

DME914C1

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

For digital circuits

■ Features

- High forward current transfer ratio h_{FE}
- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Contributes to miniaturization of sets, reduction of component count.
- Eco-friendly Halogen-free package

■ Basic Part Number

DSA9402 + DRA2143Z (Individual)

■ Packaging

Embossed type (Thermo-compression sealing): 8000 pcs / reel (standard)

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

	Parameter	Symbol	Rating	Unit
Tr1	Collector-base voltage (Emitter open)	V_{CBO}	-15	V
	Collector-emitter voltage (Base open)	V_{CEO}	-12	V
	Emitter-base voltage (Collector open)	V_{EBO}	-5	V
	Collector current	I_C	-500	mA
	Peak collector current	I_{CP}	-1	A
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	125	mW
	Junction temperature	T_j	150	$^\circ\text{C}$
	Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

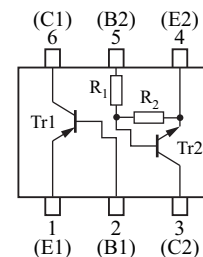
■ Package

- Code
SSMini6-F3-B
- Pin Name

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

■ Marking Symbol: T5

■ Internal Connection



Resistance value	Tr2	R_1	4.7	$k\Omega$
		R_2	47	

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

• Tr1

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = -10 \mu\text{A}, I_E = 0$	-15			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = -1 \text{ mA}, I_B = 0$	-12			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = -10 \mu\text{A}, I_C = 0$	-5			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = -10 \text{ V}, I_E = 0$			-0.1	μA
Forward current transfer ratio	h_{FE}	$V_{CE} = -2 \text{ V}, I_C = -10 \text{ mA}$	270		680	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -200 \text{ mA}, I_B = -10 \text{ mA}$			-250	mV
Transition frequency	f_T	$V_{CE} = -2 \text{ V}, I_C = -10 \text{ mA}$		300		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		4.0		pF

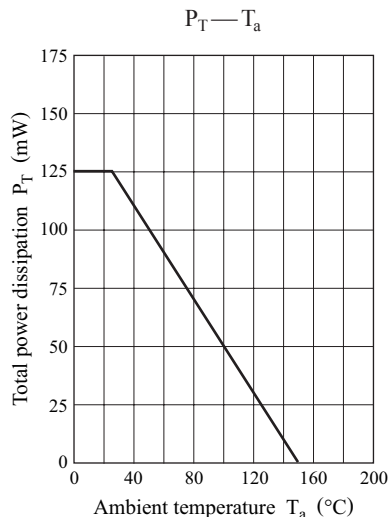
Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

