

GSC945

NPN EPITAXIAL SILICON TRANSISTOR

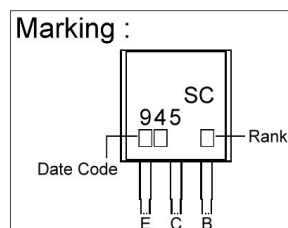
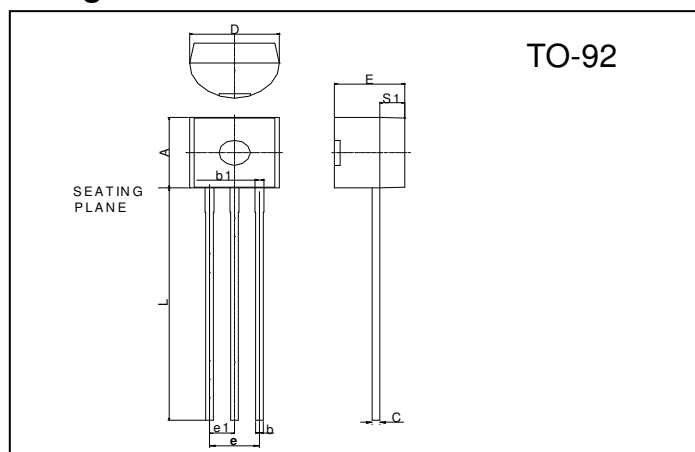
Description

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

Features

- Collector-Emitter Voltage $BV_{CE0}=50V$
- 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	Rated	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	$^{\circ}C$

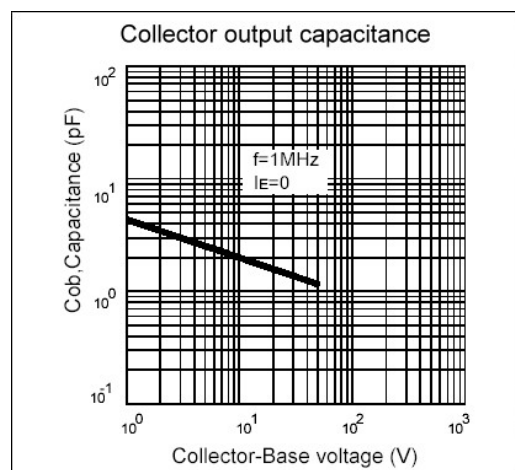
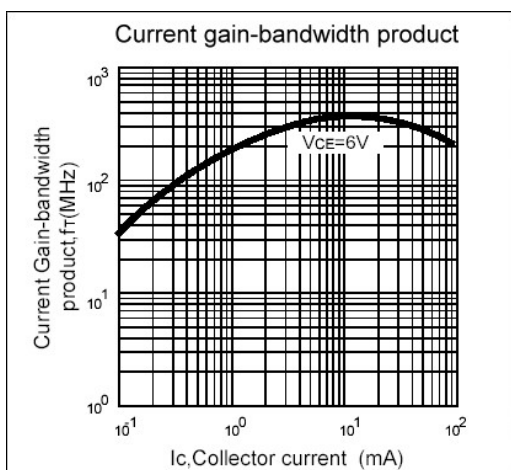
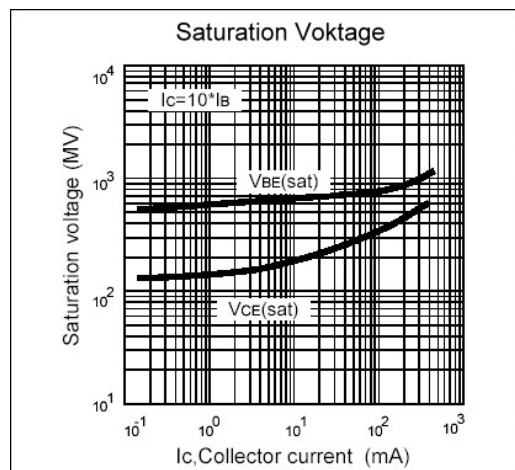
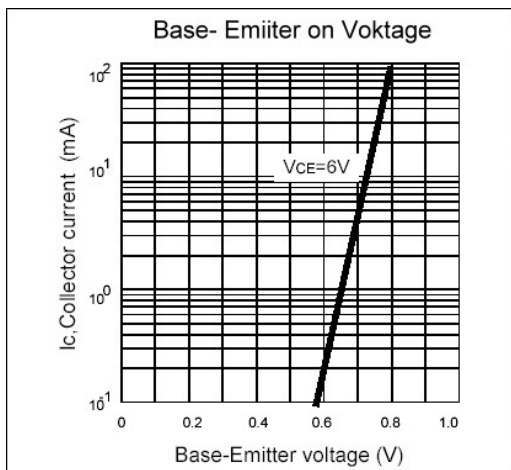
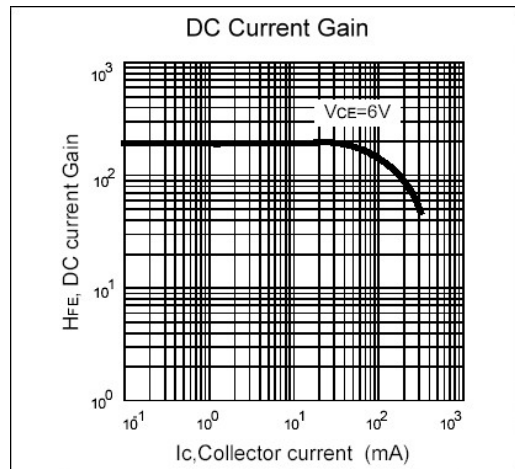
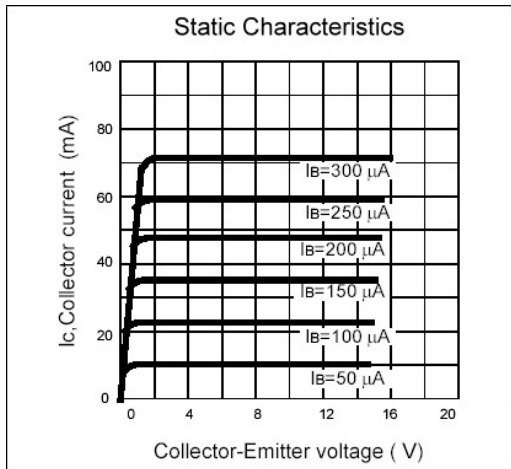
Electrical Characteristics ($T_A = 25^{\circ}C$ unless otherwise noted)

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



Important Notice:

- All rights are reserved. Reproduction in whole or in part is prohibited without the prior written approval of GTM.
- GTM reserves the right to make changes to its products without notice.
- GTM semiconductor products are not warranted to be suitable for use in life-support Applications, or systems.
- GTM assumes no liability for any consequence of customer product design, infringement of patents, or application assistance.

Head Office And Factory:

- **Taiwan:** No. 17-1 Tatung Rd. Fu Kou Hsin-Chu Industrial Park, Hsin-Chu, Taiwan, R. O. C.
- TEL : 886-3-597-7061 FAX : 886-3-597-9220, 597-0785
- **China:** (201203) No.255, Jang-Jiang Tsai-Lueng RD. , Pu-Dung-Hsin District, Shang-Hai City, China
- TEL : 86-21-5895-7671 ~ 4 FAX : 86-21-38950165