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Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



2SC3930

Silicon NPN epitaxial planar type

For high-frequency amplification

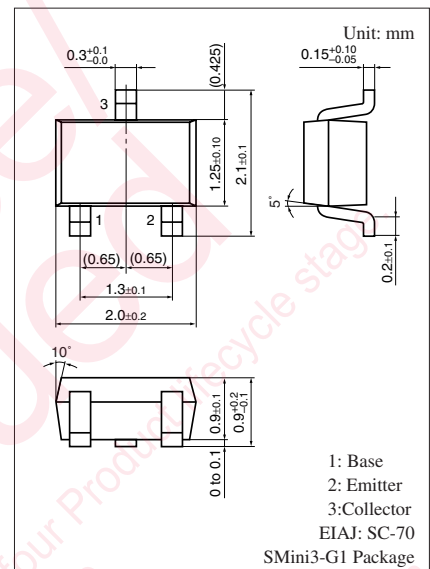
Complementary to 2SA1532

■ Features

- Optimum for RF amplification of FM/AM radios
- High transition frequency f_T
- S-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

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	150	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$



Marking Symbol: V

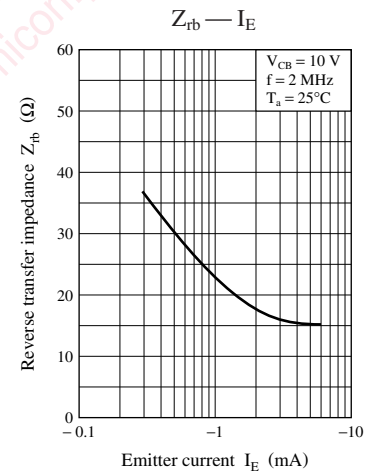
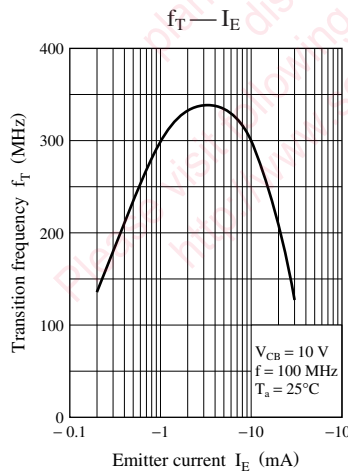
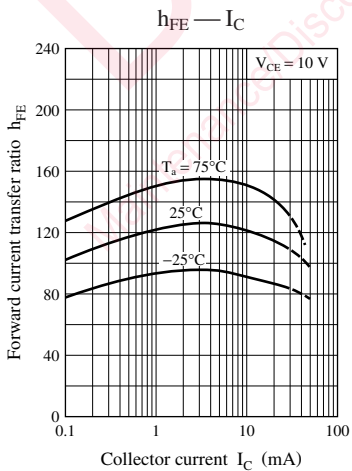
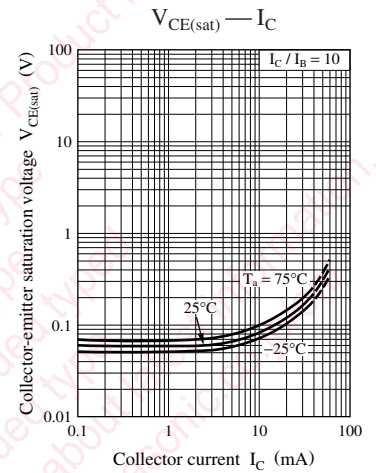
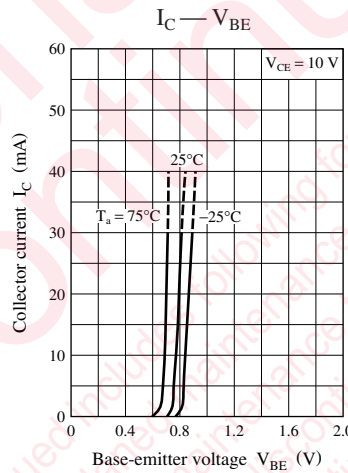
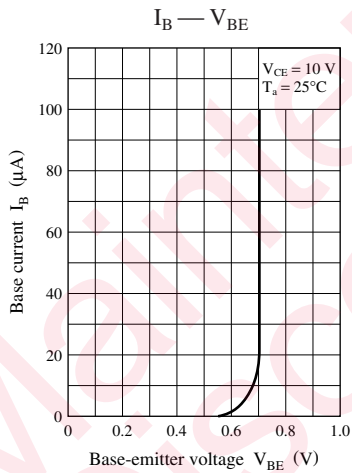
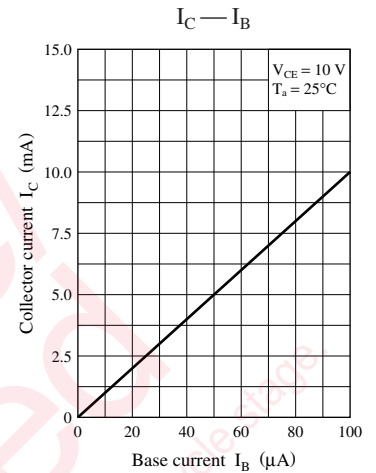
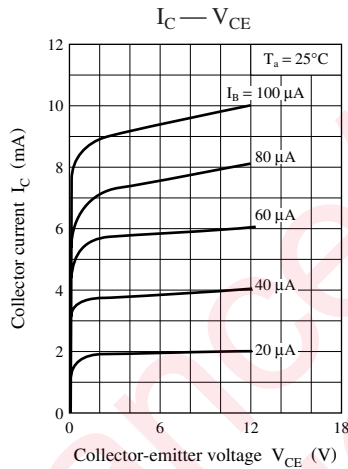
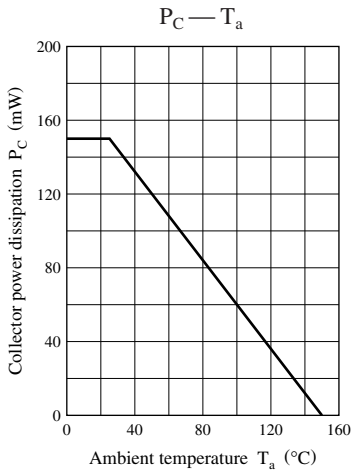
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

