Elektronische Bauelemente

2SC3930

0.03A , 30V

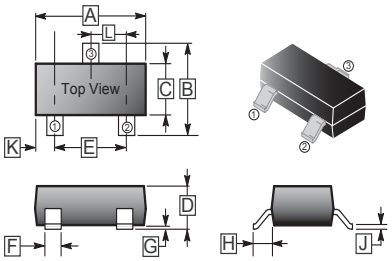
NPN Silicon Epitaxial Planar Transistor

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURE

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

SOT-323



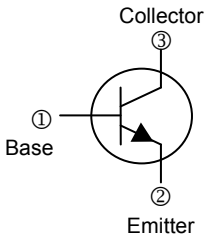
REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.80	2.20	G	0.100 REF.	
B	1.80	2.45	H	0.525 REF.	
C	1.15	1.35	J	0.08	0.25
D	0.80	1.10	K	-	-
E	1.20	1.40	L	0.650 TYP.	
F	0.20	0.40			

CLASSIFICATION OF h_{FE}

Product-Rank	2SC3930-VB	2SC3930-VC
Range	70~140	110~220

PACKAGE INFORMATION

Package	MPQ	LeaderSize
SOT-323	3K	7' inch



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	V_{CBO}	30	V
Collector to Emitter Voltage	V_{CEO}	20	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current – Continuous	I_C	30	mA
Collector Power Dissipation	P_C	150	mW
Junction, Storage Temperature	T_J, T_{STG}	150, -55~150	℃

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Testing Condition
Collector-base breakdown voltage	$V_{(BR)CBO}$	30	-	-	V	I_C=100μA, I_E=0
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	20	-	-	V	I_C=100μA, I_B=0
Emitter-base breakdown voltage	$V_{(BR)EBO}$	5	-	-	V	I_E=100μA, I_C=0
Collector Cut-off Current	I_{CBO}	-	-	0.1	μA	V_{CB}=10V, I_E=0
Emitter Cut-off Current	I_{EBO}	-	-	0.1	μA	V_{EB}=5V, I_C=0
DC Current Gain	h_{FE}	70	-	220		V_{CE}=10V, I_C=1mA
Transition Frequency	f_T	150	-	-	MHz	V_{CE}=10V, I_E=1mA, f=200MHz
Common emitter reverse transfer capacitance	C_{re}	-	-	1.5	pF	V_{CB}=10V, I_C=1mA, f=10.7MHz
Noise Figure	NF	-	-	4	dB	V_{CB}=10V, I_C=1mA, f=5MHz
Reverse transfer impedance	Z_{rb}	-	-	50	Ω	V_{CB}=10V, I_C=1mA, f=2MHz

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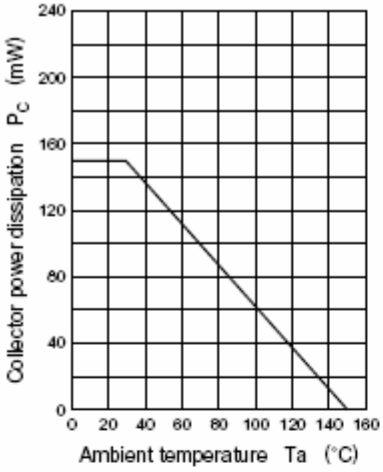
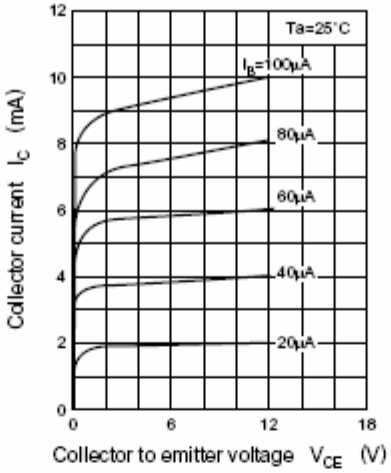
CHARACTERISTIC CURVES

