DMG21401

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

For general amplification

■ Features

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

■ Basic Part Number

DSC2001 + DRA0143G (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}	60	V
	Collector-emitter voltage (Base open)	V _{CEO}	50	V
	Emitter-base voltage (Collector open)	V _{EBO}	7	V
	Collector current	I_{C}	100	mA
	Peak collector current	I_{CP}	200	mA
Tr2	Collector-base voltage (Emitter open)	V _{CBO}	-50	V
	Collector-emitter voltage (Base open)	V _{CEO}	-50	V
	Collector current	I_{C}	-100	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

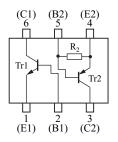
Mini6-G4-B

• Pin Name

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

■ Marking Symbol: T6

■ Internal Connection



Resistance value	Tr2	R_2	4.7	kΩ

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

• Tr1

Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = 10 \mu A, I_E = 0$	60			V
Collector-emitter voltage (Base open)	V _{CEO}	$I_{\rm C} = 2 \text{ mA}, I_{\rm B} = 0$	50			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 10 \mu A, I_C = 0$	7			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 20 \text{ V}, I_{E} = 0$			0.1	μΑ
Collector-emitter cutoff current (Base open)	I _{CEO}	$V_{CE} = 10 \text{ V}, I_{B} = 0$			100	μΑ
Forward current transfer ratio	h_{FE}	$V_{CB} = 10 \text{ V}, I_{C} = 2 \text{ mA}$	210		460	_
Collector-emitter saturation voltage	V _{CE(sat)}	$I_C = 100 \text{ mA}, I_B = 10 \text{ mA}$		0.13	0.3	V
Transition frequency	f_T	$V_{CB} = 10 \text{ V}, I_{E} = 2 \text{ mA}$		150		MHz
Collector output capacitance (Common base, input open circuited)	C _{ob}	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		1.5		pF

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

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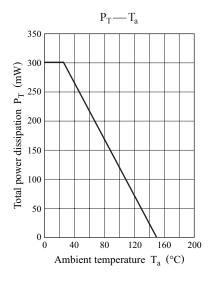
■ Electrical Characteristics (Continued) $T_a = 25$ °C±3°C

• Tr2

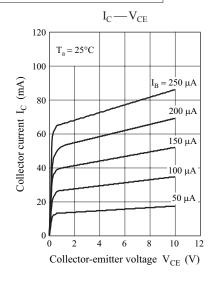
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	V _{CBO}	$I_{\rm C} = -10 \mu\text{A}, I_{\rm E} = 0$	-60			V
Collector-emitter voltage (Base open)	V _{CEO}	$I_C = -2 \text{ mA}, I_B = 0$	-50			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{\rm CB} = -50 \text{ V}, I_{\rm E} = 0$			-0.1	μΑ
Collector-emitter cutoff current (Base open)	I _{CEO}	$V_{CE} = -50 \text{ V}, I_{B} = 0$			-0.5	μΑ
Emitter-base cutoff current (Collector open)	I _{EBO}	$V_{EB} = -6 \text{ V}, I_C = 0$			-2.0	mA
Forward current transfer ratio	h _{FE}	$V_{CE} = -10 \text{ V}, I_{C} = -5 \text{ mA}$	20			_
Collector-emitter saturation voltage	V _{CE(sat)}	$I_C = -10 \text{ mA}, I_B = -0.5 \text{ mA}$			-0.25	V
Input voltage (ON)	V _{I(on)}	$V_{CE} = -0.2 \text{ V}, I_{C} = -5 \text{ mA}$	- 0.9			V
Input voltage (OFF)	V _{I(off)}	$V_{CE} = -5 \text{ V}, I_{C} = -100 \mu\text{A}$			-0.4	V
Input resistance	R ₂		-30%	4.7	+30%	kΩ

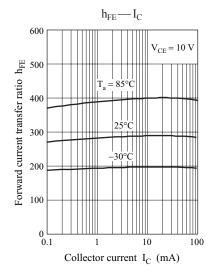
Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

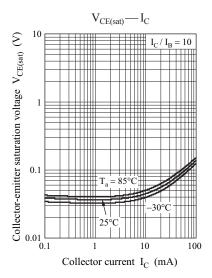
Common characteristics chart



Characteristics charts of Tr1

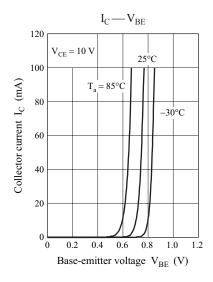


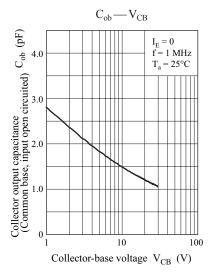


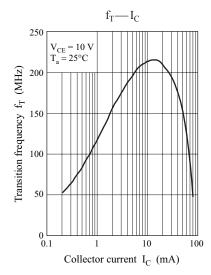


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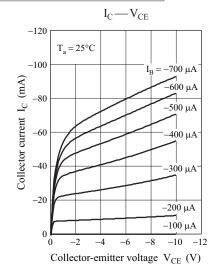
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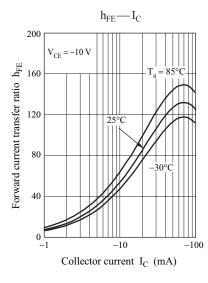


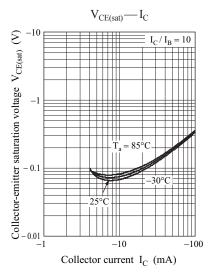


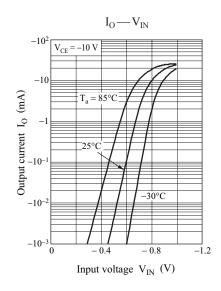


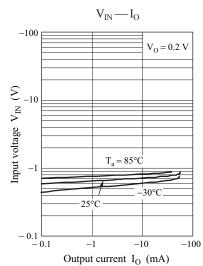
Characteristics charts of Tr2







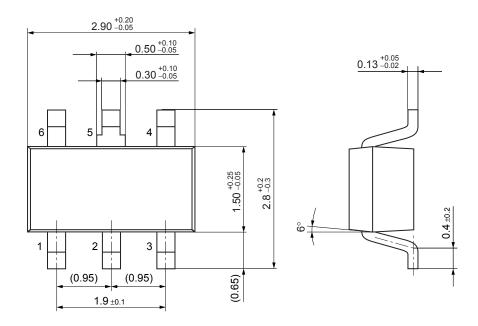


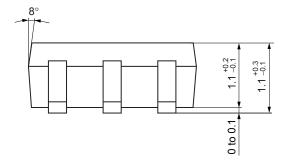


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DMG21401 Panasonic

Mini6-G4-B Unit: mm





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