2SD0875 (2SD875)

Silicon NPN epitaxial planar type

For low-frequency power amplification Complementary to 2SB0767 (2SB767)

■ Features

- Large collector power dissipation P_C
- ullet High collector-emitter voltage (Base open) V_{CEO}
- Mini power type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

■ Absolute Maximum Ratings $T_a = 25$ °C

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V _{CBO}	80	V
Collector-emitter voltage (Base open)	V _{CEO}	80	V
Emitter-base voltage (Collector open)	V_{EBO}	5	V
Collector current	I_{C}	0.5	A
Peak collector current	I_{CP}	1	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 $\rm cm^2$ or more, and the board thickness of 1.7 mm for the collector portion

Unit: mm 4.5±0.1 1.6±0.2 1.5±0.1 0.4±0.08 1.5±0.1 1

Marking Symbol: X

■ Electrical Characteristics $T_a = 25$ °C ± 3 °C

Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	V _{CBO}	$I_C = 10 \mu\text{A}, I_E = 0$	80			V
Collector-emitter voltage (Base open)	V _{CEO}	$I_C = 100 \ \mu A, I_B = 0$	80			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 10 \ \mu A, I_C = 0$	5			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 20 \text{ V}, I_{E} = 0$			0.1	μΑ
Forward current transfer ratio	h _{FE1} *	V _{CE} = 10 V, I _C = 150 mA	130		330	_
	h _{FE2}	$V_{CE} = 50 \text{ V}, I_{C} = 500 \text{ mA}$	50	100		
Collector-emitter saturation voltage	V _{CE(sat)}	$I_C = 300 \text{ mA}, I_B = 30 \text{ mA}$		0.2	0.4	V
Base-emitter saturation voltage	V _{BE(sat)}	$I_C = 300 \text{ mA}, I_B = 30 \text{ mA}$		0.85	1.2	V
Transition frequency	f_T	$V_{CB} = 10 \text{ V}, I_E = -50 \text{ mA}, f = 200 \text{ MHz}$		120		MHz
Collector output capacitance	C _{ob}	$V_{CB} = 10 \text{ V}, I_{E} = 0, f = 1 \text{ MHz}$		11	20	pF
(Common base, input open circuited)						

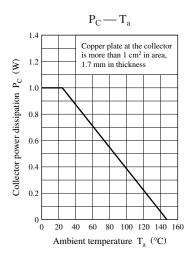
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

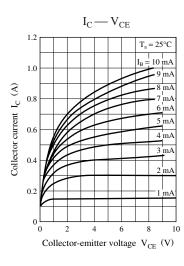
2. *: Rank classification

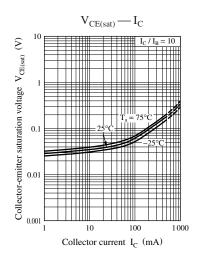
Rank	R	S
h _{FE1}	130 to 220	185 to 330

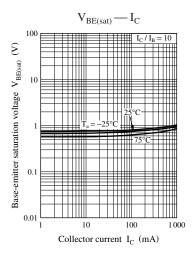
Note) The part number in the parenthesis shows conventional part number.

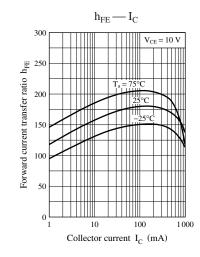
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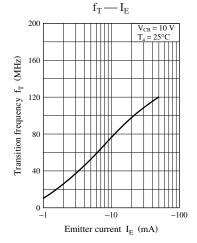


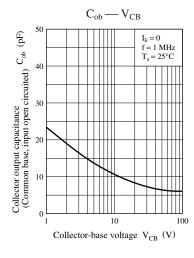


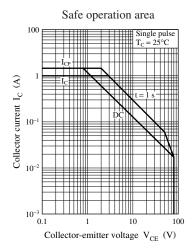












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