2SB0968 (2SB968)

Silicon PNP epitaxial planar type

For low-frequency output amplification
Complementary to 2SD1295

■ Features

- Possible to solder radiation fin directly to printed circuit board
- High collector-emitter voltage (Base open) V_{CEO}
- Large collector power dissipation P_C

■ Package

- Code
  U-G2
- Pin Name
  1: Base
  2: Collector
  3: Emitter

■ Absolute Maximum Ratings $T_a = 25°C$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	−50	V
Collector-emitter voltage (Base open)	V_{CEO}	−40	V
Emitter-base voltage (Collector open)	V_{EBO}	−5	V
Collector current	I_C	−1.5	A
Peak collector current	I_{CP}	−3	A
Collector power dissipation ($T_C = 25°C$)	P_C	10	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

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

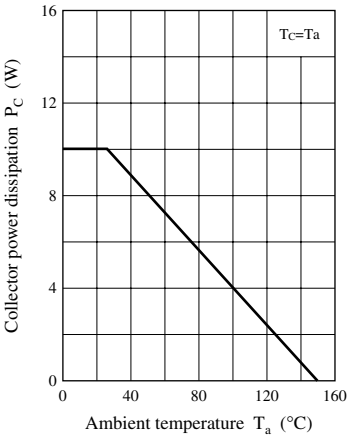
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = -1$ mA, $I_E = 0$	−50			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = -2$ mA, $I_B = 0$	−40			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = -20$ V, $I_E = 0$			−1	μA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = -10$ V, $I_B = 0$			−100	μA
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = -5$ V, $I_C = 0$			−10	μA
Forward current transfer ratio	h_{FE1} *	$V_{CE} = -5$ V, $I_C = -1$ A	80		220	—
	h_{FE2}	$V_{CE} = -5$ V, $I_C = -1$ mA	10			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -1.5$ A, $I_B = -0.15$ A			−1	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -2$ A, $I_B = -0.2$ A			−1.5	V
Transition frequency	f_T	$V_{CE} = -5$ V, $I_C = -0.5$ A, 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		45		pF