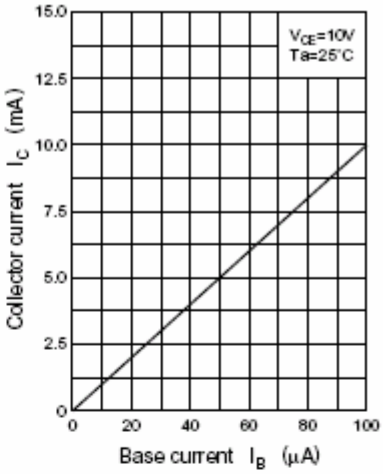
P_C — Ta



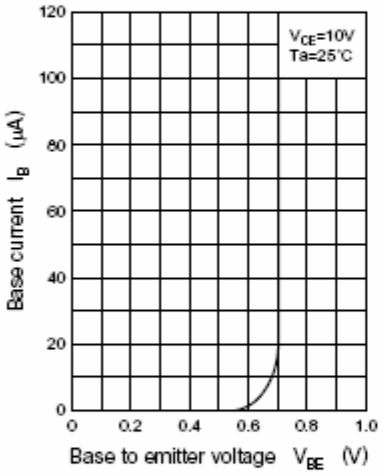
I_C — V_{CE}



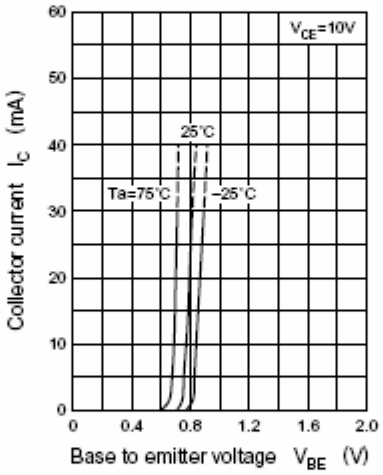
I_C — I_B



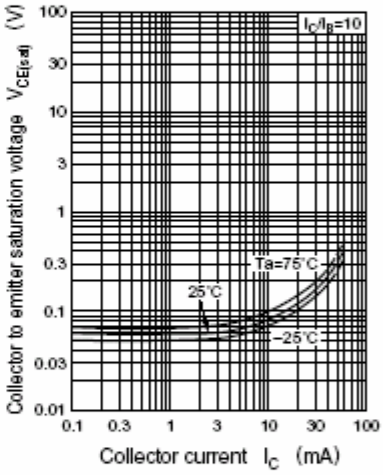
I_B — V_{BE}



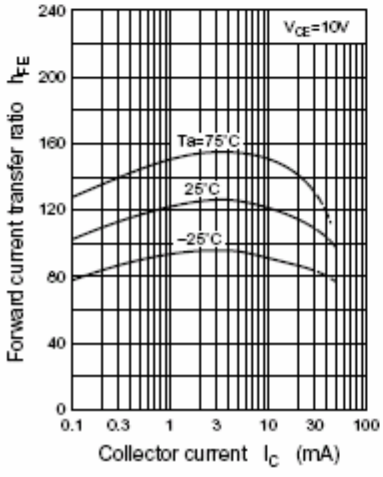
I_C — V_{BE}



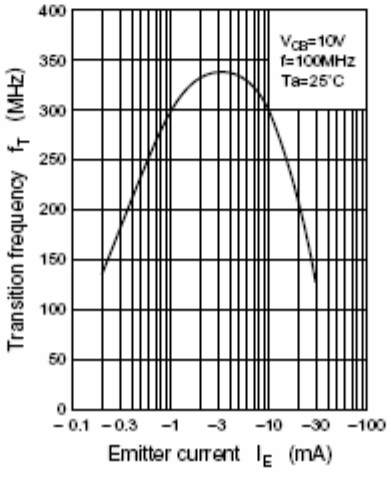
$V_{CE(sat)}$ — I_C



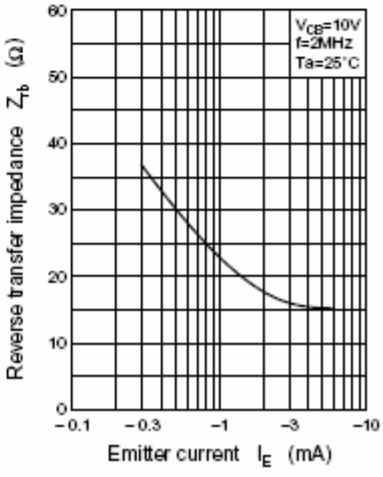
h_{FE} — I_C



f_T — I_E



Z_{rb} — I_E



