

NP042A4

Silicon NPN epitaxial planar type

For digital circuits

■ Features

- Two elements incorporated into one package (Each transistor is separated)
- SSSMini type package, reduction of the mounting area and assembly cost
- Maximum package height (0.4 mm) contributes to develop thinner equipments

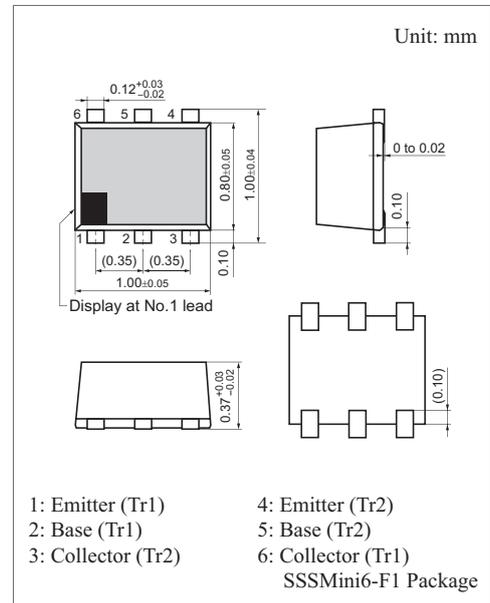
■ Basic Part Number

- UNR32A4 × 2

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

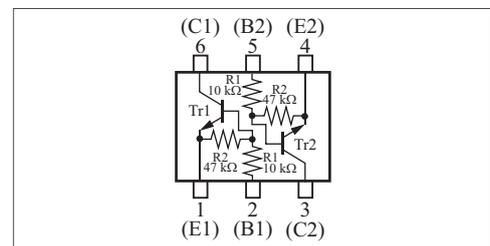
Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	50	V
Collector-emitter voltage (Base open)	V_{CEO}	50	V
Collector current	I_C	80	mA
Total power dissipation *	P_T	125	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +125	$^\circ\text{C}$

