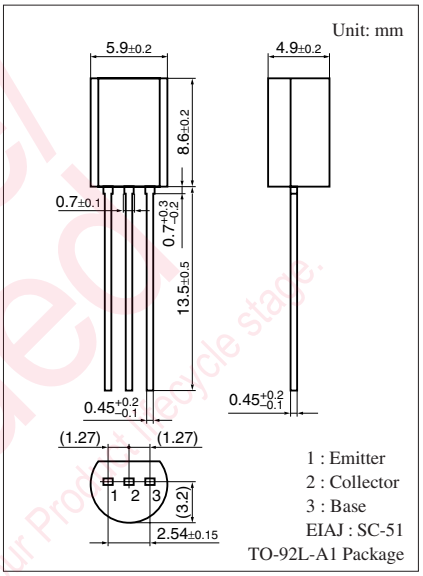
2SD0966 (2SD966)

Silicon NPN epitaxial planar type

For low-frequency amplification
For stroboscope



■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Satisfactory operation performances at high efficiency with the low-voltage power supply.

■ Absolute Maximum Ratings $T_a = 25°C$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	40	V
Collector-emitter voltage (Base open)	V_{CEO}	20	V
Emitter-base voltage (Collector open)	V_{EBO}	7	V
Collector current	I_C	5	A
Peak collector current	I_{CP}	8	A
Collector power dissipation	P_C	1	W
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-emitter voltage (Base open)	V_{CEO}	$I_C = 1$ mA, $I_B = 0$	20			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 10$ µA, $I_C = 0$	7			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 10$ V, $I_E = 0$			0.1	µA
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = 7$ V, $I_C = 0$			0.1	µA
Forward current transfer ratio *1	h_{FE1} *2	$V_{CE} = 2$ V, $I_C = 0.5$ A	180		600	—
	h_{FE}	$V_{CE} = 2$ V, $I_C = 2$ A	150			
Collector-emitter saturation voltage *1	$V_{CE(sat)}$	$I_C = 3$ A, $I_B = 0.1$ A			1	V
Transition frequency	f_T	$V_{CB} = 6$ V, $I_E = -50$ mA, f = 200 MHz		150		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = 20$ V, $I_E = 0$, f = 1 MHz			50	pF

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.
2. ∗1: Pulse measurement
∗2: Rank classification

Rank	P	Q	R
h_{FE1}	180 to 270	230 to 380	340 to 600

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

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Planned maintenance type
Planned discontinued type
Discontinued typed
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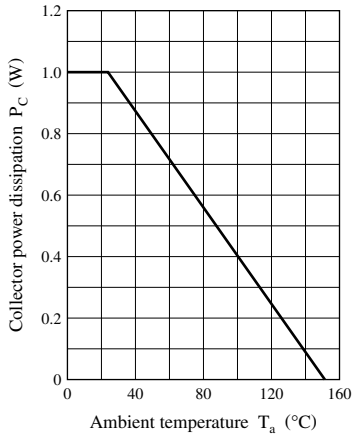
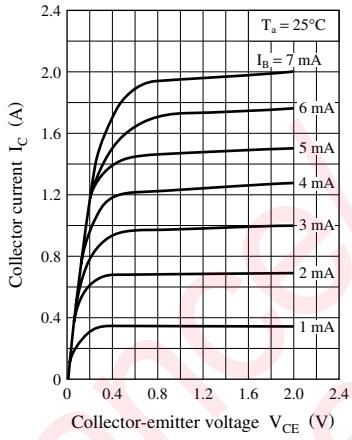
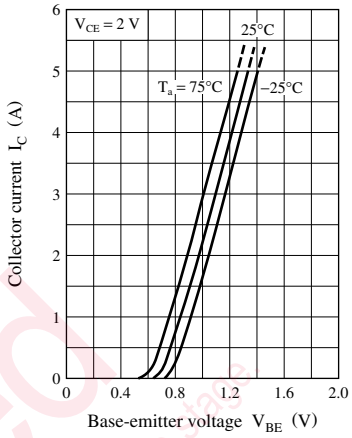
P_C — T_a



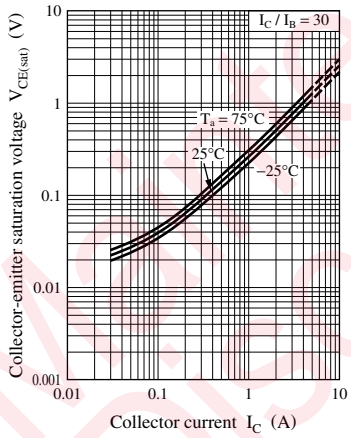
I_C — V_{CE}



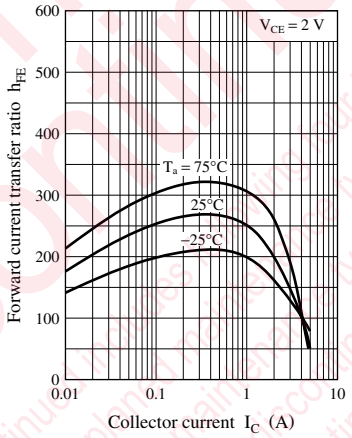
I_C — V_{BE}



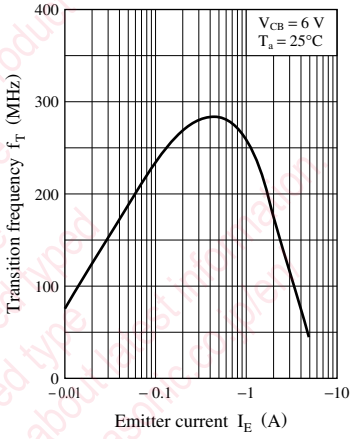
$V_{CE(sat)}$ — I_C



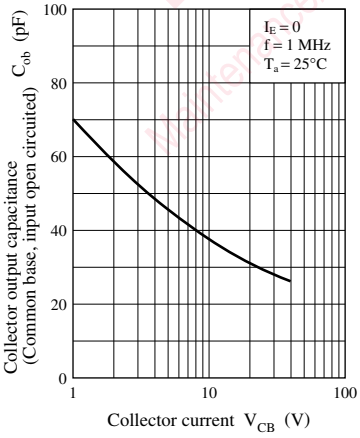
h_{FE} — I_C



f_T — I_E



C_{ob} — V_{CB}



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