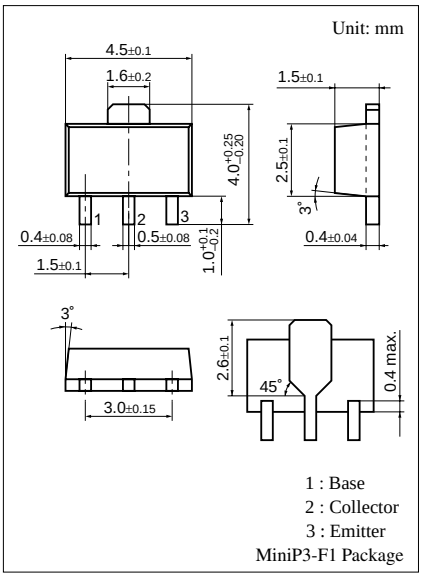
2SB0767 (2SB767)

Silicon PNP epitaxial planar type

For low-frequency output amplification
Complementary to 2SD0875 (2SD875)



Marking symbol: C

■ Features

- Large collector power dissipation P_C
- High collector to emitter voltage V_{CEO}
- Mini 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 to base voltage	V_{CBO}	−80	V
Collector to emitter voltage	V_{CEO}	−80	V
Emitter to base voltage	V_{EBO}	−5	V
Peak collector current	I_{CP}	−1	A
Collector current	I_C	− 0.5	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 $T_a = 25°C$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = −20 V, I_E = 0			− 0.1	μA
Collector to base voltage	V_{CBO}	I_C = −10 μA, I_E = 0	−80			V
Collector to emitter voltage	V_{CEO}	I_C = −100 μA, I_B = 0	−80			V
Emitter to base voltage	V_{EBO}	I_E = −10 μA, I_C = 0	−5			V
Forward current transfer ratio *1	h_{FE1} *2	V_{CE} = −10 V, I_C = −150 mA	90		220	
	h_{FE2}	V_{CE} = −5 V, I_C = −500 mA	50	100		
Collector to emitter saturation voltage *1	$V_{CE(sat)}$	I_C = −300 mA, I_B = −30 mA		− 0.2	− 0.4	V
Base to emitter saturation voltage *1	$V_{BE(sat)}$	I_C = −300 mA, I_B = −30 mA		− 0.85	−1.2	V
Transition frequency	f_T	V_{CB} = −10 V, I_E = 50 mA, f = 200 MHz		120		MHz
Collector output capacitance	C_{ob}	V_{CB} = −10 V, I_E = 0, f = 1 MHz		20	30	pF

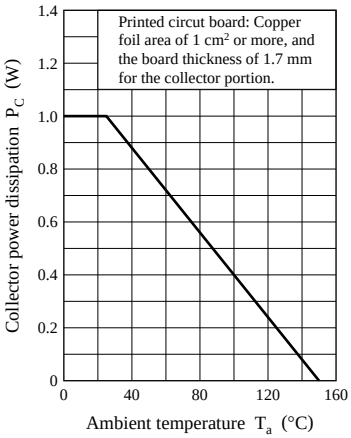
Note) ∗1: Pulse measurement

∗2: h_{FE} Rank classification

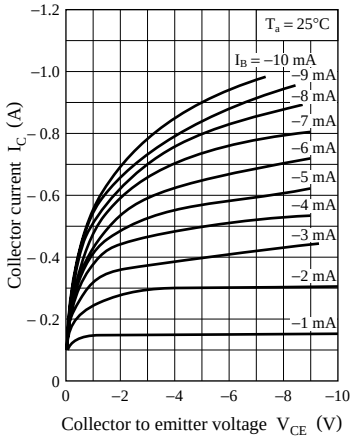
Rank	Q	R
h_{FE1}	90 to 155	130 to 220
Marking symbol	CQ	CR

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

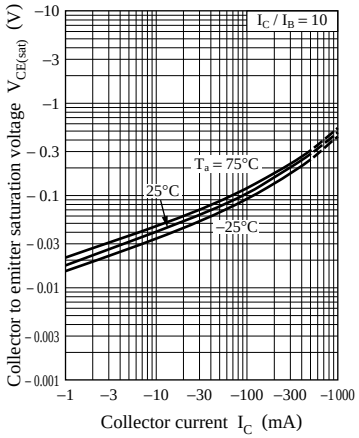
P_C — T_a



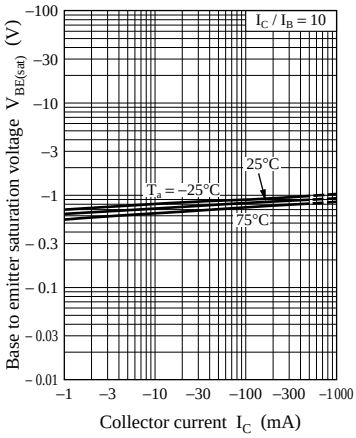
I_C — V_{CE}



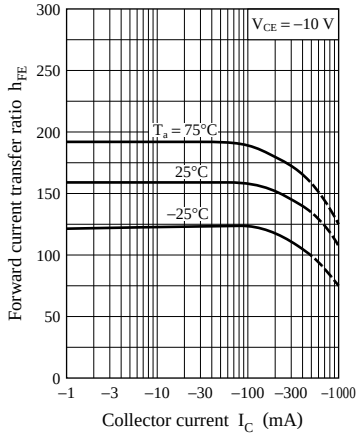
$V_{CE(sat)}$ — I_C



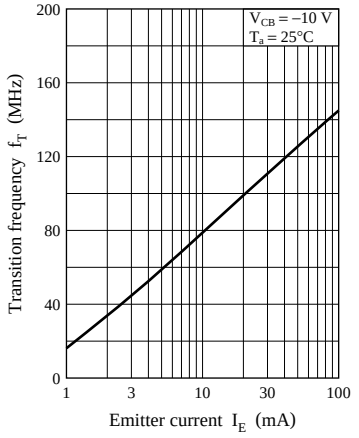
$V_{BE(sat)}$ — I_C



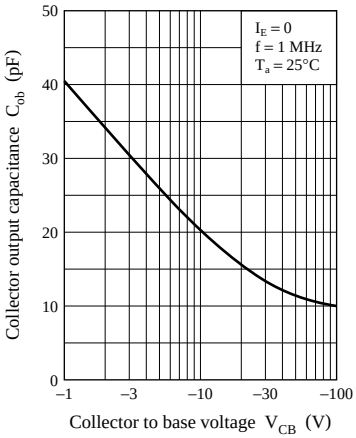
h_{FE} — I_C



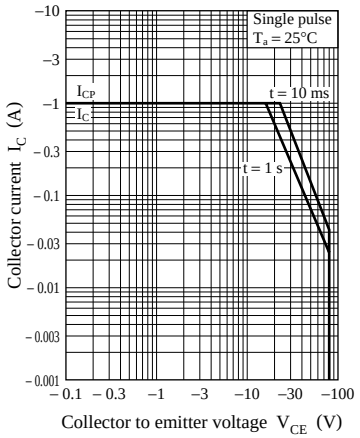
f_T — I_E



C_{ob} — V_{CB}



Area of safe operation (ASO)



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