



DRC5144T0L

Silicon NPN epitaxial planar type

For digital circuits

Complementary to DRA5144T

DRC2144T in SMini3 type package

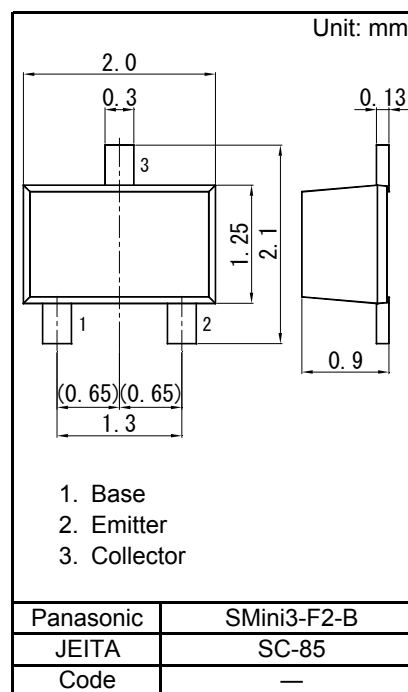
■ Features

- High forward current transfer ratio hFE with excellent linearity
- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Halogen-free / RoHS compliant
(EU RoHS / UL-94 V-0 / MSL:Level 1 compliant)

■ Marking Symbol: NP

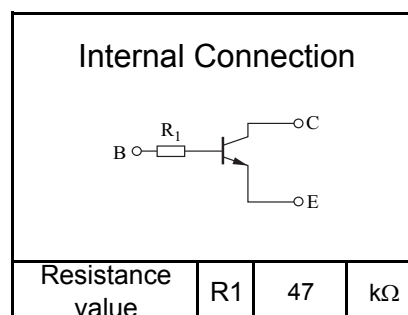
■ Packaging

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)	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	$^{\circ}\text{C}$
Operating ambient temperature	T_{opr}	-40 to +85	$^{\circ}\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^{\circ}\text{C}$



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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = 10\text{ }\mu\text{A}$, $I_E = 0$	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}	$V_{EB} = 6\text{ V}$, $I_C = 0$			0.01	mA
Forward current transfer ratio	hFE	$V_{CE} = 10\text{ V}$, $I_C = 5\text{ mA}$	160		460	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10\text{ mA}$, $I_B = 0.5\text{ mA}$			0.25	V
Input voltage	$V_{i(on)}$	$V_{CE} = 0.2\text{ V}$, $I_C = 5\text{ mA}$	2.8			V
	$V_{i(off)}$	$V_{CE} = 5\text{ V}$, $I_C = 100\text{ }\mu\text{A}$			0.4	V
Input resistance	R1		-30%	47	+30%	k Ω

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