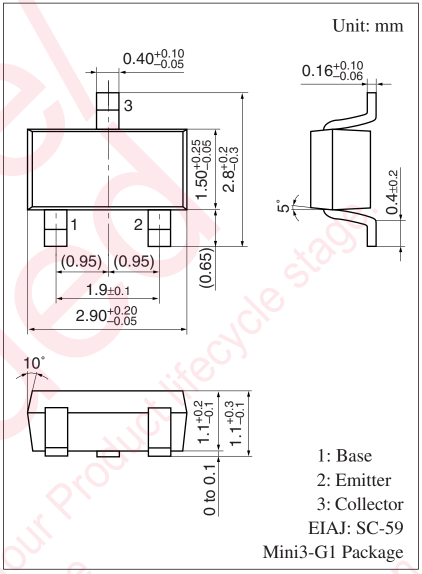
2SC2295

Silicon NPN epitaxial planar type

For high-frequency amplification
Complementary to 2SA1022



Marking Symbol: V

Features

- Optimum for RF amplification of FM/AM radios
- High transition frequency f_T
- 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-base voltage (Emitter open)	V_{CBO}	30	V
Collector-emitter voltage (Base open)	V_{CEO}	20	V
Emitter-base voltage (Collector open)	V_{EBO}	5	V
Collector current	I_C	30	mA
Collector power dissipation	P_C	200	mW
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 cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 10$ V, $I_E = 0$			0.1	µA
Forward current transfer ratio *	h_{FE}	$V_{CB} = 10$ V, $I_E = -1$ mA	70		220	—
Transition frequency	f_T	$V_{CB} = 10$ V, $I_E = -1$ mA, f = 200 MHz	150	250		MHz
Noise figure	NF	$V_{CB} = 10$ V, $I_E = -1$ mA, f = 5 MHz		2.8	4.0	dB
Reverse transfer impedance	Z_{rb}	$V_{CB} = 10$ V, $I_E = -1$ mA, f = 2 MHz		22	50	Ω
Reverse transfer capacitance (Common emitter)	C_{re}	$V_{CB} = 10$ V, $I_E = -1$ mA, f = 10.7 MHz		0.9	1.5	pF

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

Rank	B	C
h_{FE}	70 to 140	110 to 220

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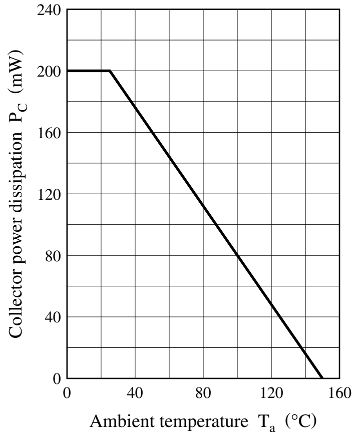
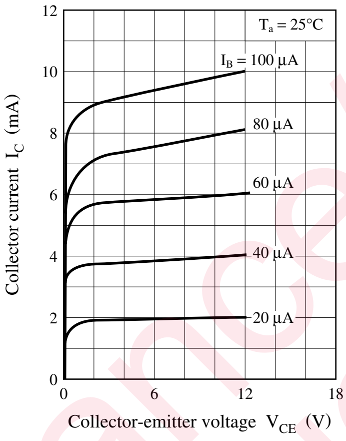
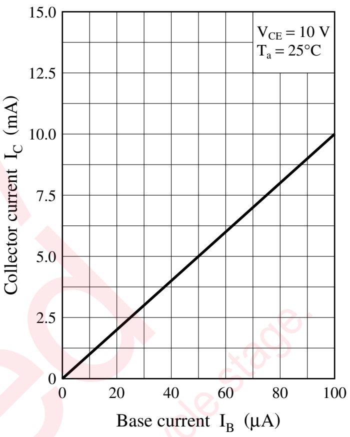
P_C — T_a



