# **DRC5124E**

### Silicon NPN epitaxial planar type

For digital circuits Complementary to DRA5124E DRC2124E in SMini3 type package

#### 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 $T_a = 25^{\circ}C$

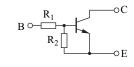
Parameter	Symbol	Rating	Unit	
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	50	V	
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	50	V	
Collector current	I <sub>C</sub>	100	mA	
Total power dissipation	P <sub>T</sub>	P <sub>T</sub> 150		
Junction temperature	Tj	150	°C	
Storage temperature	T <sub>stg</sub>	-55 to +150	°C	

#### Package

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

Marking Symbol: NE

#### Internal Connection



Resistance value	R <sub>1</sub>	22	kΩ
	R <sub>2</sub>	22	kΩ

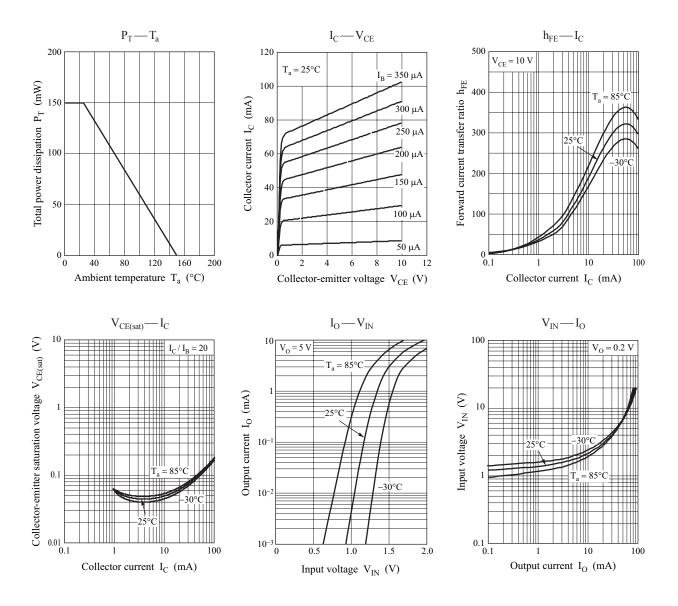
#### Electrical Characteristics $T_a = 25^{\circ}C \pm 3^{\circ}C$

Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	$I_{\rm C} = 10 \ \mu {\rm A}, I_{\rm E} = 0$	50			V
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	$I_{\rm C} = 2  {\rm mA},  I_{\rm B} = 0$	50			V
Collector-base cutoff current (Emitter open)	I <sub>CBO</sub>	$V_{CB} = 50 \text{ V}, I_E = 0$			0.1	μΑ
Collector-emitter cutoff current (Base open)	I <sub>CEO</sub>	$V_{CE} = 50 \text{ V}, I_{B} = 0$			0.5	μΑ
Emitter-base cutoff current (Collector open)	I <sub>EBO</sub>	$V_{EB} = 6 V, I_C = 0$			0.2	mA
Forward current transfer ratio	h <sub>FE</sub>	$V_{CE} = 10 \text{ V}, I_C = 5 \text{ mA}$	60			
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	$I_{\rm C} = 10 \text{ mA}, I_{\rm B} = 0.5 \text{ mA}$			0.25	V
Input voltage (ON)	V <sub>I(on)</sub>	$V_{CE} = 0.2 \text{ V}, I_C = 5 \text{ mA}$	2.6			V
Input voltage (OFF)	V <sub>I(off)</sub>	$V_{CE} = 5 \text{ V}, I_C = 100 \mu\text{A}$			0.8	V
Input resistance	R <sub>1</sub>		-30%	22	+30%	kΩ
Resistance ratio	R <sub>1</sub> / R <sub>2</sub>		0.8	1.0	1.2	

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

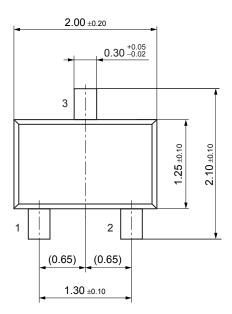
#### DRC5124E

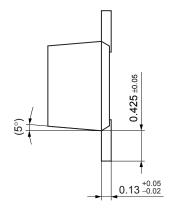
### **Panasonic**

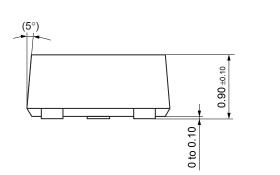


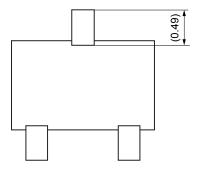
### SMini3-F2-B

Unit: mm









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