DMG26412

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

For digital circuits

■ Features

- Contributes to miniaturization of sets, reduction of component count.
- Eco-friendly Halogen-free package

■ Basic Part Number

DRC2543E + DRA2543E (Individual)

Packaging

Embossed type (Thermo-compression sealing): 3000 pcs / reel (standard)

■ Absolute Maximum Ratings $T_a = 25$ °C

	Parameter	Symbol	Rating	Unit
Tr1	Collector-base voltage (Emitter open)	V _{CBO}	50	V
	Collector-emitter voltage (Base open)	V _{CEO}	50	V
	Collector current	I_{C}	500	mA
Tr2	Collector-base voltage (Emitter open)	V _{CBO}	-50	V
	Collector-emitter voltage (Base open)	V _{CEO}	-50	V
	Collector current	I_{C}	-500	mA
Overall	Total power dissipation	P_{T}	300	mW
	Junction temperature	T _j	150	°C
	Storage temperature	T _{stg}	-55 to +150	°C

■ Package

Code

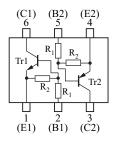
Mini6-G4-B

• Pin Name

1: Emitter (Tr1) 4: Emitter (Tr2) 2: Base (Tr1) 5: Base (Tr2) 3: Collector (Tr2) 6: Collector (Tr1)

■ Marking Symbol: S9

■ Internal Connection



	Tr1	R_1	4.7	kΩ	
Resistance	111	R ₂	4.7		
value	Tr2	R_1	4.7	kΩ	
		R ₂	4.7	KS 2	

■ Electrical Characteristics $T_a = 25$ °C±3°C

• Tr1

Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = 10 \mu A, I_E = 0$	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}	$V_{\rm CB} = 50 \text{ V}, I_{\rm E} = 0$			1	μΑ
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = 50 \text{ V}, I_{B} = 0$			1	μΑ
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = 6 \text{ V}, I_C = 0$			2	mA
Forward current transfer ratio	h _{FE}	$V_{CE} = 10 \text{ V}, I_{C} = 100 \text{ mA}$	50			_
Collector-emitter saturation voltage	V _{CE(sat)}	$I_C = 100 \text{ mA}, I_B = 5 \text{ mA}$			0.25	V
Input voltage (ON)	V _{I(on)}	$V_{CE} = 0.2 \text{ V}, I_{C} = 50 \text{ mA}$	3.6			V
Input voltage (OFF)	V _{I(off)}	$V_{CE} = 5 \text{ V}, I_{C} = 100 \mu\text{A}$			0.7	V
Input resistance	R_1		-30%	4.7	+30%	kΩ
Resistance ratio	R_1/R_2		0.8	1.0	1.2	_

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

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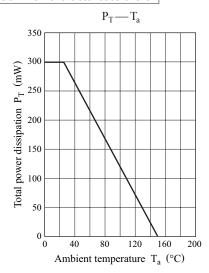
■ Electrical Characteristics (Continued) $T_a = 25$ °C±3°C

• Tr2

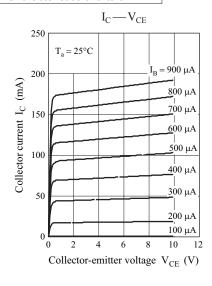
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	V _{CBO}	$I_{\rm C} = -10 \mu \text{A}, I_{\rm E} = 0$	-50			V
Collector-emitter voltage (Base open)	V _{CEO}	$I_{\rm C} = -2 \text{ mA}, I_{\rm B} = 0$	-50			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{\rm CB} = -50 \text{ V}, I_{\rm E} = 0$			-1	μΑ
Collector-emitter cutoff current (Base open)	I _{CEO}	$V_{CE} = -50 \text{ V}, I_{B} = 0$			-1	μΑ
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = -6 \text{ V}, I_C = 0$			-2	mA
Forward current transfer ratio	h_{FE}	$V_{CE} = -10 \text{ V}, I_{C} = -100 \text{ mA}$	50			_
Collector-emitter saturation voltage	V _{CE(sat)}	$I_C = -100 \text{ mA}, I_B = -5 \text{ mA}$			-0.25	V
Input voltage (ON)	V _{I(on)}	$V_{CE} = -0.2 \text{ V}, I_{C} = -50 \text{ mA}$	-3.6			V
Input voltage (OFF)	V _{I(off)}	$V_{CE} = -5 \text{ V}, I_{C} = -100 \mu\text{A}$			-0.7	V
Input resistance	R_1		-30%	4.7	+30%	kΩ
Resistance ratio	R_1/R_2		0.8	1.0	1.2	_

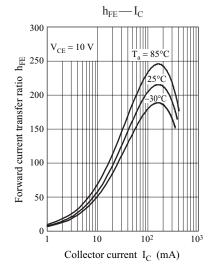
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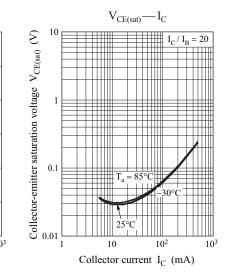
Common characteristics chart



Characteristics charts of Tr1

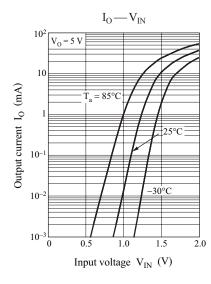


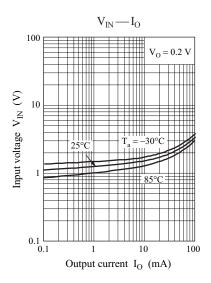




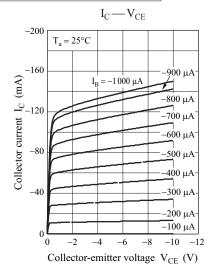
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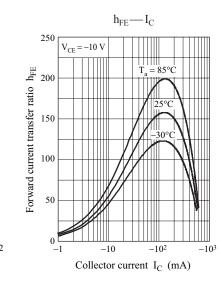
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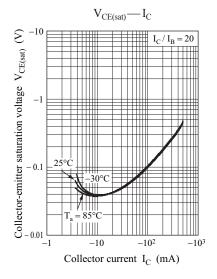


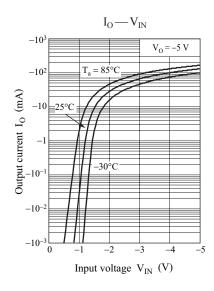


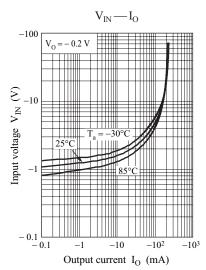
Characteristics charts of Tr2





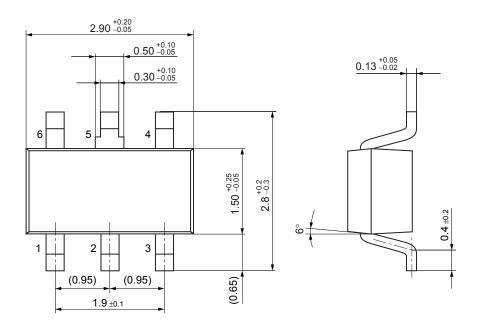


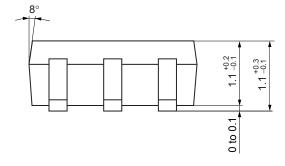




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Mini6-G4-B Unit: mm





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