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2SD0601A (2SD601A)

Silicon NPN epitaxial planar type

For general amplification

Complementary to 2SB0709A (2SB709A)

■ Features

- High forward current transfer ratio h_{FE}
- Low collector to emitter saturation voltage $V_{CE(sat)}$
- Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

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

Parameter	Symbol	Rating	Unit
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
Collector power dissipation	P_C	200	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

■ 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}	$I_C = 10 \mu\text{A}, I_E = 0$	60			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 2 \text{ mA}, I_B = 0$	50			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 10 \mu\text{A}, I_C = 0$	7			V
Collector-base cut-off current (Emitter open)	I_{CBO}	$V_{CB} = 20 \text{ V}, I_E = 0$			0.1	μA
	I_{CEO}	$V_{CE} = 10 \text{ V}, I_B = 0$			100	μA
Forward current transfer ratio	h_{FE1}^*	$V_{CE} = 10 \text{ V}, I_C = 2 \text{ mA}$	160		460	—
	h_{FE2}	$V_{CE} = 2 \text{ V}, I_C = 100 \text{ mA}$	90			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100 \text{ mA}, I_B = 10 \text{ mA}$		0.1	0.3	V
Transition frequency	f_T	$V_{CB} = 10 \text{ V}, I_E = -2 \text{ mA}, f = 200 \text{ MHz}$		150		MHz
Noise voltage	NV	$V_{CE} = 10 \text{ V}, I_C = 1 \text{ mA}, G_V = 80 \text{ dB}$ $R_g = 100 \text{ k}\Omega, \text{Function} = \text{FLAT}$		110		mV
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$			3.5	pF

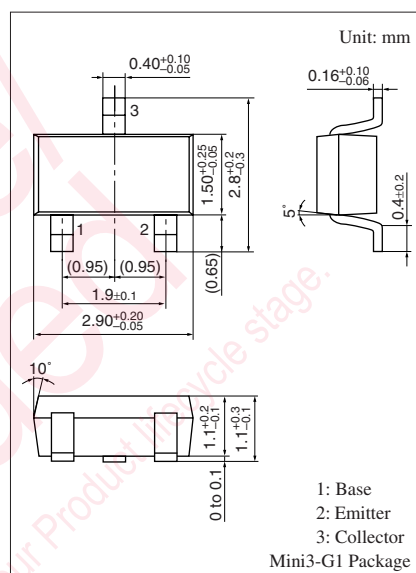
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *: Rank classification