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

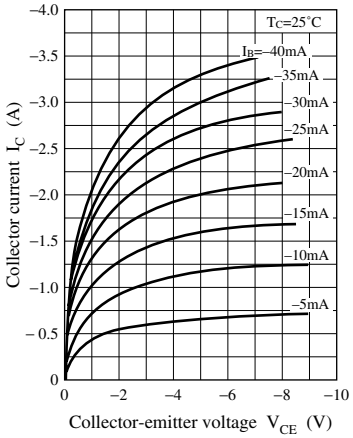
Rank	Q	R
h_{FE1}	80 to 160	120 to 220

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

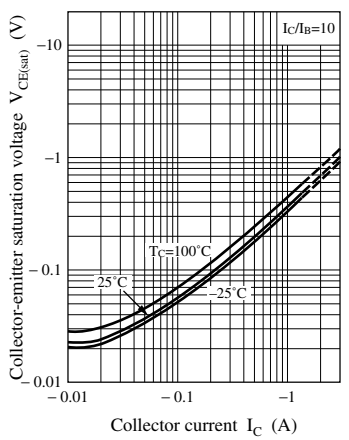
P_C — T_a



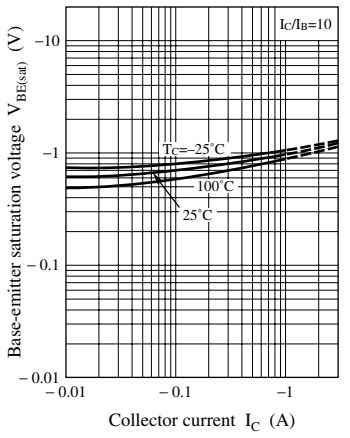
I_C — V_{CE}



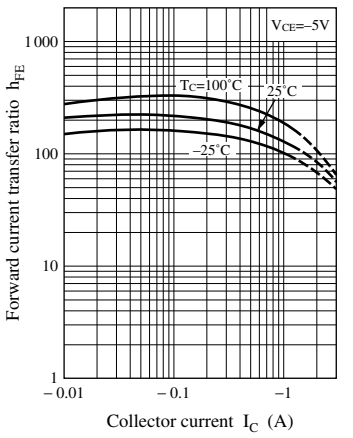
$V_{CE(sat)}$ — I_C



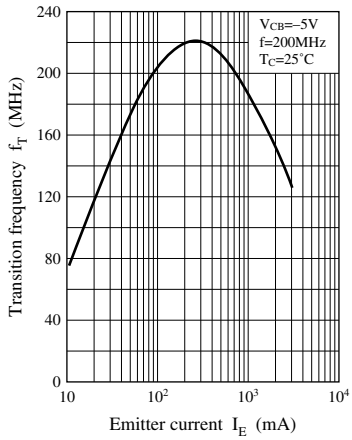
$V_{BE(sat)}$ — I_C



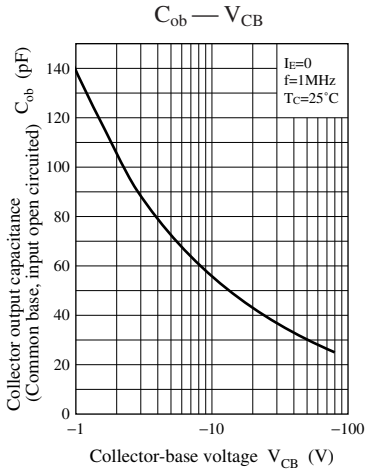
h_{FE} — I_C



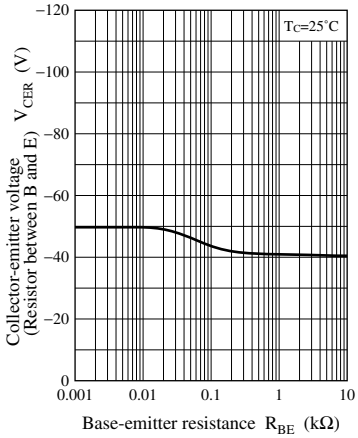
f_T — I_E



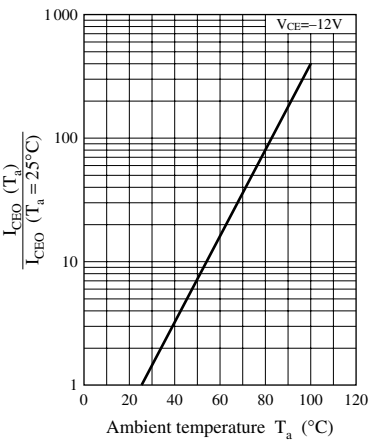
C_{ob} — V_{CB}



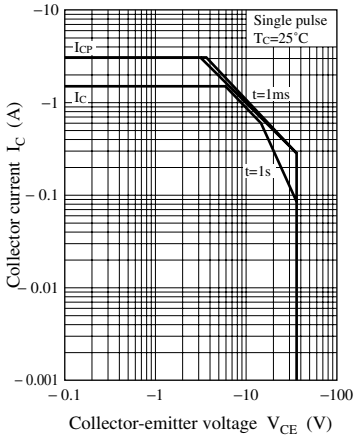
V_{CER} — R_{BE}



I_{CEO} — T_a

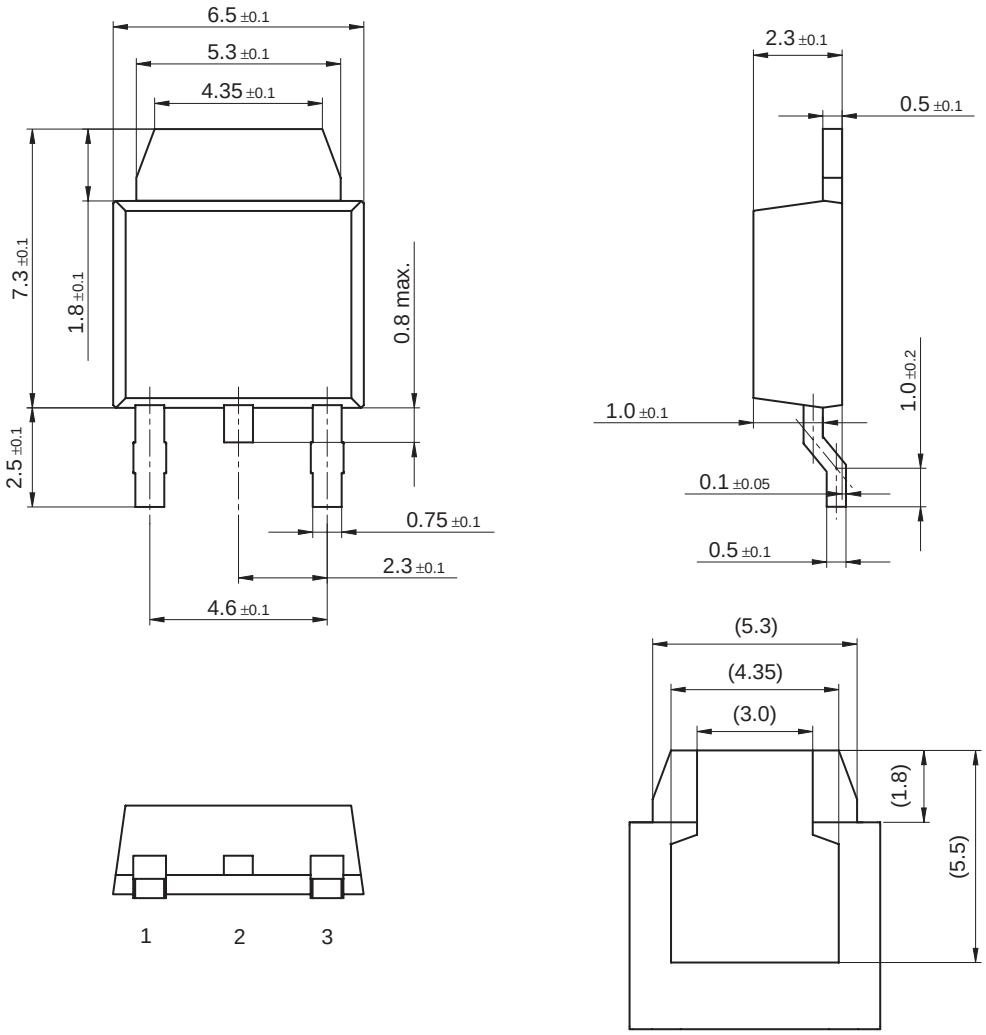


Safe operation area



U-G2

Unit: mm


6.5 ±0.1
5.3 ±0.1
4.35 ±0.1
7.3 ±0.1
1.8 ±0.1
0.8 max.
2.5 ±0.1
0.75 ±0.1
2.3 ±0.1
4.6 ±0.1
1
2
3
2.3 ±0.1
0.5 ±0.1
1.0 ±0.1
1.0 ±0.2
0.1 ±0.05
0.5 ±0.1
(5.3)
(4.35)
(3.0)
(1.8)
(5.5)

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