• Tr2

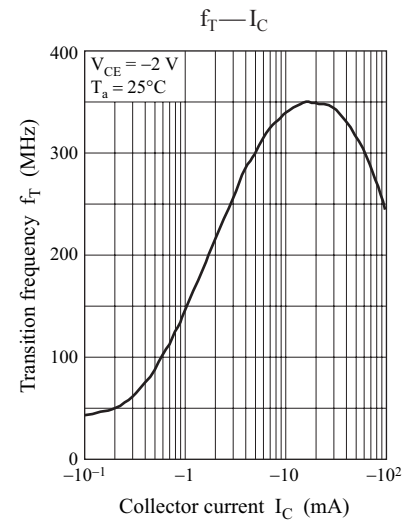
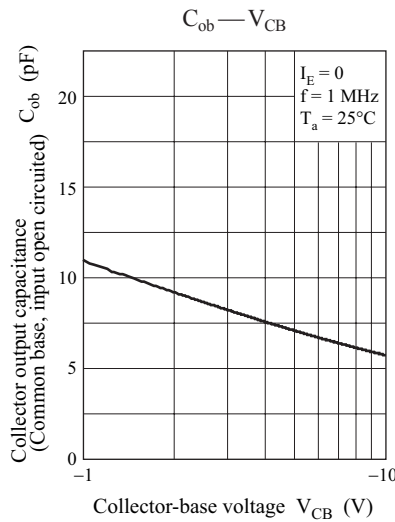
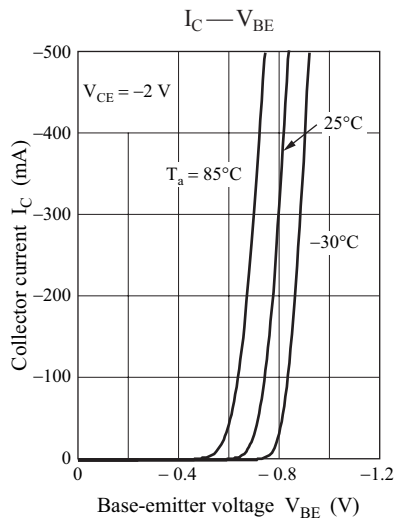
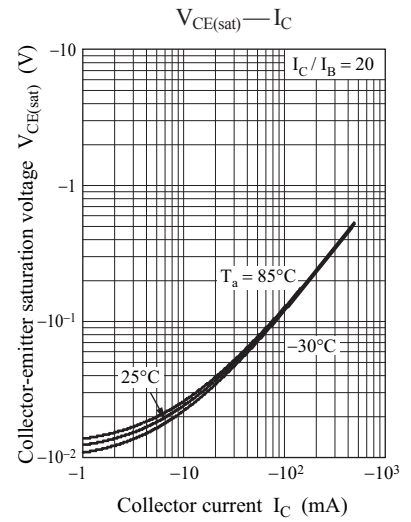
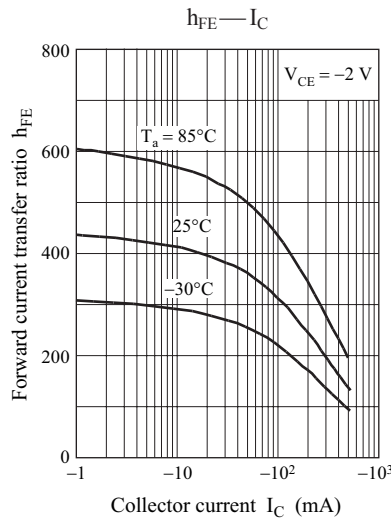
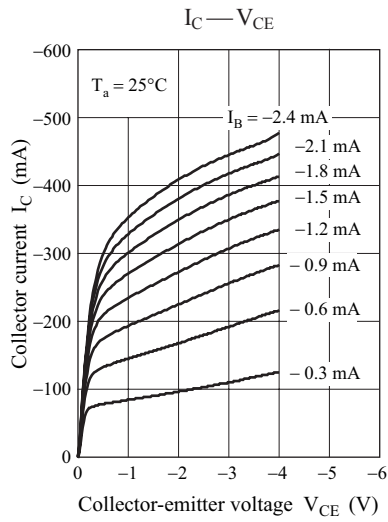
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = 10 \mu\text{A}, I_E = 0$	50			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 2 \text{ mA}, I_B = 0$	50			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 50 \text{ V}, I_E = 0$			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}	$V_{EB} = 6 \text{ V}, I_C = 0$			0.2	mA
Forward current transfer ratio	h_{FE}	$V_{CE} = 10 \text{ V}, I_C = 5 \text{ mA}$	80		400	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10 \text{ mA}, I_B = 0.5 \text{ mA}$			0.25	V
Input voltage (ON)	$V_{I(on)}$	$V_{CE} = 0.2 \text{ V}, I_C = 5 \text{ mA}$	1.3			V
Input voltage (OFF)	$V_{I(off)}$	$V_{CE} = 5 \text{ V}, I_C = 100 \mu\text{A}$			0.4	V
Input resistance	R_1		-30%	4.7	+30%	$\text{k}\Omega$
Resistance ratio	R_1 / R_2		0.08	0.10	0.12	—

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

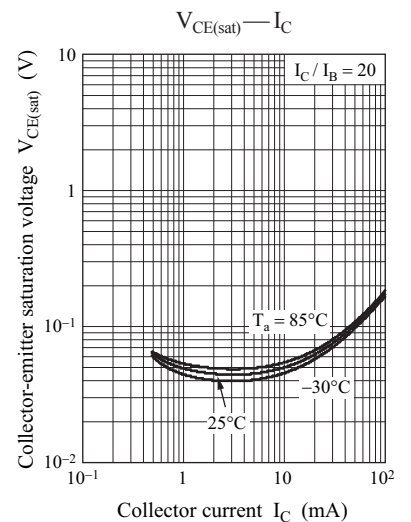
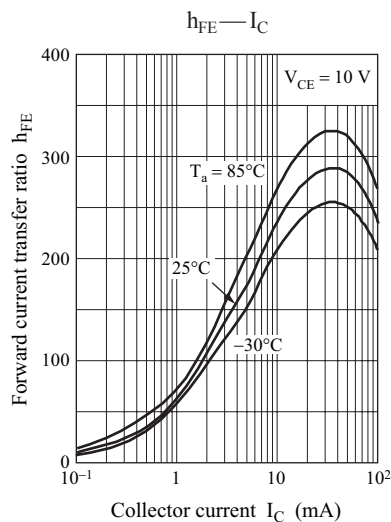
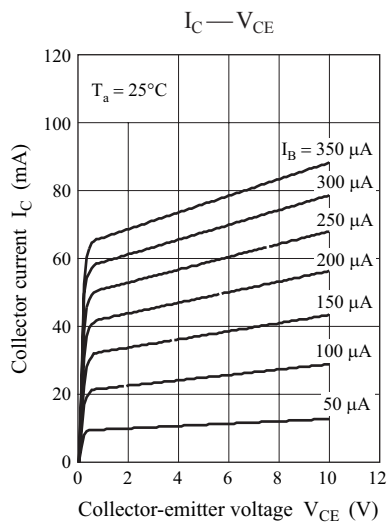
Common characteristics chart

