2SD0601A (2SD601A)

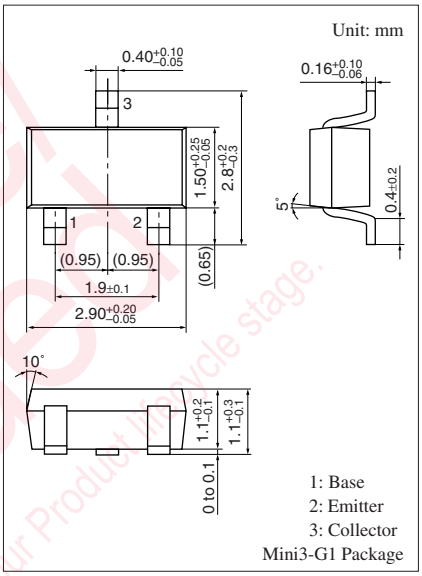
Silicon NPN epitaxial planar type

For general amplification

Complementary to 2SB0709A (2SB709A)

■ Features

- High foward 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.



Marking Symbol: Z

■ Absolute Maximum Ratings $T_a = 25°C$

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	°C
Storage temperature	T_{stg}	–55 to +150	°C

■ Electrical Characteristics $T_a = 25°C \pm 3°C$

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

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Discontinued
Maintenance/Discontinued includes following four Product lifecycle stage.
Please refer to the following URL and contact information.
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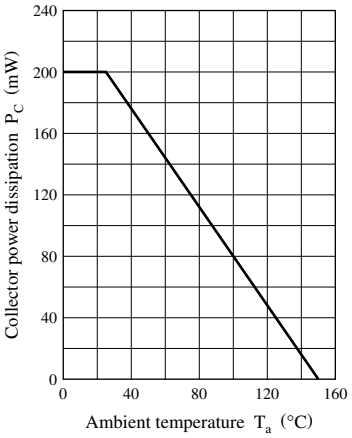
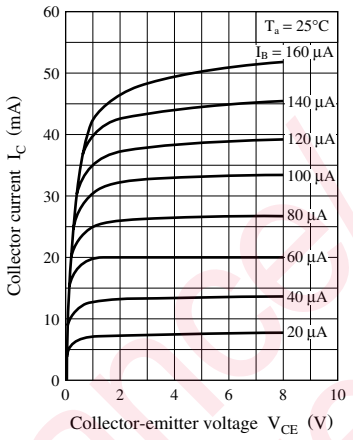
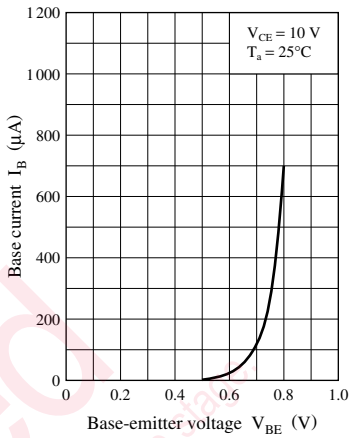
P_C — T_a



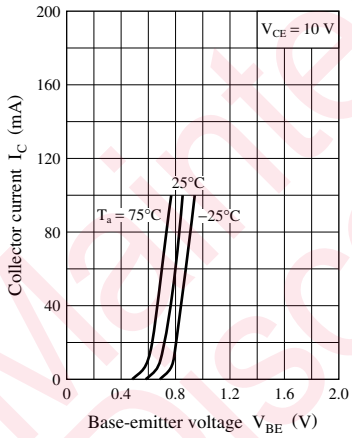
I_C — V_{CE}



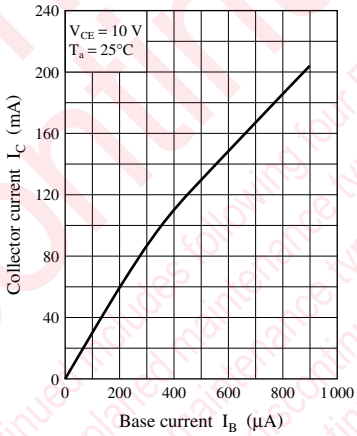
I_B — V_{BE}



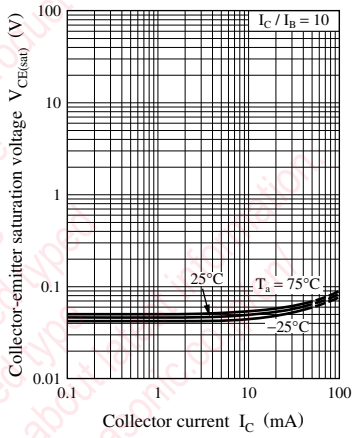
I_C — V_{BE}



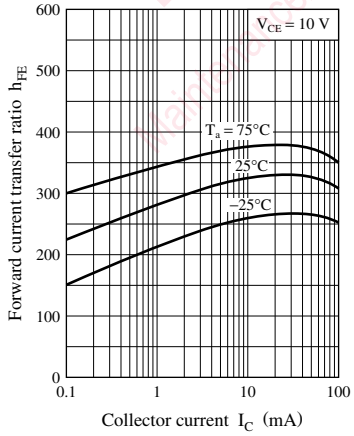
I_C — I_B



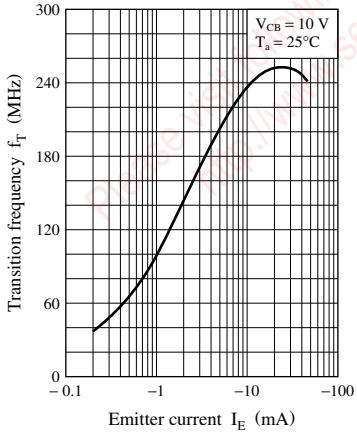
$V_{CE(sat)}$ — I_C



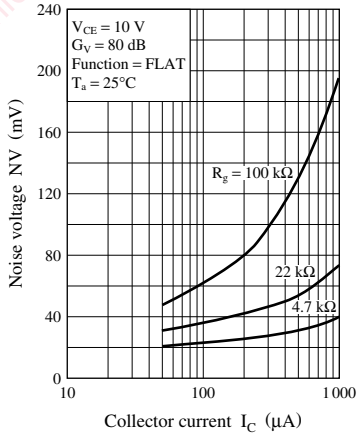
h_{FE} — I_C



f_T — I_E



NV — I_C



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