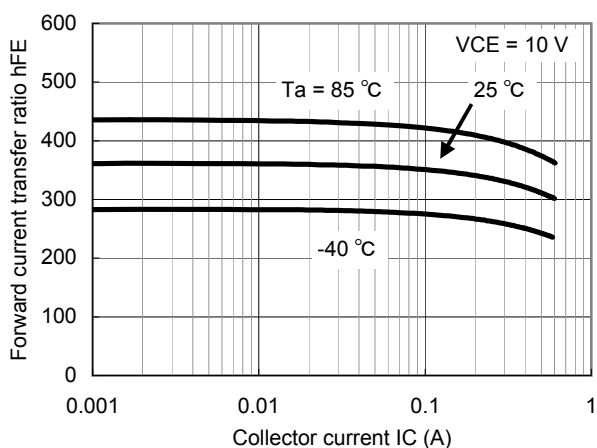
PT - Ta



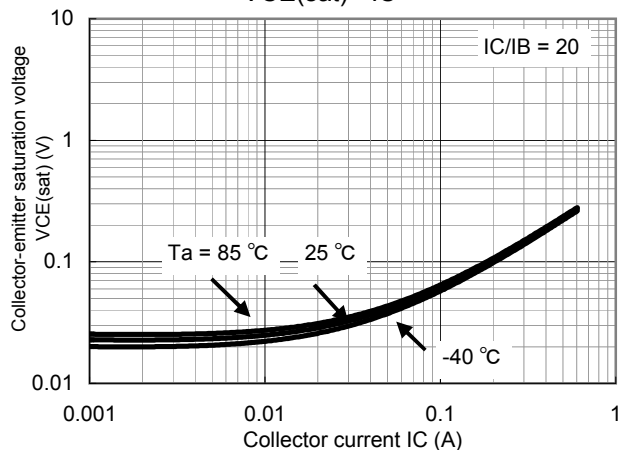
IC - VCE



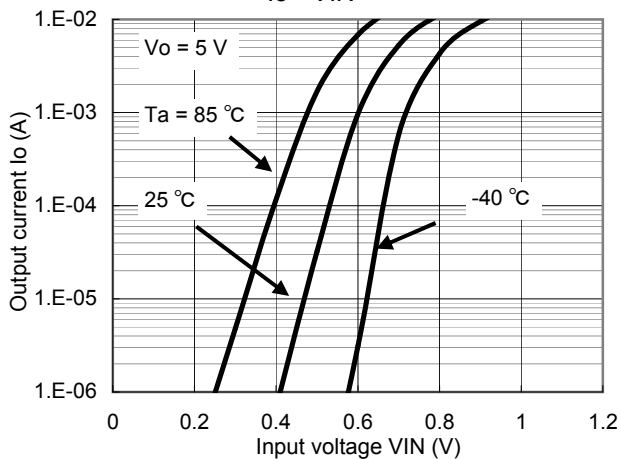
hFE - IC



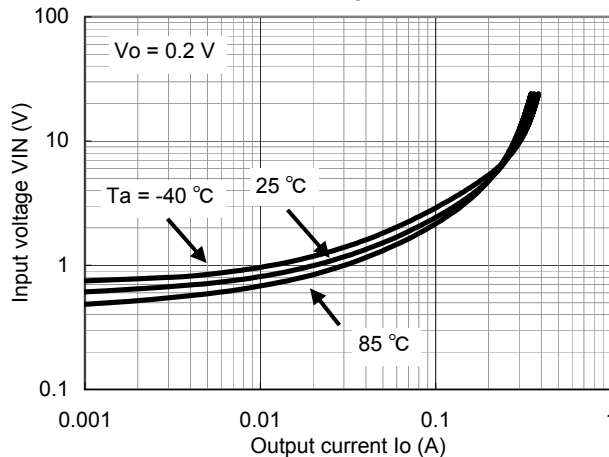
VCE(sat) - IC



Io - VIN



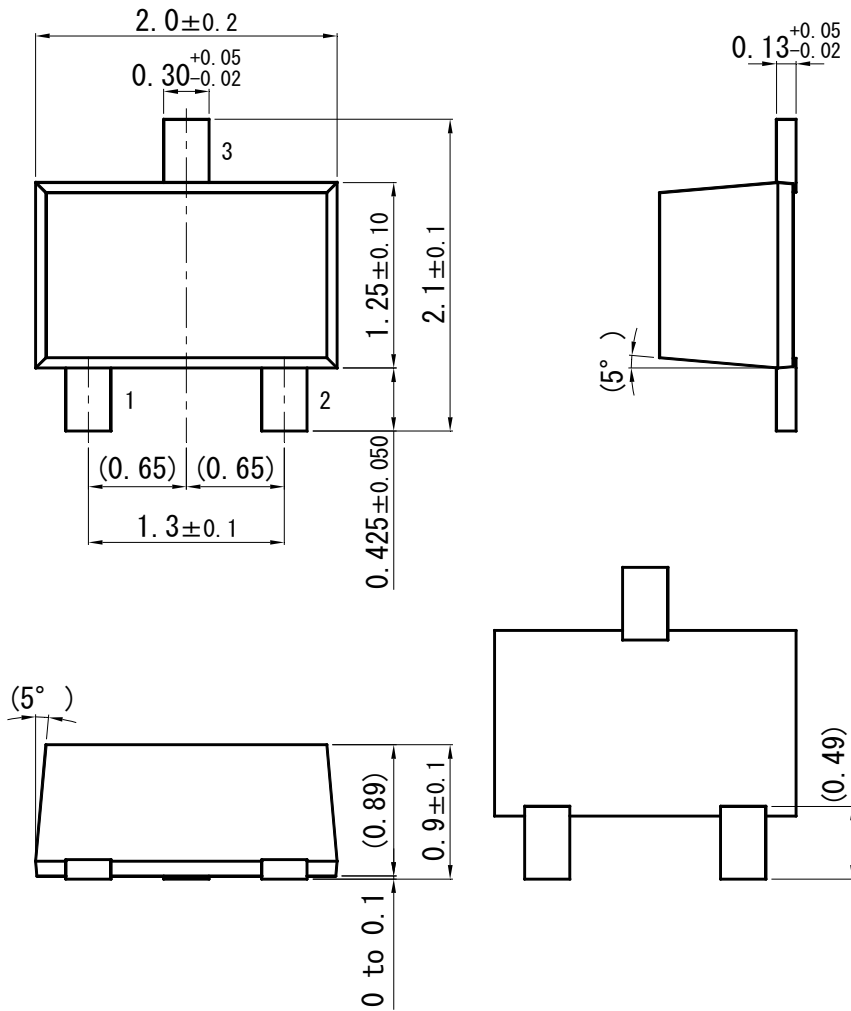
VIN - Io



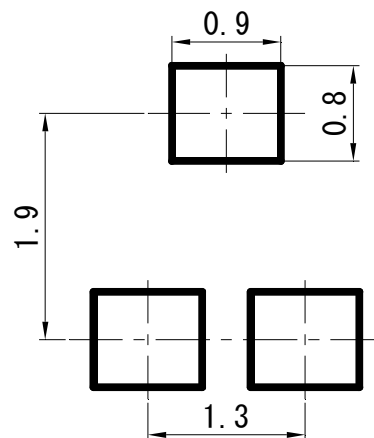


### SMini3-F2-B

Unit: mm



#### ■ Land Pattern (Reference) (Unit: mm)



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