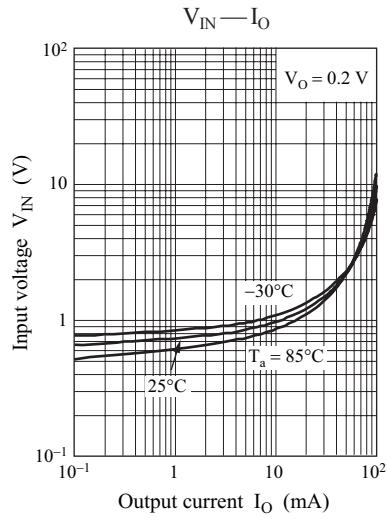
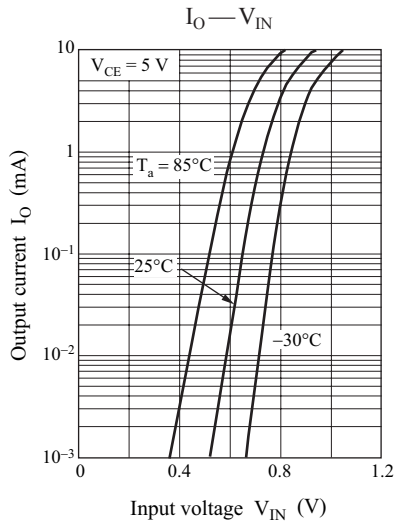


Characteristics charts of Tr1



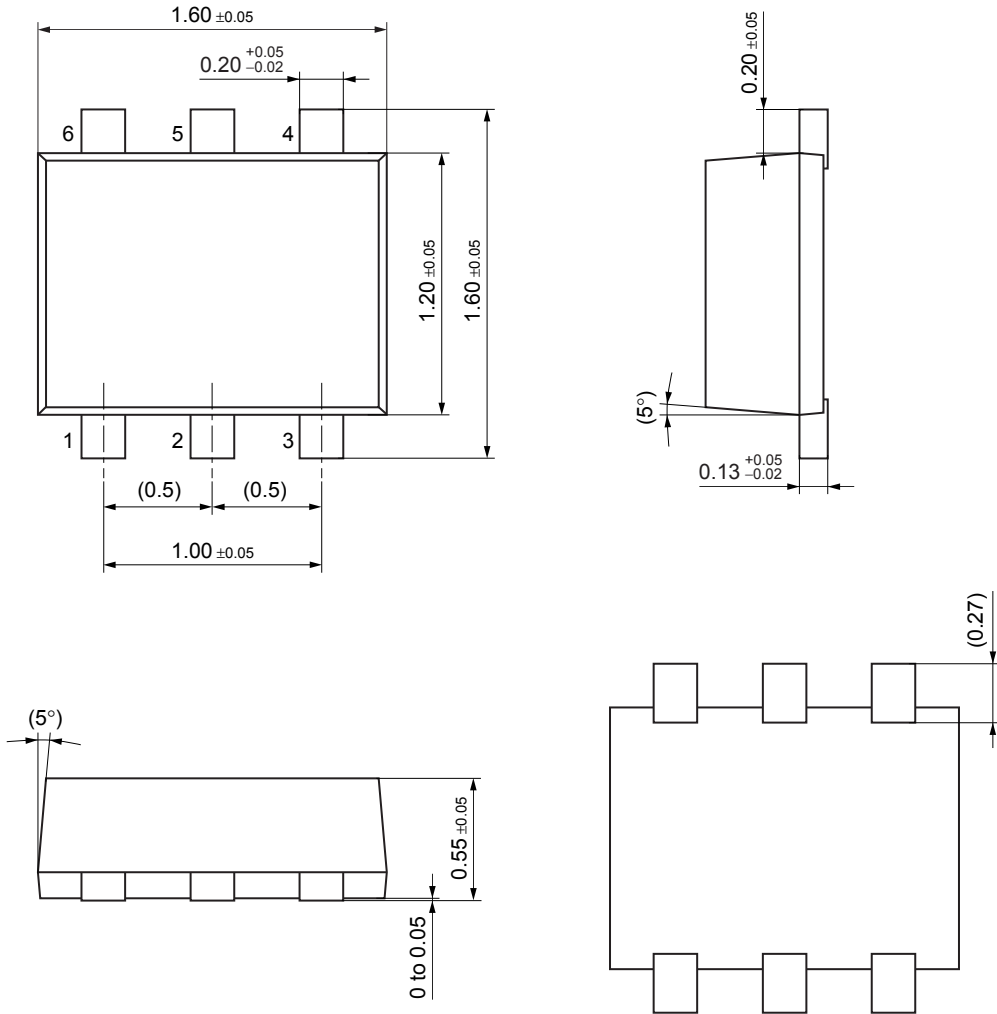
Characteristics charts of Tr2





SSMini6-F3-B

Unit: mm



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