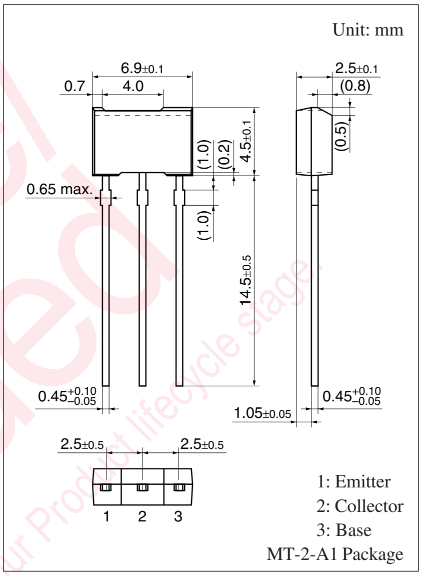
2SD2067

Silicon NPN epitaxial planar type

For low-frequency output amplification



■ Features

- Darlington connection
- High forward current transfer ratio h_{FE}
- Large peak collector current I_{CP}
- High collector-emitter voltage (Base open) V_{CEO}
- Allowing supply with the radial taping

■ Absolute Maximum Ratings $T_a = 25°C$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	120	V
Collector-emitter voltage (Base open)	V_{CEO}	100	V
Emitter-base voltage (Collector open)	V_{EBO}	5	V
Collector current	I_C	2	A
Peak collector current	I_{CP}	3	A
Collector power dissipation *	P_C	1	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

Note) *: Printed circuit board: Copper foil area of 1 cm^2 or more, and the board thickness of 1.7 mm for the collector portion

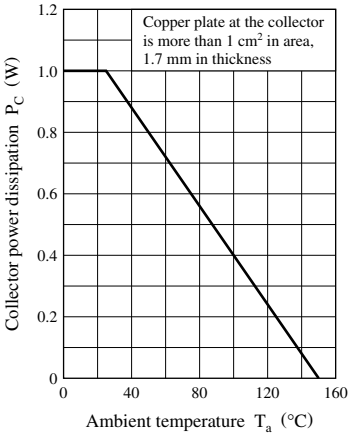
■ Electrical Characteristics $T_a = 25°C \pm 3°C$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = 100\ \mu A$, $I_E = 0$	120			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 1$ mA, $I_B = 0$	100			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 100\ \mu A$, $I_C = 0$	5			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 25$ V, $I_E = 0$			0.1	μA
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = 4$ V, $I_C = 0$			1	μA
Forward current transfer ratio *1, 2	h_{FE}	$V_{CE} = 10$ V, $I_C = 1$ A	4 000		40 000	—
Collector-emitter saturation voltage *1	$V_{CE(sat)}$	$I_C = 1$ A, $I_B = 1$ mA			1.5	V
Base-emitter saturation voltage *1	$V_{BE(sat)}$	$I_C = 1$ A, $I_B = 1$ mA			2	V

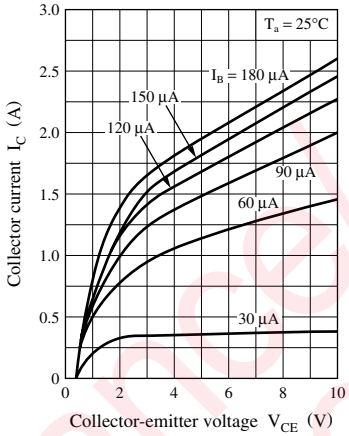
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.
2. *1: Pulse measurement
*2: Rank classification

Rank	Q	R	S
h_{FE}	4 000 to 10 000	8 000 to 20 000	16 000 to 40 000

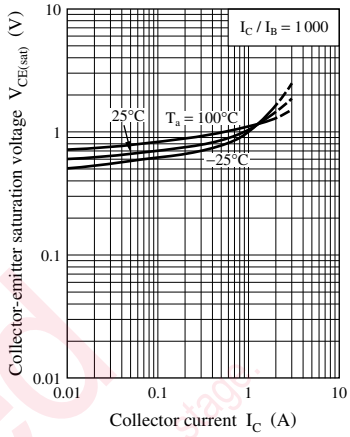
P_C — T_a



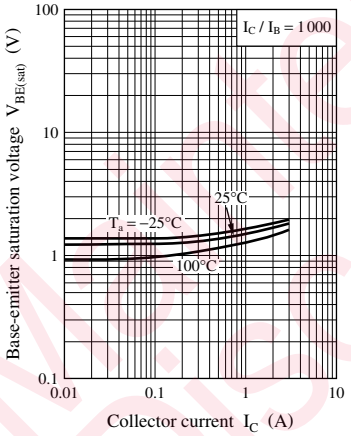
I_C — V_{CE}



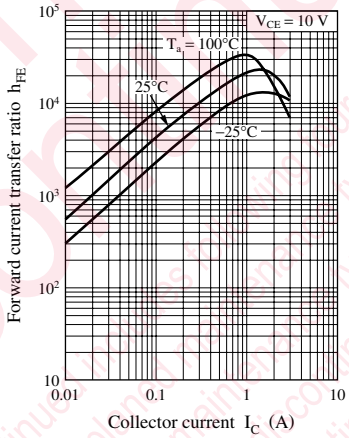
$V_{CE(sat)}$ — I_C



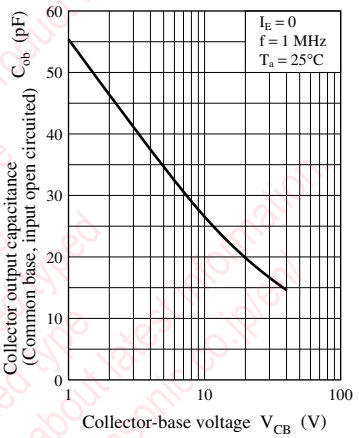
$V_{BE(sat)}$ — I_C



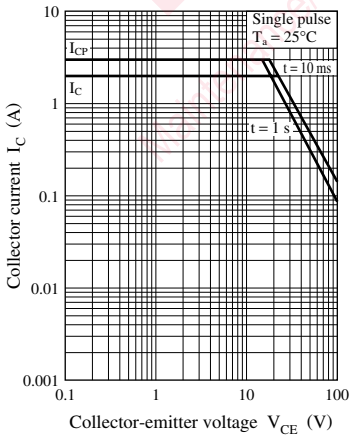
h_{FE} — I_C



C_{ob} — V_{CB}



Safe operation area



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