

NPN Silicon Epitaxial Planar Transistor

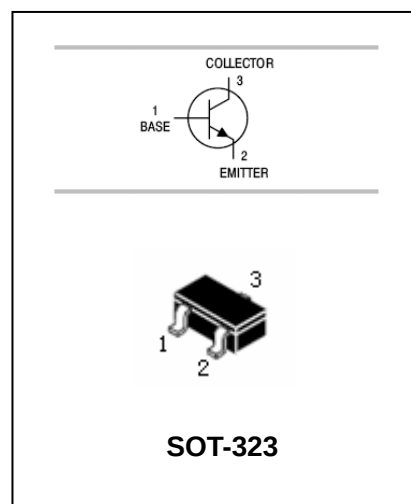
2SC3930W

FEATURES

- High transition frequency f_T .
- Optimum for RF amplification of FM/AM radios.
- For high-frequency amplification complementary to 2SA1532.



Lead-free



APPLICATIONS

- Audio frequency general purpose amplifier.

ORDERING INFORMATION

Type No.	Marking	Package Code
2SC3930W	VB/VC	SOT-323

MAXIMUM RATING @ $T_a=25^{\circ}\text{C}$ unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	30	mA
P_C	Collector Dissipation	150	mW
T_j, T_{stg}	Junction and Storage Temperature	-55~150	$^{\circ}\text{C}$

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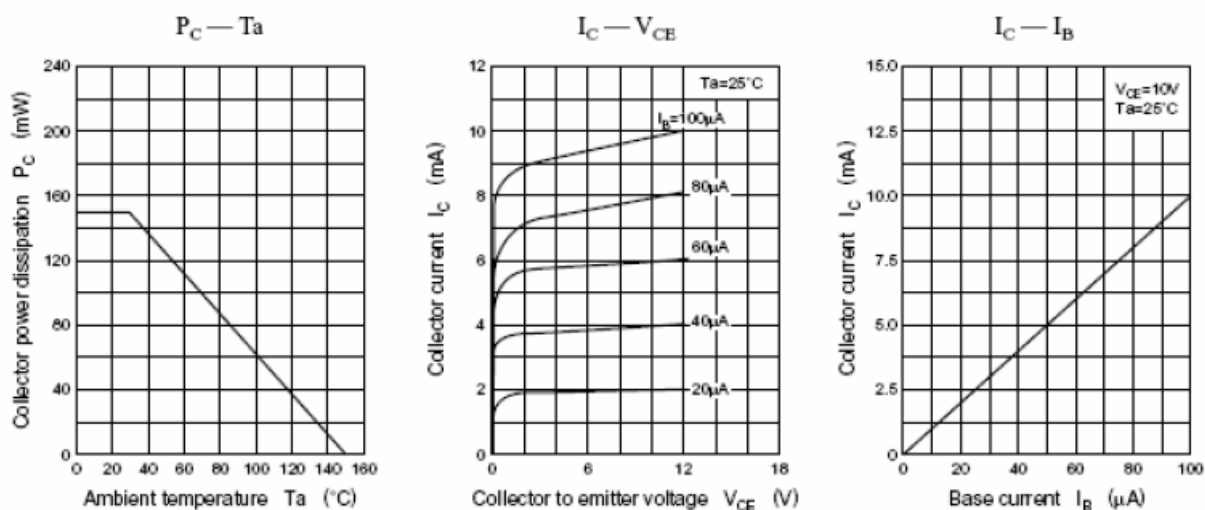
ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=100\mu A, I_B=0$	20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=10V, I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=10V, I_C=1mA$	70		220	
Transition frequency	f_T	$V_{CE}=10V, I_E=1mA$ $f=200MHz$	150			MHz
Common emitter reverse transfer capacitance	C_{re}	$V_{CE}=10V, I_E=1mA$ $f=10.7MHz$		1.5		pF
Noise figure	NF	$V_{CB}=10V, I_C=1mA, f=5MHz$		4		dB
Reverse transfer impedance	Z_{rb}	$V_{CB}=10V, I_C=1mA, f=2MHz$		50		Ω

