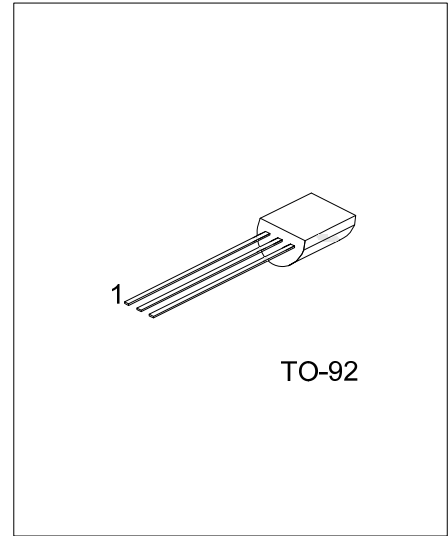




**2SC945**

**NPN SILICON TRANSISTOR**

AUDIO FREQUENCY  
 AMPLIFIER HIGH FREQUENCY  
 OSC NPN TRANSISTOR



■ DESCRIPTION

The UTC **2SC945** 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
- \* Complimentary to UTC 2SA733

Lead-free: 2SC945L  
 Halogen-free: 2SC945G

■ ORDERING INFORMATION

Order Number			Package	Pin Assignment			Packing
Normal	Lead Free Plating	Halogen Free		1	2	3	
2SC945-x-T92-B	2SC945L-x-T92-B	2SC945G-x-T92-B	TO-92	E	C	B	Tape Box
2SC945-x-T92-K	2SC945L-x-T92-K	2SC945G-x-T92-K	TO-92	E	C	B	Bulk

<p>2SC945L-x-T92-B</p>	<p>(1) B: Tape Box, K: Bulk          (2) T92: TO-92          (3) x: refer to Classification of <math>h_{FE}</math>          (4) G: Halogen Free, L: Lead Free, Blank: Pb/Sn</p>
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■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C, unless otherwise specified )

PARAMETER	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	60	V
Collector-Emitter Voltage	$V_{CEO}$	50	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Dissipation(Ta=25°C)	$P_C$	250	mW
Collector Current	$I_C$	150	mA
Base Current	$I_B$	50	mA
Junction Temperature	$T_J$	125	°C
Storage Temperature	$T_{STG}$	-55 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

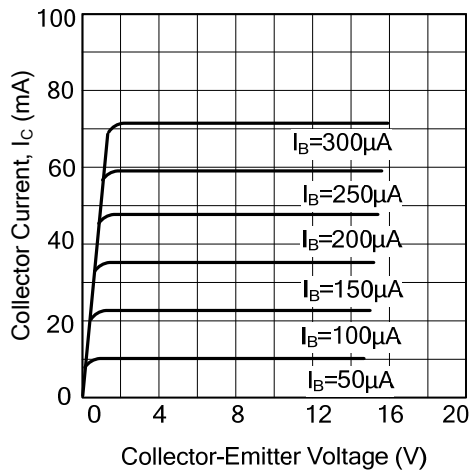
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C=100\mu A, I_E=0$	60			V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C=10mA, I_B=0$	50			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=40V, I_E=0$			100	nA
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=3V, I_C=0$			100	nA
DC Current Gain	$h_{FE}$	$V_{CE}=6V, I_C=1mA$	90		600	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=100mA, I_B=10mA$		0.1	0.3	V
Current Gain Bandwidth Product	$f_T$	$V_{CE}=10V, I_C=50mA$	100	190		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$		2.0	3.0	pF
Noise Figure	NF	$I_C=-0.1mA, V_{CE}=6V$ $R_G=10k\Omega, f=100Hz$		4.0	6.0	dB

