



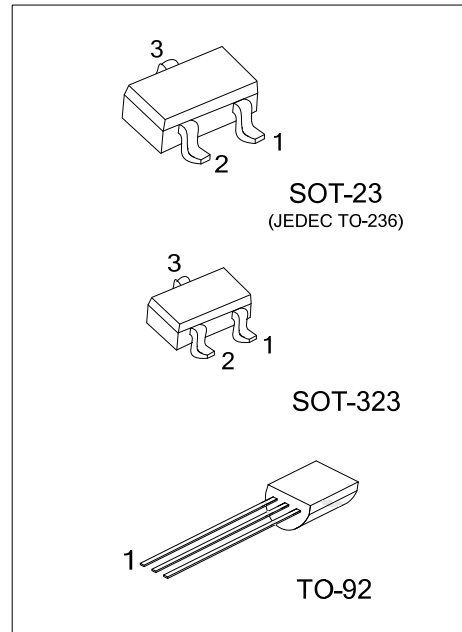
# 2SC2712

## NPN SILICON TRANSISTOR

### AUDIO FREQUENCY AMPLIFIER NPN TRANSISTOR

■ FEATURES

- \* High Voltage and High Current:  
 $V_{CE0}=50V, I_C=150mA$  (Max.)
- \* Excellent  $h_{FE}$  Linearity:  
 $h_{FE}(I_C=0.1mA)/h_{FE}(I_C=2mA)=0.95$ (Typ.)
- \* High  $h_{FE}$
- \* Low Noise



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
-	2SC2712G-x-AE3-R	SOT-23	E	B	C	Tape Reel
-	2SC2712G-x-AL3-R	SOT-323	E	B	C	Tape Reel
2SC2712L-x-T92-R	2SC2712G-x-T92-R	TO-92	E	C	B	Tape Reel

Note: Pin assignment: E: Emitter B: Base C: Collector

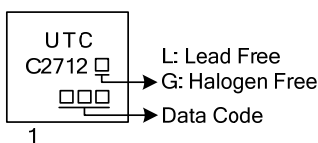
<p>2SC2712G-x-AE3-R</p> <p>(1) Packing Type (2) Package Type (3) Rank (4) Green Package</p>	<p>(1) R: Tape Reel (2) AE3: SOT-23, AL3: SOT-323, T92: TO-92 (3) x: refer to Classification of <math>h_{FE}</math> (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING

For SOT-23/SOT-323

2SC2712-Y	2SC2712-G	2SC2712-L

For TO-92



ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ , unless otherwise stated)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		$V_{CBO}$	60	V
Collector-Emitter Voltage		$V_{CEO}$	50	V
Emitter-Base Voltage		$V_{EBO}$	5	V
Collector Current		$I_C$	150	mA
Base Current		$I_B$	30	mA
Collector Power Dissipation	SOT-23/SOT-323	$P_C$	150	mW
	TO-92		625	mW
Junction Temperature		$T_J$	+125	$^\circ\text{C}$
Storage Temperature		$T_{STG}$	-55 ~ +125	$^\circ\text{C}$

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.