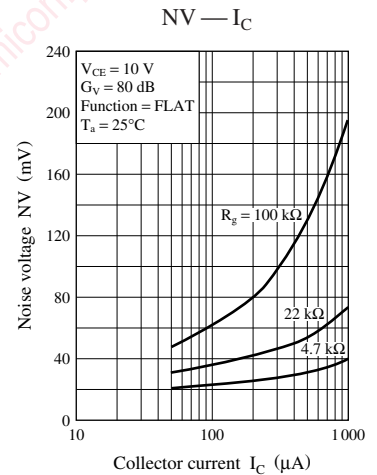
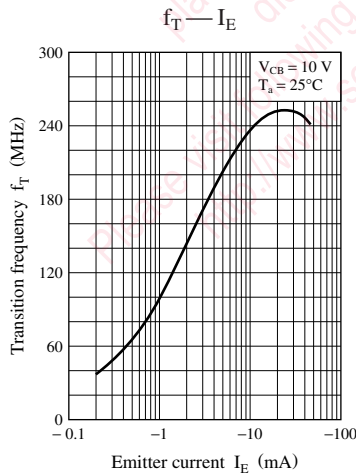
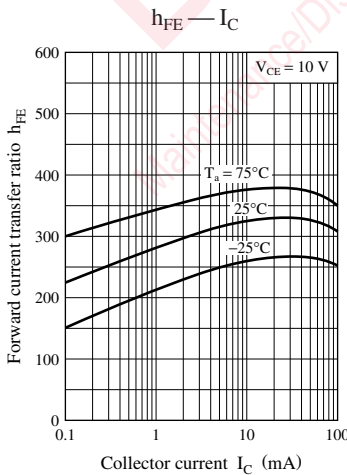
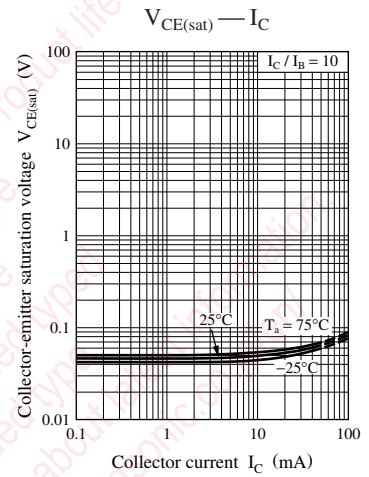
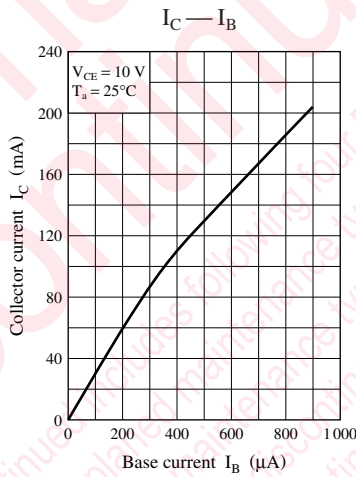
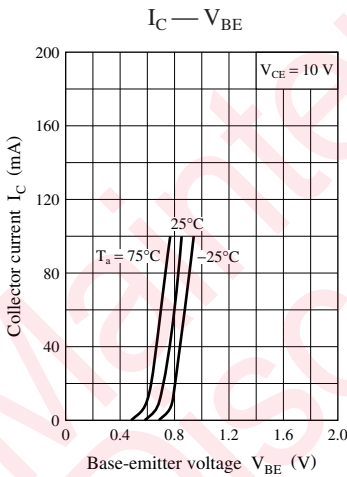
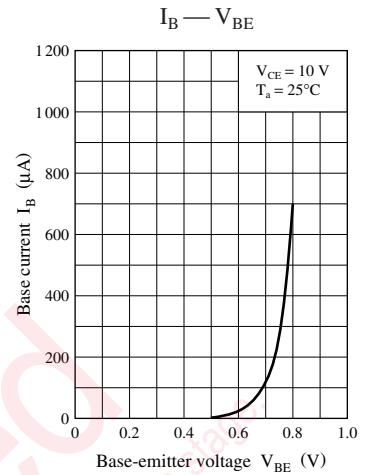
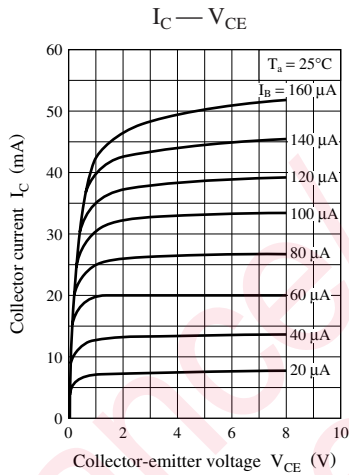
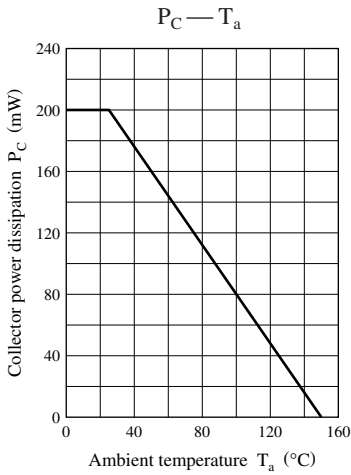
Rank	Q	R	S	No-rank
h_{FE1}	160 to 260	210 to 340	290 to 460	160 to 460
Marking symbol	ZQ	ZR	ZS	Z

Product of no-rank is not classified and have no marking symbol for rank.

Note) The part number in the parenthesis shows conventional part number.



Marking Symbol: Z



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