

XP06501 (XP6501)

Silicon NPN epitaxial planar type

For general amplification

■ Features

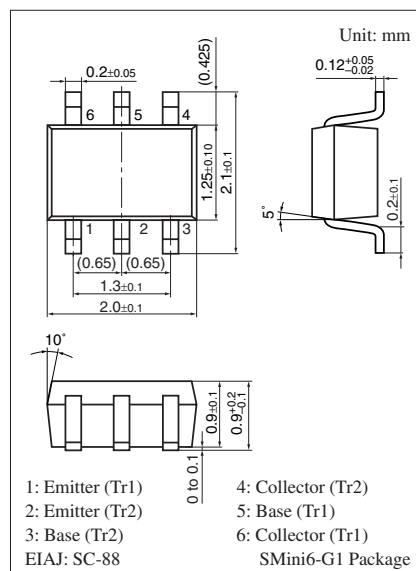
- Two elements incorporated into one package
- Reduction of the mounting area and assembly cost by one half

■ Basic Part Number

- 2SD0601A (2SD601A) × 2

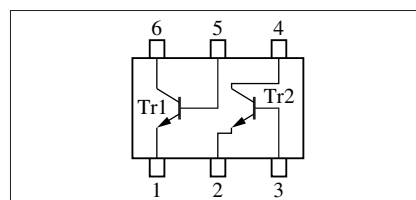
■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

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
Total power dissipation	P_T	150	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$



Marking Symbol: 5N

Internal Connection



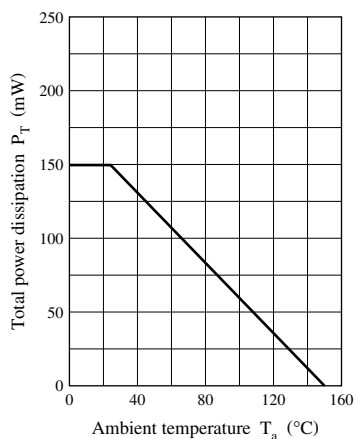
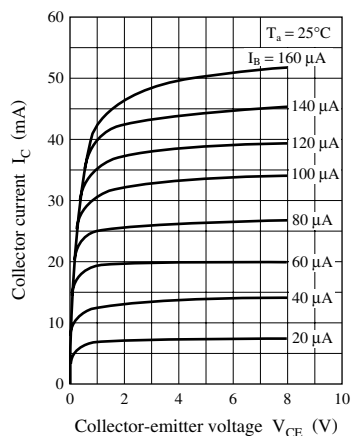
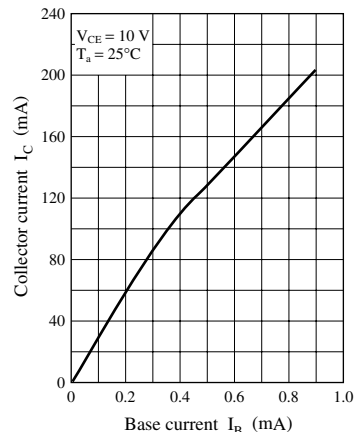
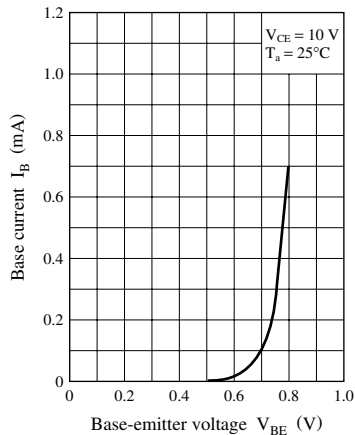
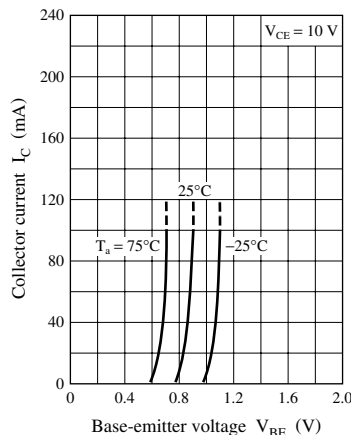
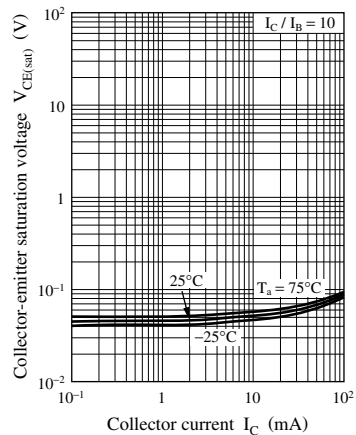
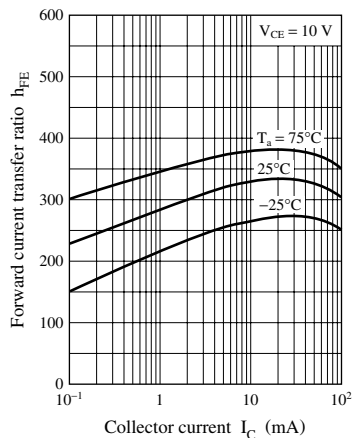
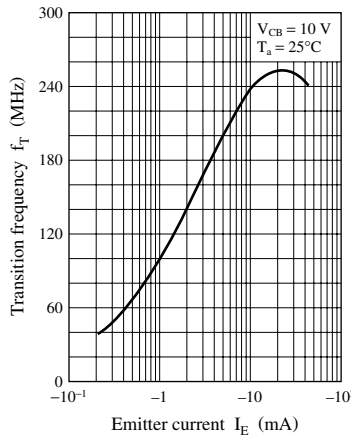
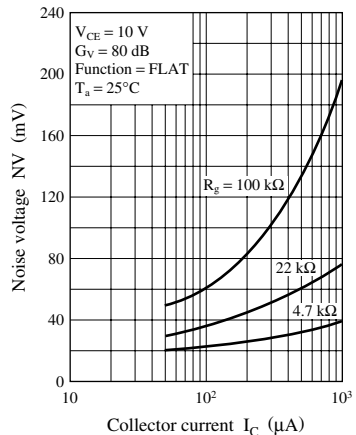
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = 10 \mu\text{A}$, $I_E = 0$	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 cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 20 \text{ V}$, $I_E = 0$			0.1	μA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = 10 \text{ V}$, $I_B = 0$			100	μA
Forward current transfer ratio	h_{FE}	$V_{CE} = 10 \text{ V}$, $I_C = 2 \text{ mA}$	160		460	—
h_{FE} ratio *	$h_{FE(\text{Small/Large})}$	$V_{CE} = 10 \text{ V}$, $I_C = 2 \text{ mA}$	0.50	0.99		—
Collector-emitter saturation voltage	$V_{CE(\text{sat})}$	$I_C = 100 \text{ mA}$, $I_B = 10 \text{ mA}$		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
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. *: Ratio between 2 elements

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

$P_T - T_a$  $I_C - V_{CE}$  $I_C - I_B$  $I_B - V_{BE}$  $I_C - V_{BE}$  $V_{CE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_E$  $NV - I_C$ 

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