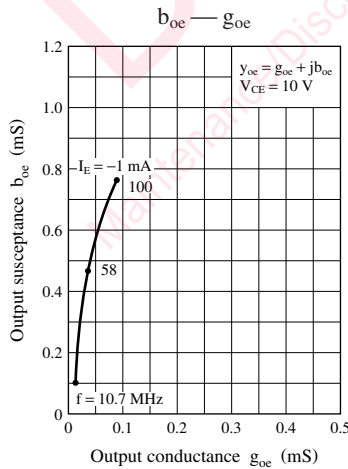
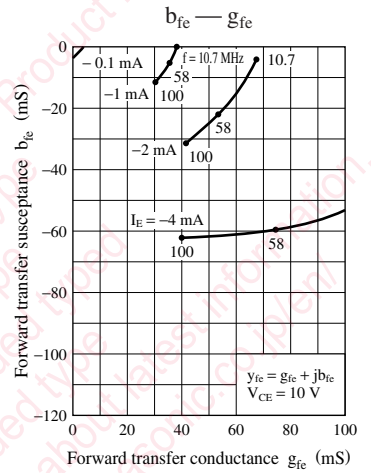
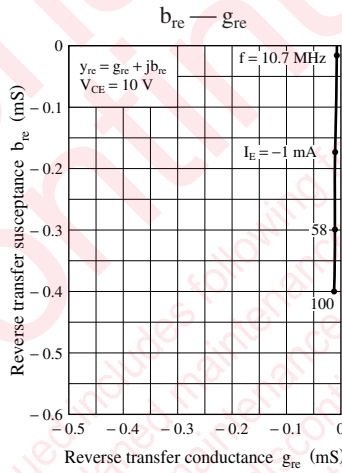
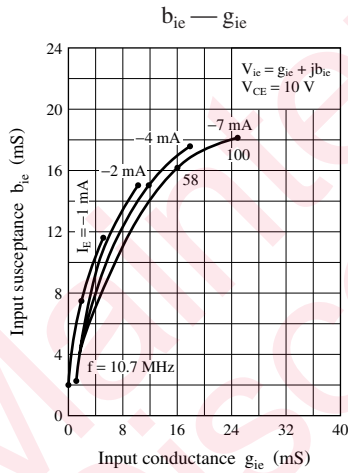
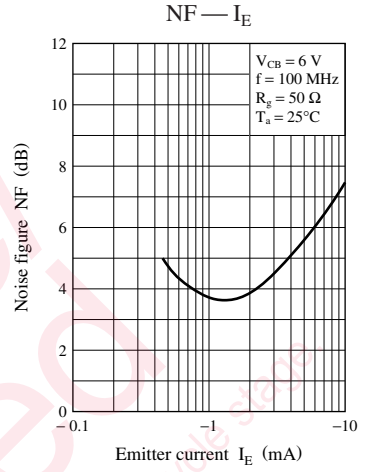
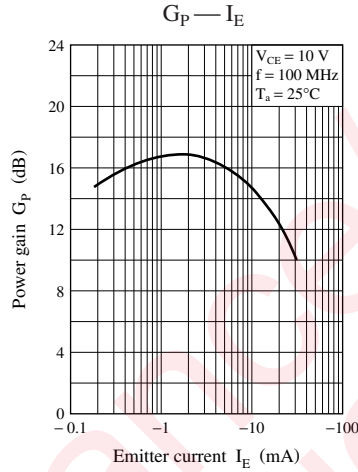
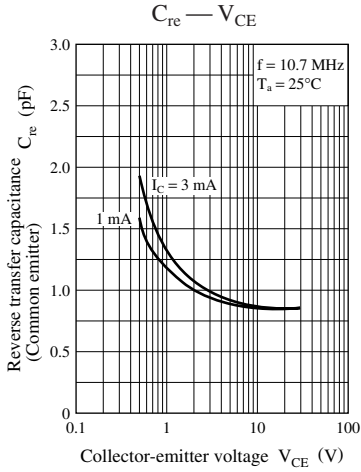
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 10\text{ V}, I_E = 0$			0.1	μA
Forward current transfer ratio *	h_{FE}	$V_{CB} = 10\text{ V}, I_E = -1\text{ mA}$	70		220	—
Transition frequency	f_T	$V_{CB} = 10\text{ V}, I_E = -1\text{ mA}, f = 200\text{ MHz}$	150	250		MHz
Noise figure	NF	$V_{CB} = 10\text{ V}, I_E = -1\text{ mA}, f = 5\text{ MHz}$		2.8	4.0	dB
Reverse transfer impedance	Z_{rb}	$V_{CB} = 10\text{ V}, I_E = -1\text{ mA}, f = 2\text{ MHz}$		22	50	Ω
Reverse transfer capacitance (Common emitter)	C_{re}	$V_{CB} = 10\text{ V}, I_E = -1\text{ mA}, f = 10.7\text{ MHz}$		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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