

## GSC945

### NPN EPITAXIAL SILICON TRANSISTOR

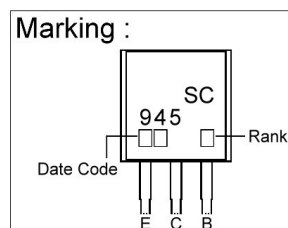
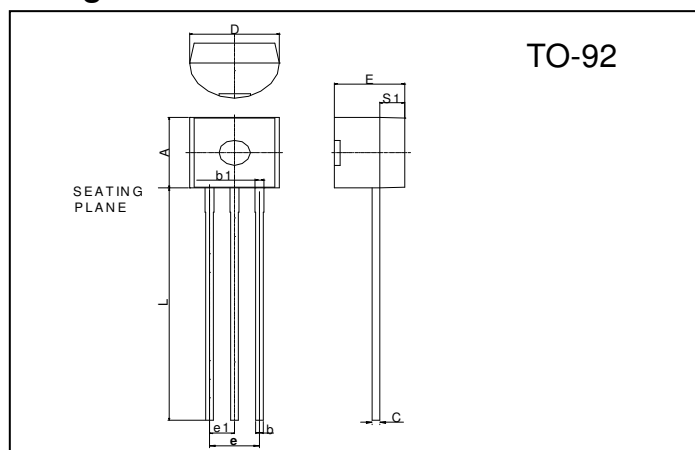
#### Description

The GSC945 is an audio frequency amplifier high frequency OSC NPN transistor.

#### Features

- Collector-Emitter Voltage  $BV_{CBO}=50V$
- Collector current up to 150mA
- High  $h_{FE}$  linearity

#### Package Dimensions



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.45	4.7	D	4.44	4.7
S1	1.02	-	E	3.30	3.81
b	0.36	0.51	L	12.70	-
b1	0.36	0.76	e1	1.150	1.390
C	0.36	0.51	e	2.42	2.66

#### Absolute Maximum Ratings ( $T_A=25^{\circ}C$ )

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	$V_{CBO}$	60	V
Collector to Emitter Voltage	$V_{CEO}$	50	V
Emitter to Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	150	mA
Base Current	$I_B$	50	mA
Total Device Dissipation	PD	250	mW
Junction Temperature	$T_J$	125	$^{\circ}C$
Storage Temperature	$T_{stg}$	-55 ~ +150	$^{\circ}C$

