

# 2SC3930

## Silicon NPN epitaxial planer type

For high-frequency amplification

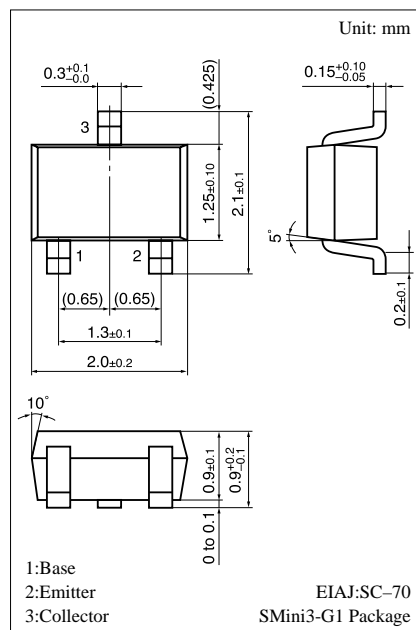
Complementary to 2SA1532

### 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 and the magazine packing.

### Absolute Maximum Ratings (Ta=25°C)

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	$I_C$	30	mA
Collector power dissipation	$P_C$	150	mW
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 ~ +150	°C



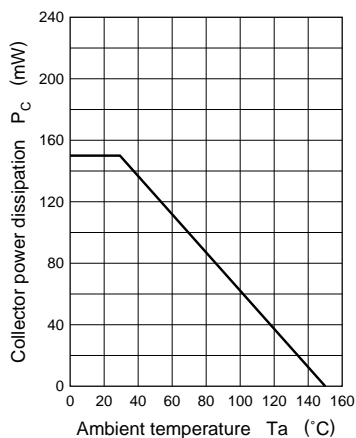
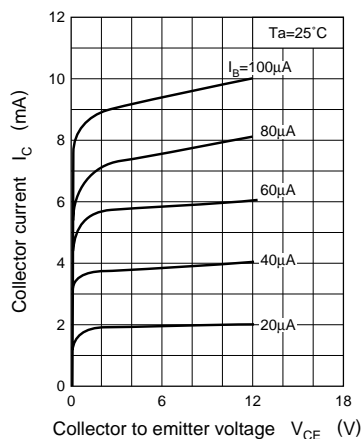
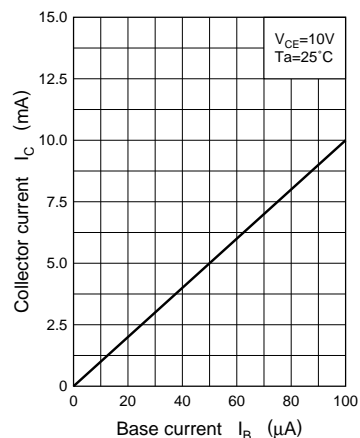
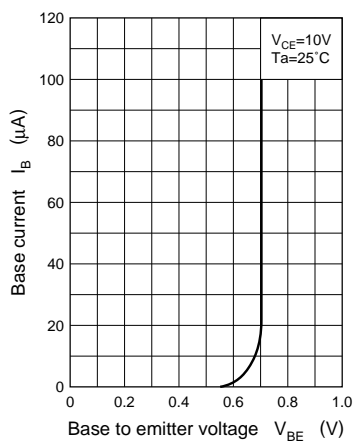
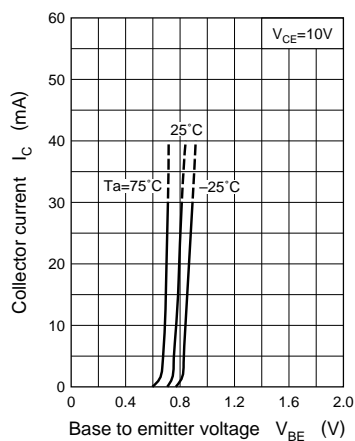
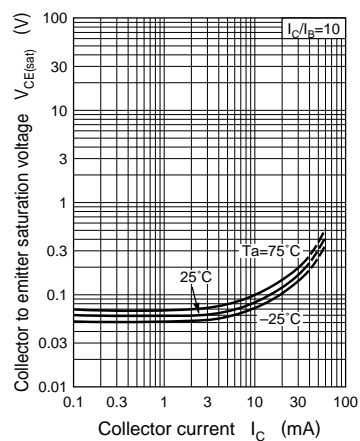
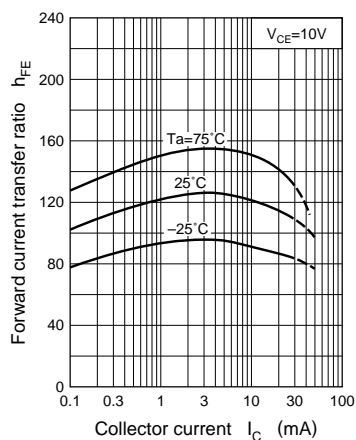
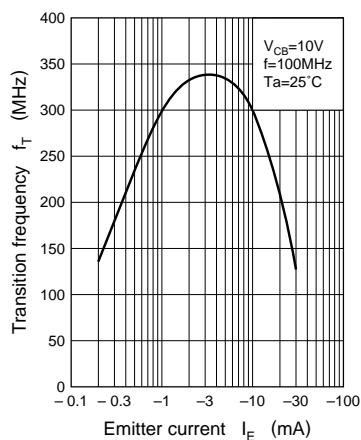
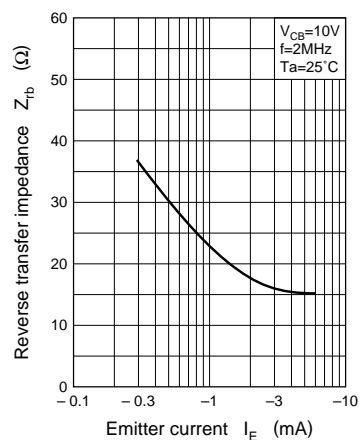
Marking symbol : V

