# DMG26406

### Silicon NPN epitaxial planar type (Tr1) Silicon PNP epitaxial planar type (Tr2)

For digital circuits

#### Features

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

Marking Symbol: L9

#### Basic Part Number

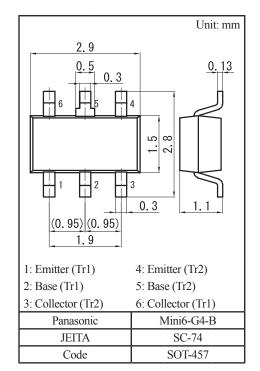
DRC2143T + DRA2143T (Individual)

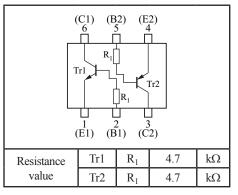
#### Packaging

DMG264060R Embossed type (Thermo-compression sealing): 3 000 pcs / reel (standard)

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

	Parameter	Symbol	Rating	Unit
Tr1	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
Tr2	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>	300	mW
Overall	Junction temperature	Tj	150	°C
	Operating ambient temperature	T <sub>opr</sub>	-40 to +85	°C
	Storage temperature	T <sub>stg</sub>	-55 to +150	°C





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

• Tr1

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>	$V_{\rm CE} = 50 \text{ V}, I_{\rm B} = 0$			0.5	μΑ
Emitter-base cutoff current (Collector open)	I <sub>EBO</sub>	$V_{\rm EB} = 6 \text{ V}, I_{\rm C} = 0$			0.01	mA
Forward current transfer ratio	$\mathbf{h}_{\mathrm{FE}}$	$V_{CE} = 10 \text{ V}, I_C = 5 \text{ mA}$	160		460	
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>	$V_{\rm CE} = 0.2$ V, $I_{\rm C} = 5$ mA	1.0			V
Input voltage (OFF)	V <sub>I(off)</sub>	$V_{CE} = 5 \text{ V}, I_C = 100 \mu\text{A}$			0.4	V
Input resistance	R <sub>1</sub>		-30%	4.7	+30%	kΩ

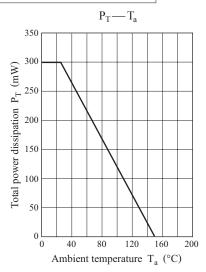
Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

• Tr2	
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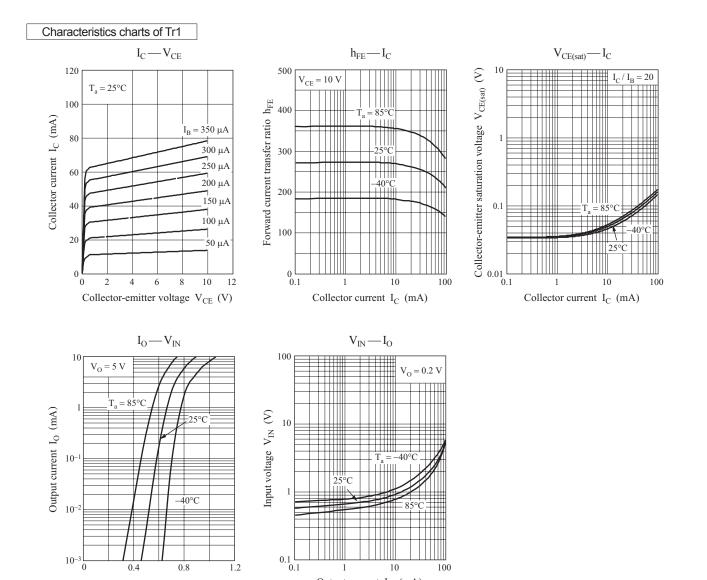
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	$I_{\rm C} = -10 \ \mu {\rm A}, I_{\rm E} = 0$	-50			V
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	$I_{\rm C} = -2  {\rm mA},  I_{\rm B} = 0$	-50			V
Collector-base cutoff current (Emitter open)	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>	$V_{\rm CE} = -50$ V, $I_{\rm B} = 0$			-0.5	μΑ
Emitter-base cutoff current (Collector open)	I <sub>EBO</sub>	$V_{\rm EB} = -6  \text{V},  \text{I}_{\rm C} = 0$			-0.01	mA
Forward current transfer ratio	h <sub>FE</sub>	$V_{CE} = -10 \text{ V}, I_C = -5 \text{ mA}$	160		460	
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>	$V_{CE} = -0.2 \text{ V}, I_C = -5 \text{ mA}$	-1.0			V
Input voltage (OFF)	V <sub>I(off)</sub>	$V_{CE} = -5 V, I_C = -100 \mu A$			-0.4	V
Input resistance	R <sub>1</sub>		-30%	4.7	+30%	kΩ

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

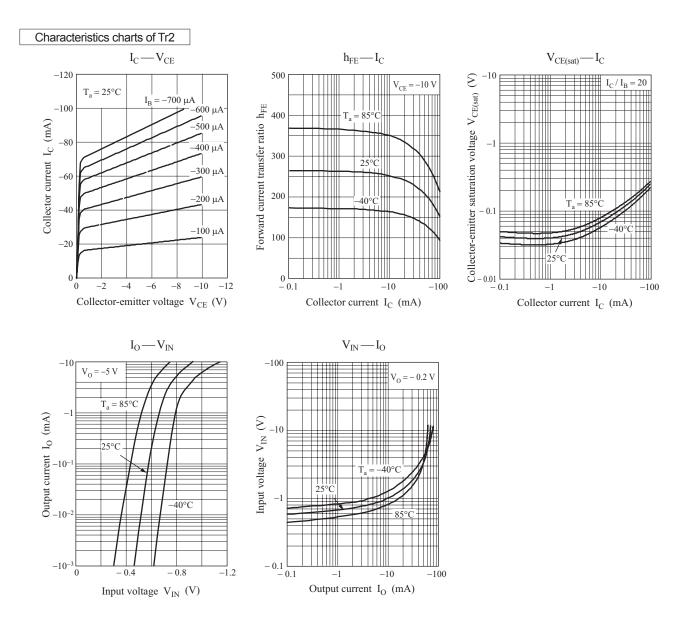
Common characteristics chart



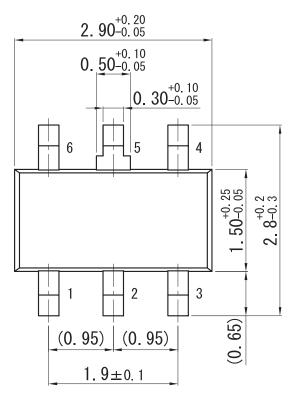
Input voltage V<sub>IN</sub> (V)

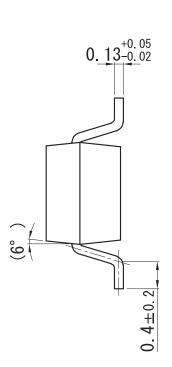


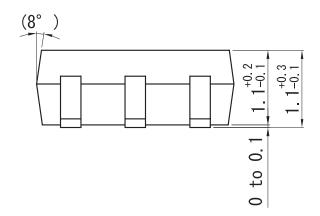
Output current  $I_O$  (mA)



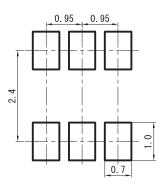
# Mini6-G4-B







Land Pattern (Reference) (Unit: mm)



Ver. DED

Unit: mm

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