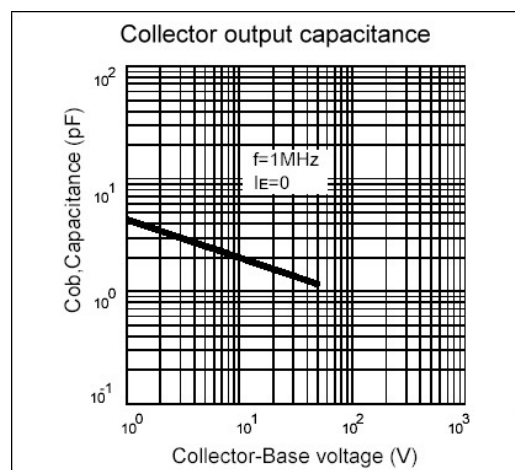
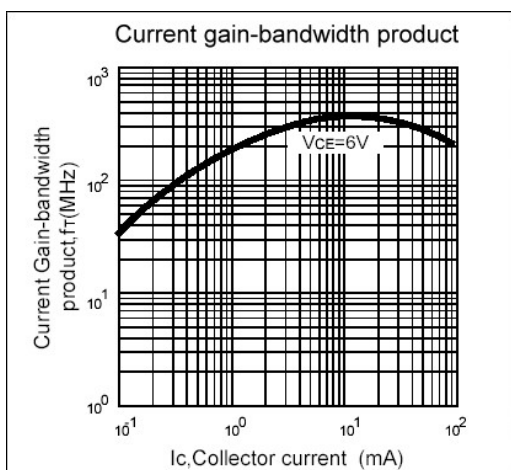
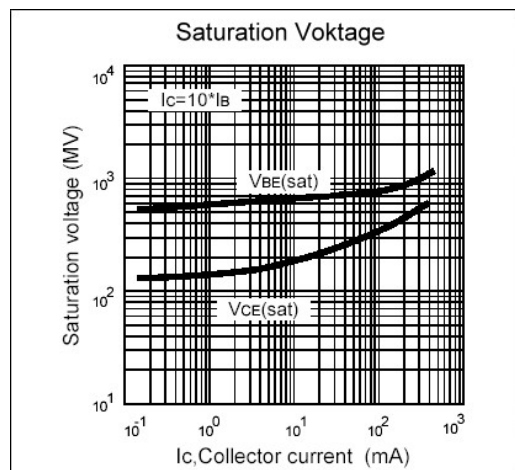
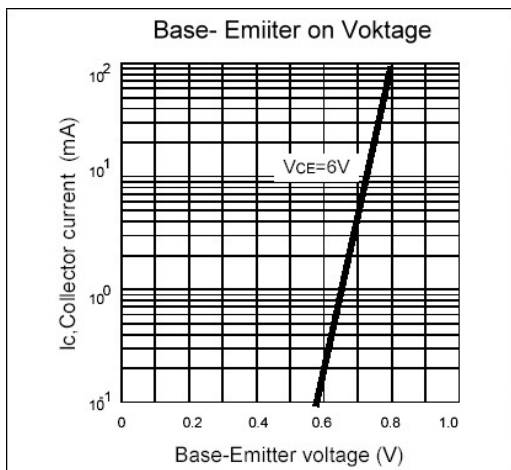
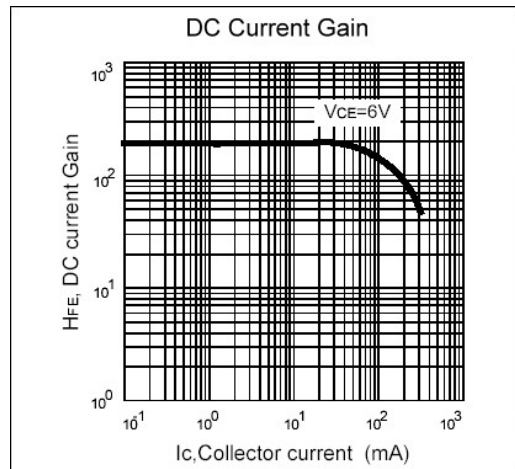
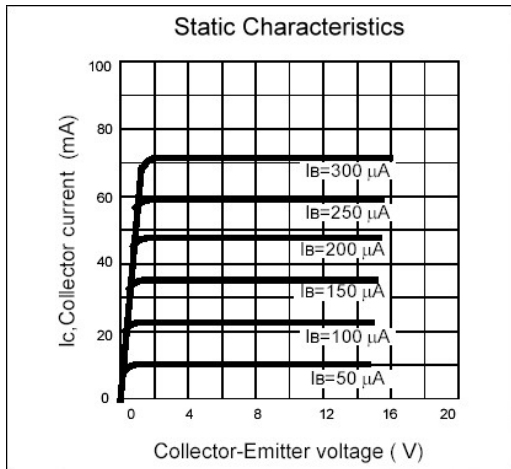
#### Electrical Characteristics ( $T_A = 25^{\circ}C$ unless otherwise noted)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
$BV_{CBO}$	60	-	-	V	$I_C=100\mu A, I_E=0$
$BV_{CEO}$	50	-	-	V	$I_C=1mA, I_B=0$
$BV_{EBO}$	5	-	-	V	$I_E=1\mu A, I_C=0$
$I_{CBO}$	-	-	100	nA	$V_{CB}=40V$
$I_{EBO}$	-	-	100	nA	$V_{EB}=3V$
$V_{CE(sat)}$	-	0.1	0.3	V	$I_C=100mA, I_B=10mA$
$h_{FE}$	90	-	600		$V_{CE}=6V, I_C=1mA$
fT	100	190	-	MHz	$V_{CE}=10V, I_C=50mA$
Cob	-	2.0	3.0	pF	$V_{CB}=10V, I_E=0, f=1MHz$
NF	-	4.0	6.0	dB	$I_C=0.1mA, V_{CE}=6V, R_G=10k\Omega, f=100HZ$

#### Classification Of $h_{FE}$

Rank	R	Q	P	K
Range	90 ~ 180	135 ~ 270	200 ~ 400	300 ~ 600

## Characteristics Curve



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