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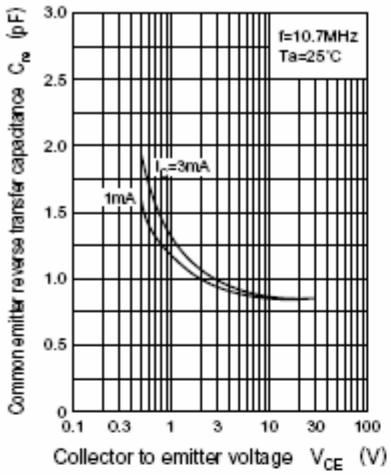
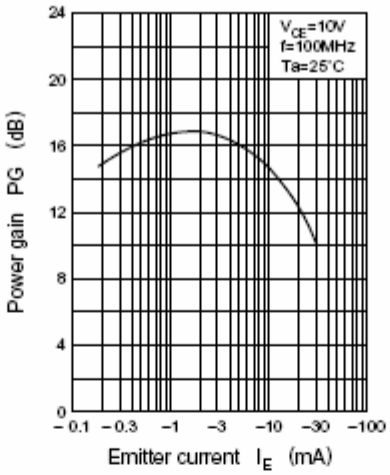
CHARACTERISTIC CURVES

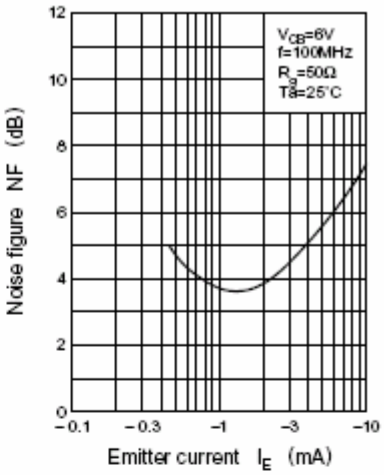
C_{re} — V_{CE}



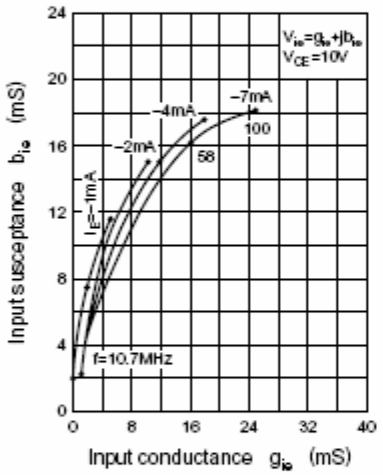
PG — I_E



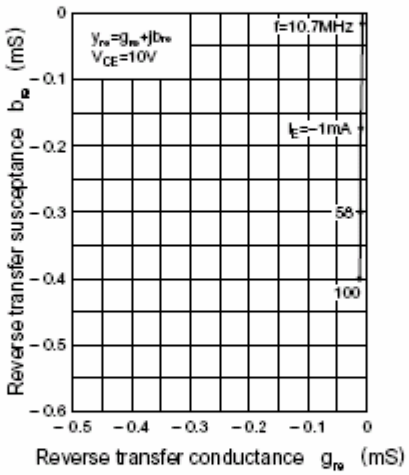
NF — I_E



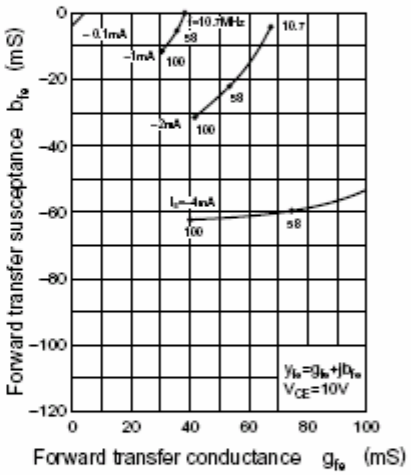
b_{ie} — g_{ie}



b_{re} — g_{re}



b_{fe} — g_{fe}



b_{oe} — g_{oe}