CLASSIFICATION OF h_{FE}

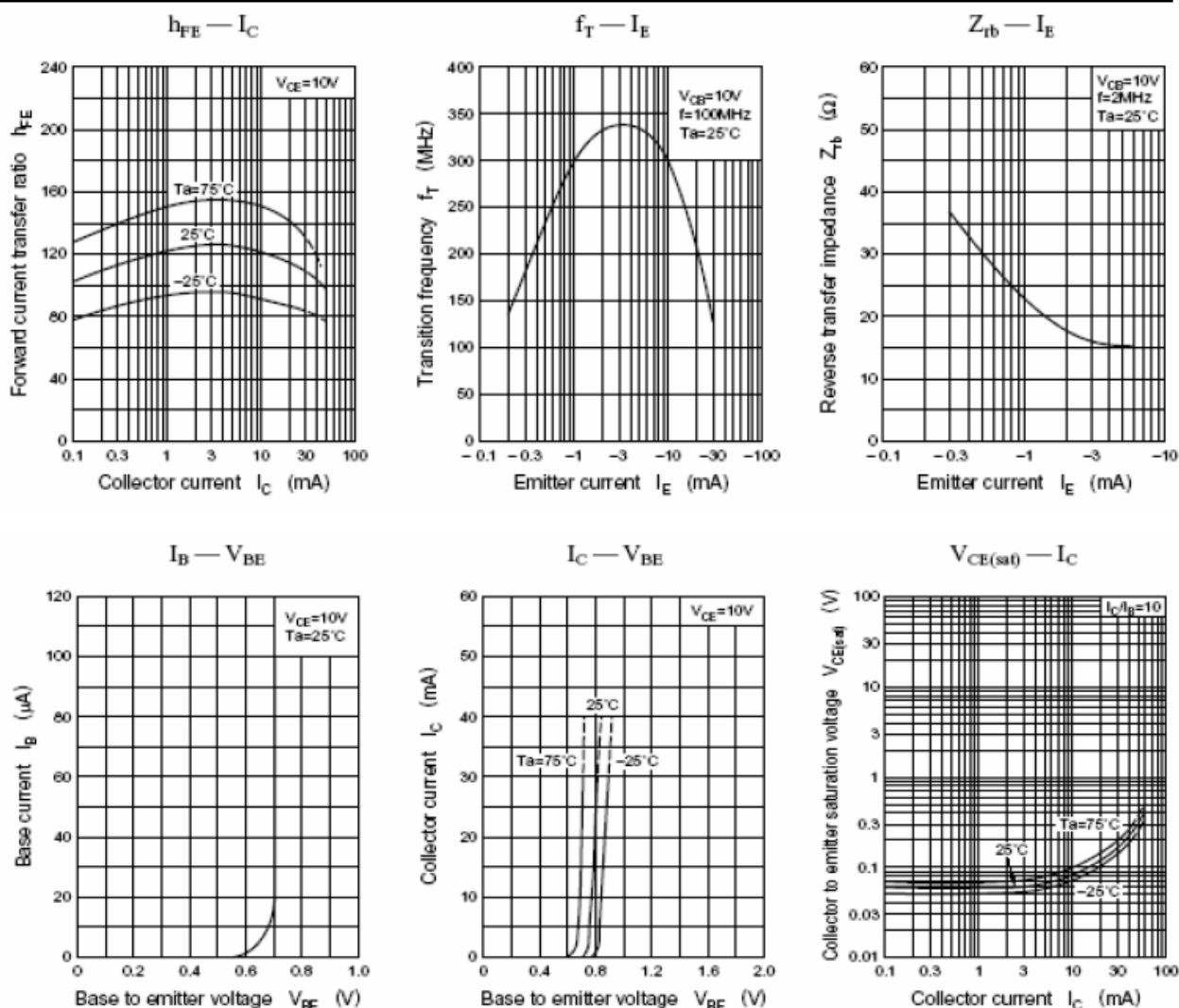
Marking	VB	VC
h_{FE}	70-140	110-220

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



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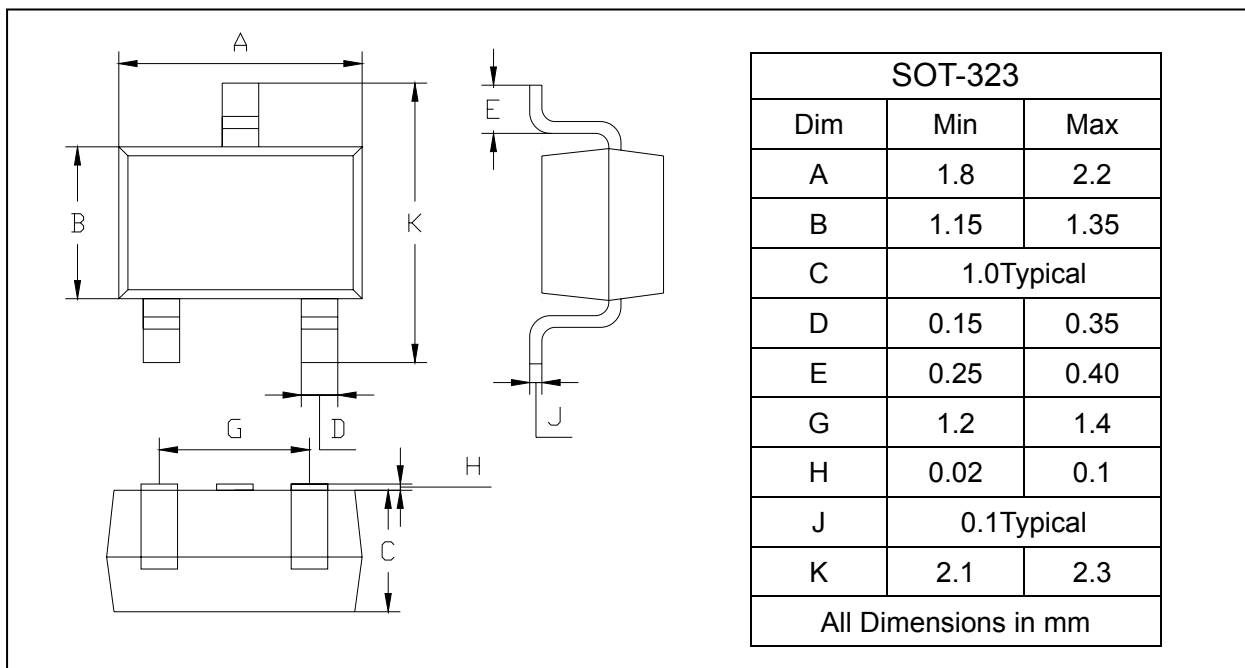
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PACKAGE OUTLINE

Plastic surface mounted package

SOT-323



PACKAGE INFORMATION

Device	Package	Shipping
2SC3930W	SOT-323	3000/Tape&Reel