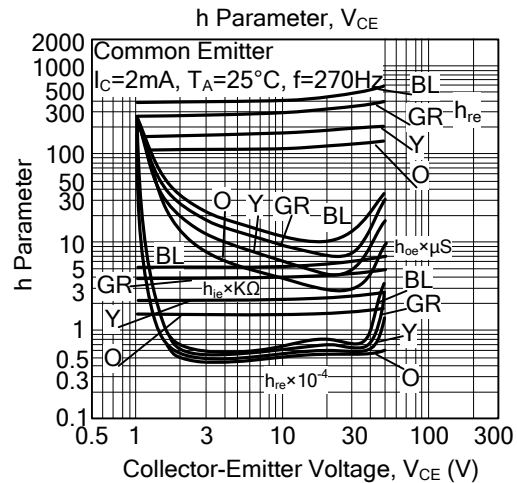
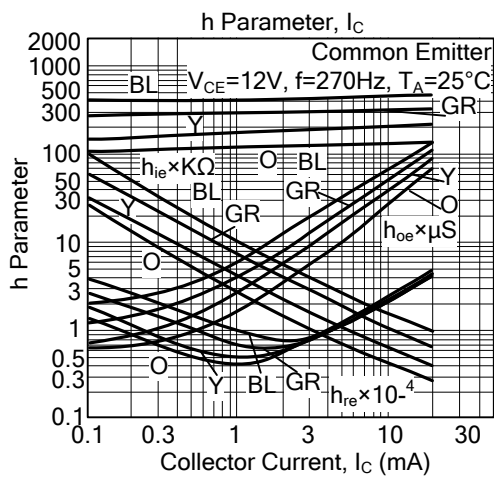
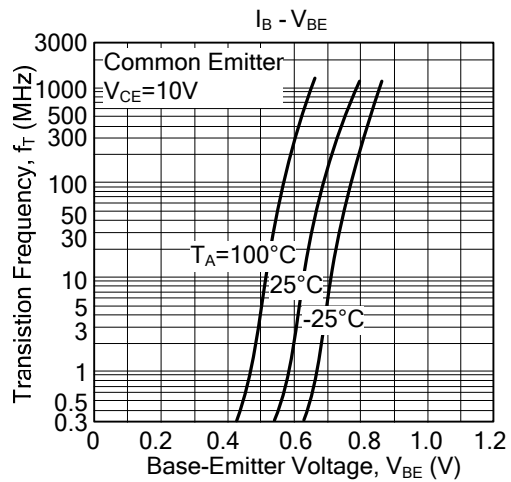
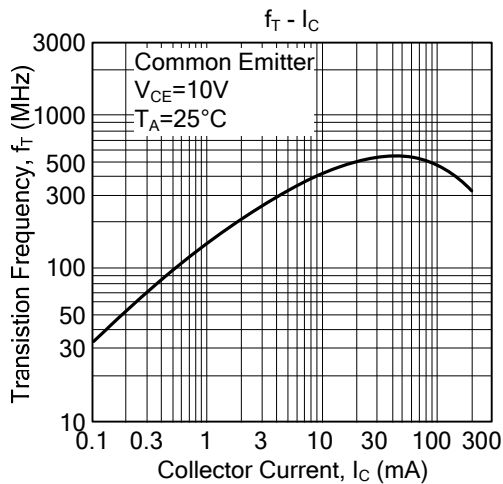
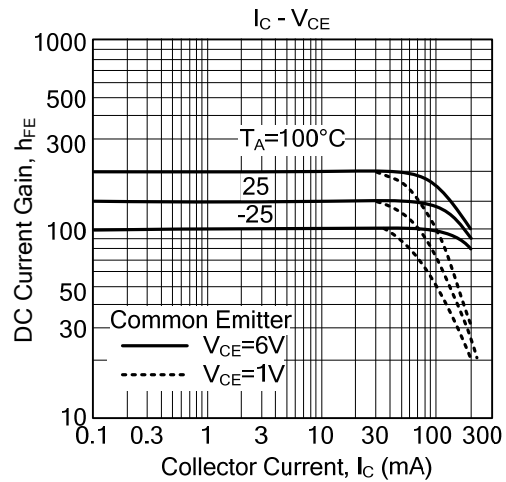
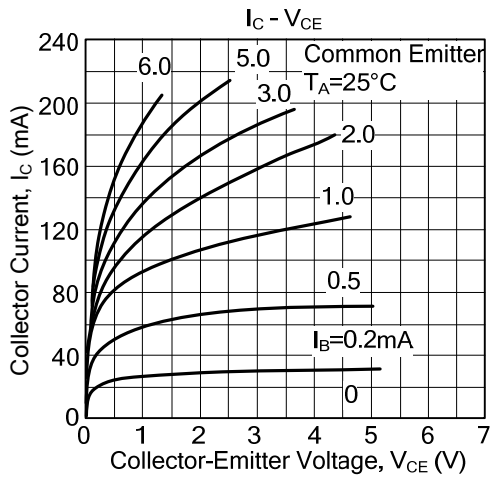
■ ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ , unless otherwise stated)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=60\text{V}$ , $I_E=0$			0.1	$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=5\text{V}$ , $I_C=0$			0.1	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE}=6\text{V}$ , $I_C=2\text{mA}$	70		700	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=100\text{mA}$ , $I_B=10\text{mA}$		0.1	0.25	V
Transistor Frequency	$f_T$	$V_{CE}=10\text{V}$ , $I_C=1\text{mA}$	80			MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=10\text{V}$ , $I_E=0$ , $f=1\text{MHz}$		2.0	3.5	pF
Noise Figure	NF	$V_{CE}=6\text{V}$ , $I_C=0.1\text{mA}$ $f=1\text{kHz}$ , $R_g=10\text{K}\Omega$		1.0	10	dB

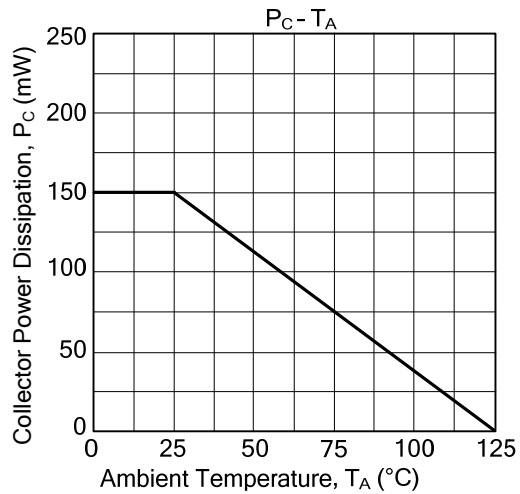
■ CLASSIFICATION OF  $h_{FE}$

RANK	Y	G	L
RANGE	120~240	200~400	350~700

## TYPICAL CHARACTERISTICS



## ■ TYPICAL CHARACTERISTICS(Cont.)



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