■ CLASSIFICATION OF  $h_{FE}$

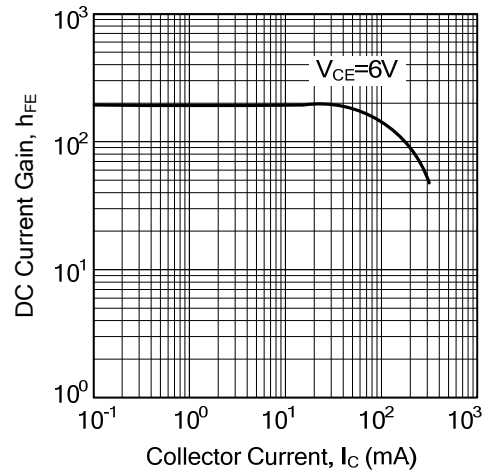
RANK	R	Q	P	K
RANGE	90-180	135-270	200-400	300-600

## TYPICAL CHARACTERISTICS

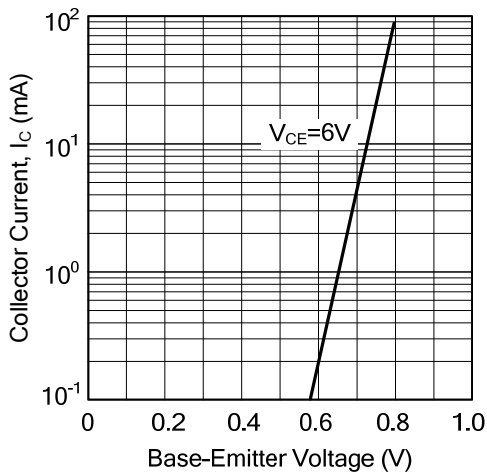
Static Characteristics



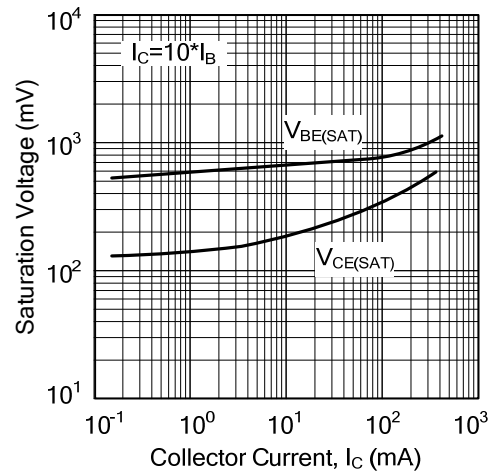
DC Current Gain



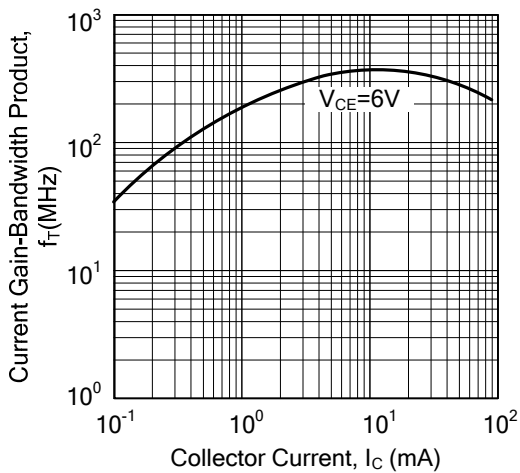
Base-Emitter on Voltage



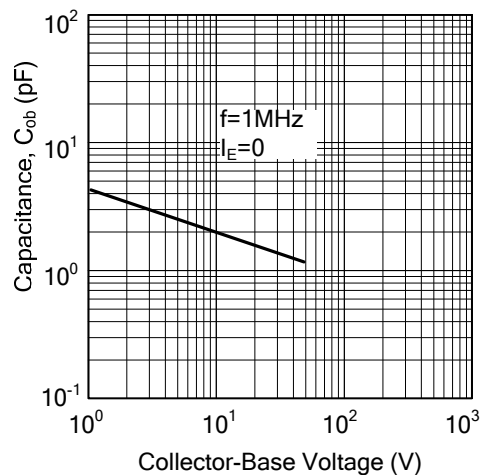
Saturation Voltage



Current Gain-Bandwidth Product



Collector Output Capacitance



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