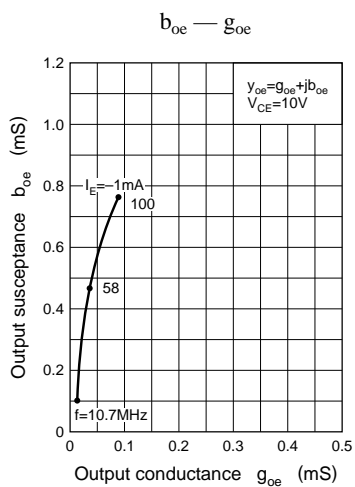
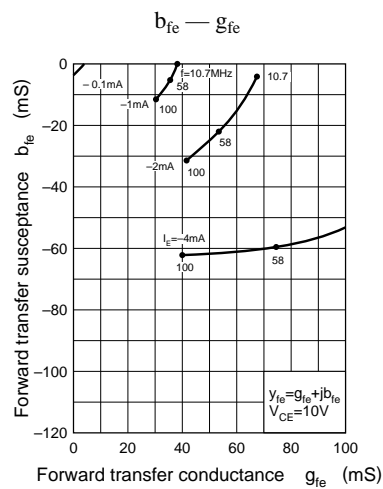
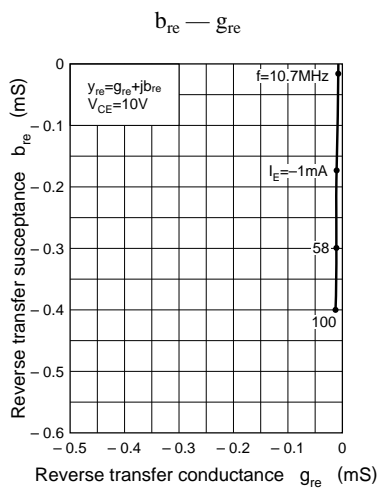
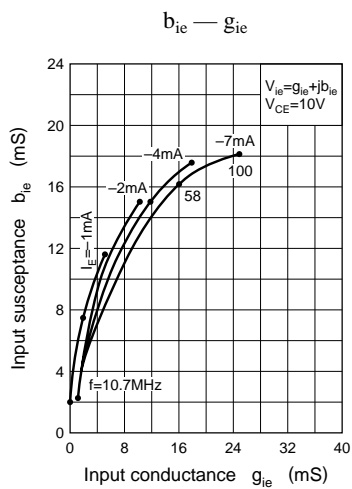
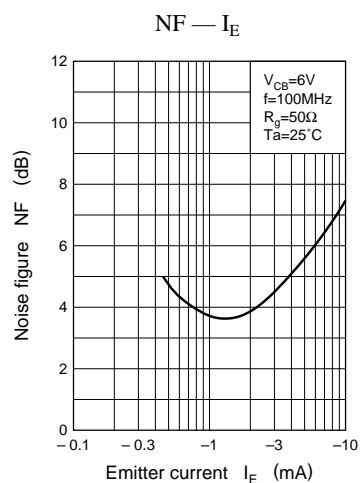
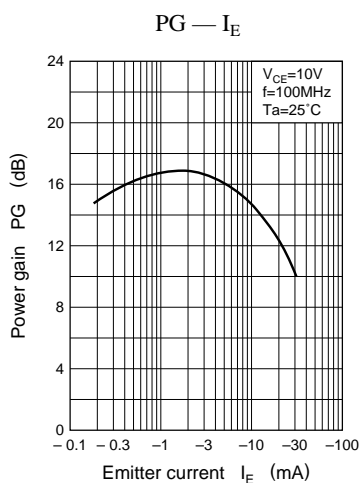
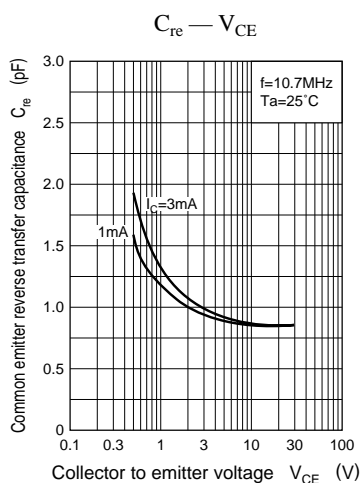
### Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = 10V, I_E = 0$			0.1	$\mu A$
Forward current transfer ratio	$h_{FE}^*$	$V_{CB} = 10V, I_E = -1mA$	70		220	
Transition frequency	$f_T$	$V_{CB} = 10V, I_E = -1mA, f = 200MHz$	150	250		MHz
Noise figure	NF	$V_{CB} = 10V, I_E = -1mA, f = 5MHz$		2.8	4	dB
Reverse transfer impedance	$Z_{rb}$	$V_{CB} = 10V, I_E = -1mA, f = 2MHz$		22	50	$\Omega$
Common emitter reverse transfer capacitance	$C_{re}$	$V_{CE} = 10V, I_C = 1mA, f = 10.7MHz$		0.9	1.5	pF

\* $h_{FE}$  Rank classification

Rank	B	C
$h_{FE}$	70 ~ 140	110 ~ 220
Marking Symbol	VB	VC

$P_C - T_a$  $I_C - V_{CE}$  $I_C - I_B$  $I_B - V_{BE}$  $I_C - V_{BE}$  $V_{CE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_E$  $Z_{rb} - I_E$ 



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