Note) * : Measuring on substrate at 17 mm × 10 mm × 1 mm



Marking Symbol: BR

Internal Connection

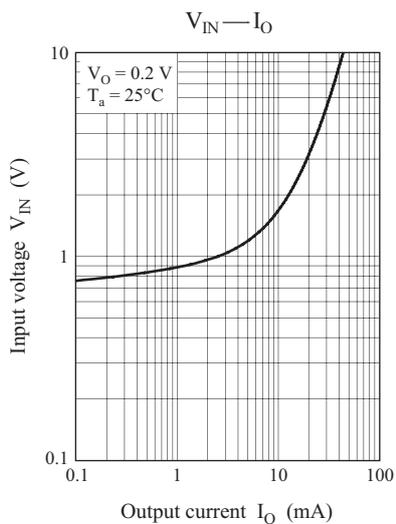
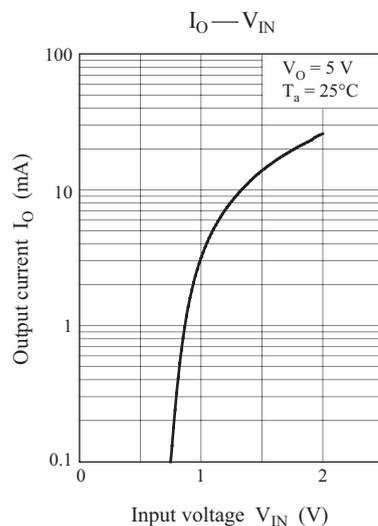
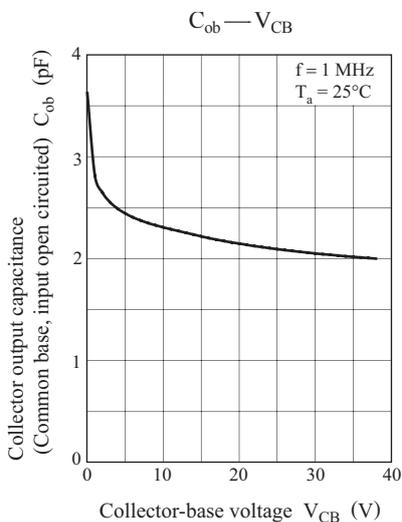
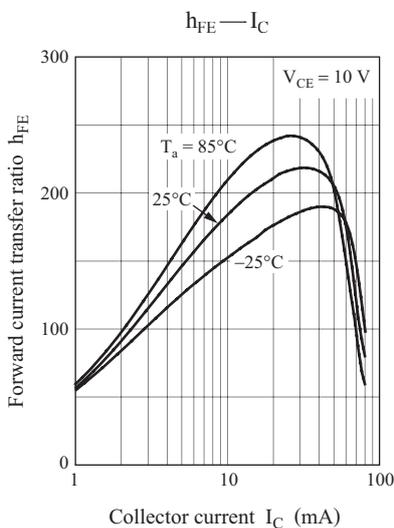
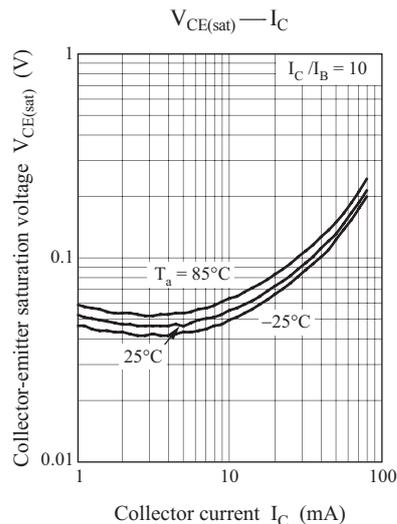
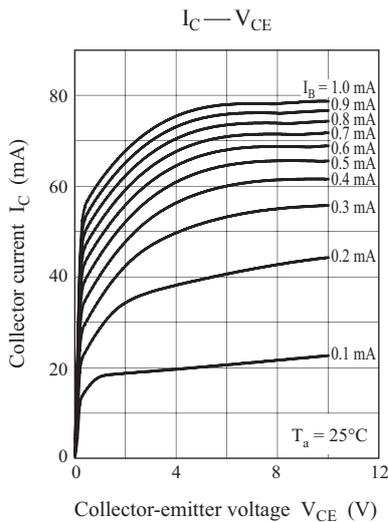
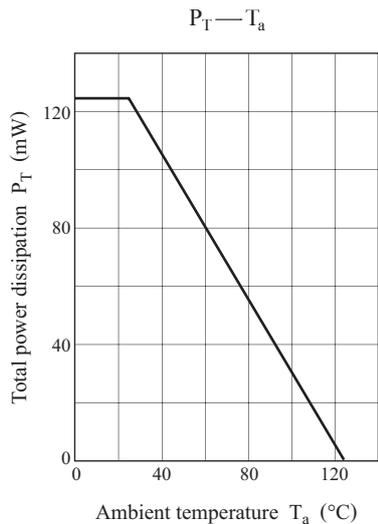


■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

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			—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10 \text{mA}, I_B = 0.3 \text{mA}$			0.25	V
Output voltage high-level	V_{OH}	$V_{CC} = 5 \text{V}, V_B = 0.5 \text{V}, R_L = 1 \text{k}\Omega$	4.9			V
Output voltage low-level	V_{OL}	$V_{CC} = 5 \text{V}, V_B = 2.5 \text{V}, R_L = 1 \text{k}\Omega$			0.2	V
Input resistance	R_1		-30%	10	+30%	k Ω
Resistance ratio	R_1 / R_2		0.17	0.21	0.25	—
Transition frequency	f_T	$V_{CB} = 10 \text{V}, I_E = -2 \text{mA}, f = 200 \text{MHz}$		150		MHz

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

2. *: Pulse measurement



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