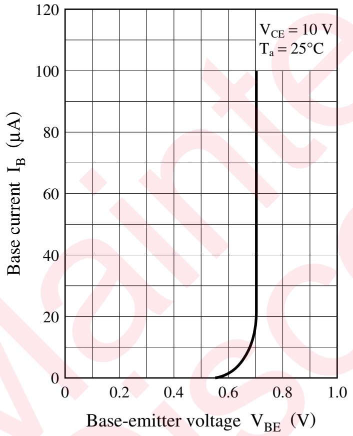
I_C — V_{CE}



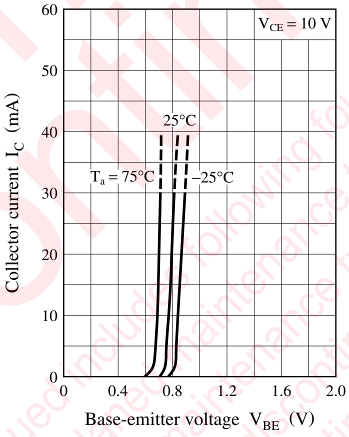
I_C — I_B



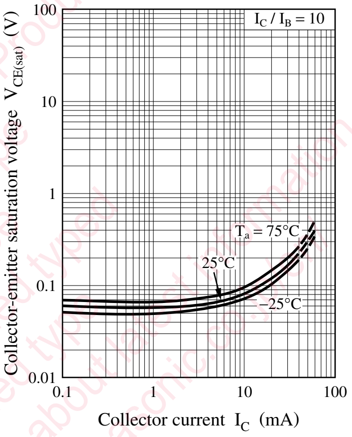
I_B — V_{BE}



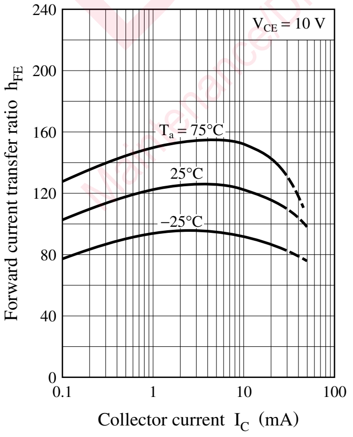
I_C — V_{BE}



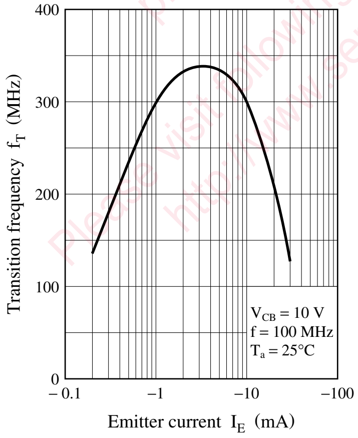
$V_{CE(sat)}$ — I_C



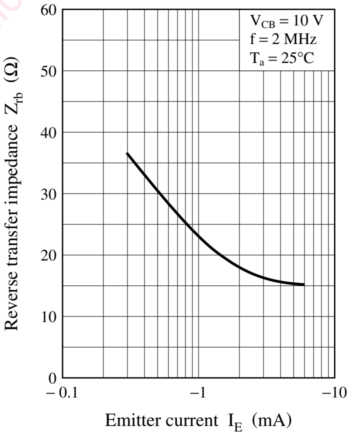
h_{FE} — I_C



f_T — I_E



Z_{rb} — I_E



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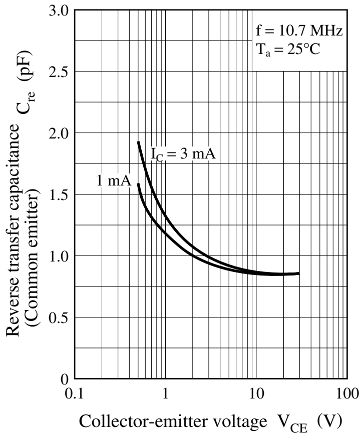
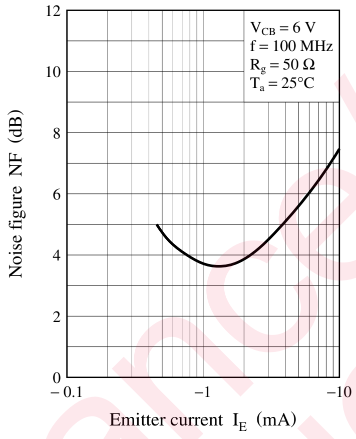
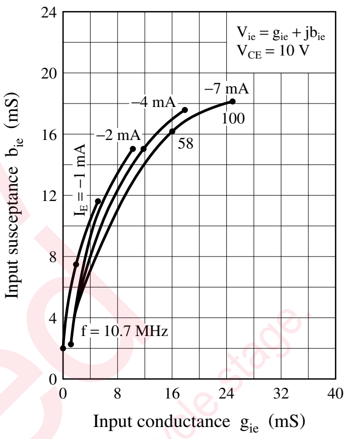
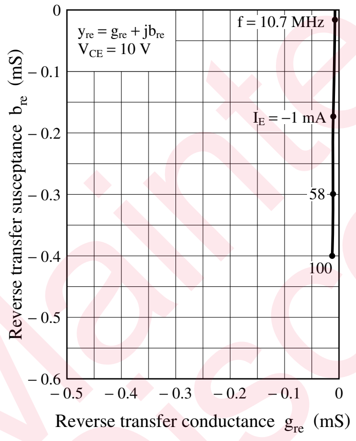
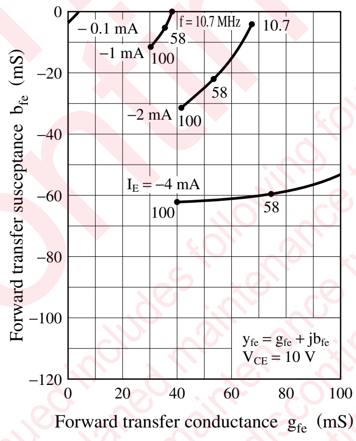
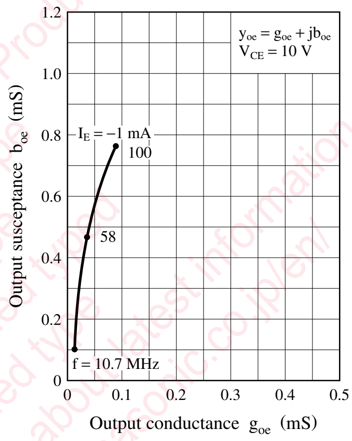

C_{re} — V_{CE}


NF — I_E


b_{ie} — g_{ie}


b_{re} — g_{re}


b_{fe} — g_{fe}


b_{oe} — g_{oe}

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