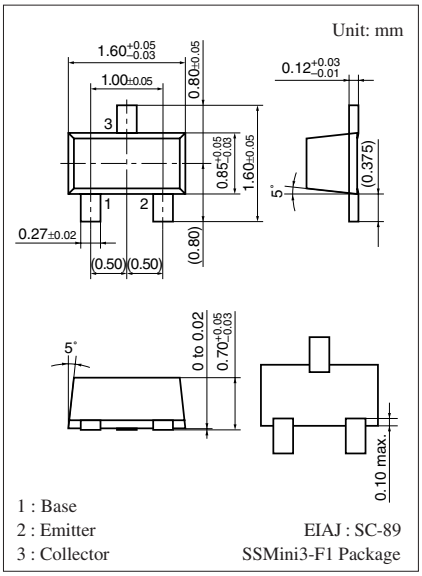
2SC4656J

Silicon NPN epitaxial planar type

For high-frequency amplification
Complementary to 2SA1791J

■ Features

- High transition frequency f_T
- Small collector output capacitance (Common base, input open circuited) C_{ob}
- SS-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing



Marking Symbol: AM

■ 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}	50	V
Emitter-base voltage (Collector open)	V_{EBO}	5	V
Collector current	I_C	50	mA
Collector power dissipation	P_C	125	mW
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	−55 to +125	°C

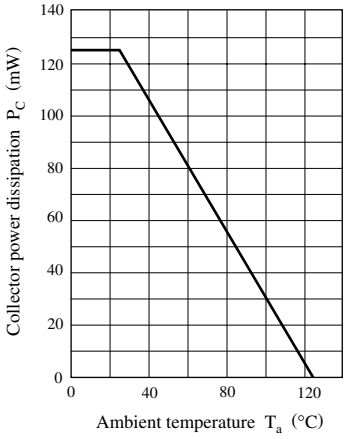
■ Electrical Characteristics $T_a = 25°C \pm 3°C$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	I_C = 10 µA, I_E = 0	50			V
Collector-emitter voltage (Base open)	V_{CEO}	I_C = 1 mA, I_B = 0	50			V
Emitter-base voltage (Collector open)	V_{EBO}	I_E = 10 µA, I_C = 0	5			V
Collector-base cutoff current (Emitter open)	I_{CBO}	V_{CB} = 10 V, I_E = 0			0.1	µA
Collector-emitter cutoff current (Base open)	I_{CEO}	V_{CE} = 10 V, I_B = 0			100	µA
Forward current transfer ratio *	h_{FE}	V_{CE} = 10 V, I_C = 2 mA	200		500	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 10 mA, I_B = 1 mA		0.06	0.3	V
Transition frequency	f_T	V_{CB} = 10 V, I_E = −2 mA, f = 200 MHz		250		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	V_{CB} = 10 V, I_E = 0, f = 1 MHz		1.5		pF

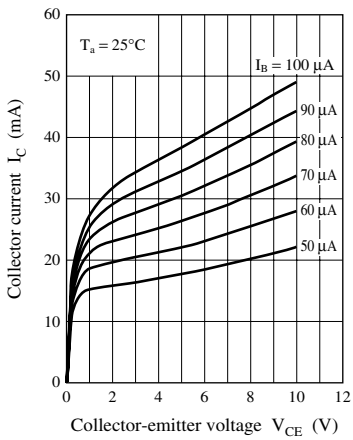
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.
2. *: Rank classification

Rank	Q	R
h_{FE}	200 to 400	250 to 500

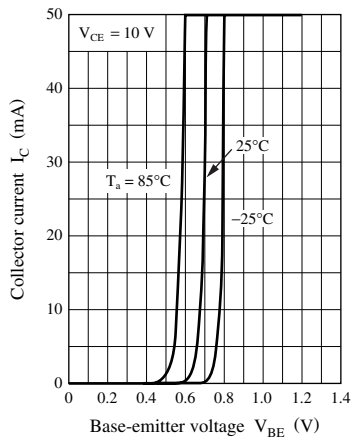
P_C — T_a



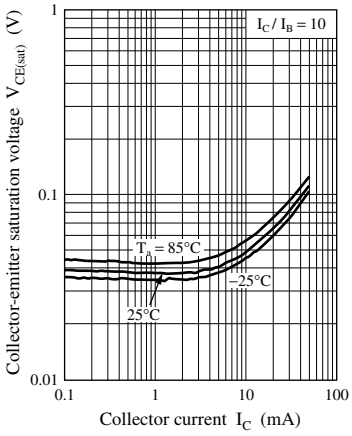
I_C — V_{CE}



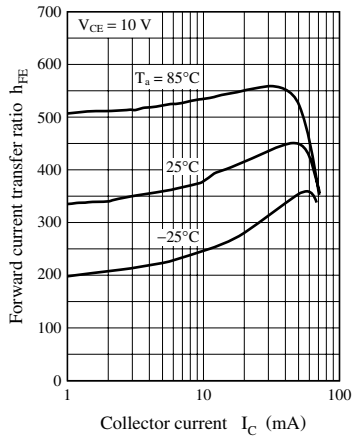
I_C — V_{BE}



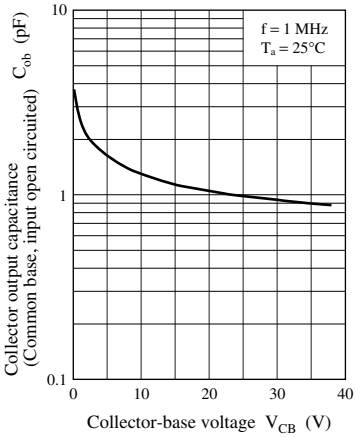
$V_{CE(sat)}$ — I_C



h_{FE} — I_C



C_{ob} — V_{CB}



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