



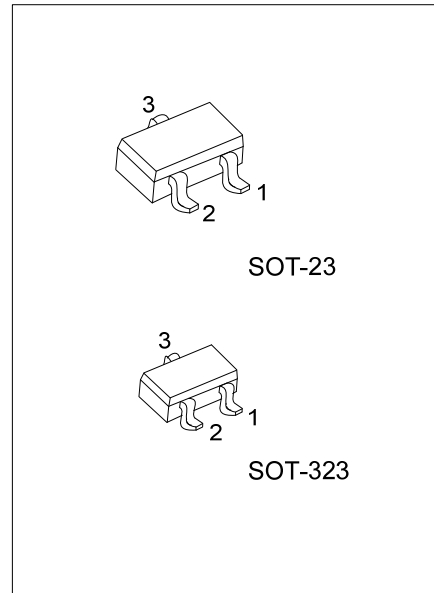
## 2SC2712

## 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



Lead-free: 2SC2712L  
Halogen-free: 2SC2712G

#### ORDERING INFORMATION

Ordering Number			Package	Pin Assignment			Packing
Normal	Lead Free	Halogen Free		1	2	3	
2SC2712-x-AE3-R	2SC2712L-x-AE3-R	2SC2712G-x-AE3-R	SOT-23	E	B	C	Tape Reel
2SC2712-x-AL3-R	2SC2712L-x-AL3-R	2SC2712G-x-AL3-R	SOT-323	E	B	C	Tape Reel

<p>2SC2712L-x-AE3-R</p> <p>(1) Packing Type (2) Package Type (3) Rank (4) Lead Plating</p>	<p>(1) R: Tape Reel (2) AE3: SOT-23, AL3: SOT-323 (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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#### MARKING

2SC2712-Y	2SC2712-G	2SC2712-L
<p>L: Lead Free G: Halogen Free</p>	<p>L: Lead Free G: Halogen Free</p>	<p>L: Lead Free G: Halogen Free</p>

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°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	$P_C$	150	mW
Junction Temperature	$T_J$	+125	°C
Storage Temperature	$T_{STG}$	-55 ~ +125	°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.

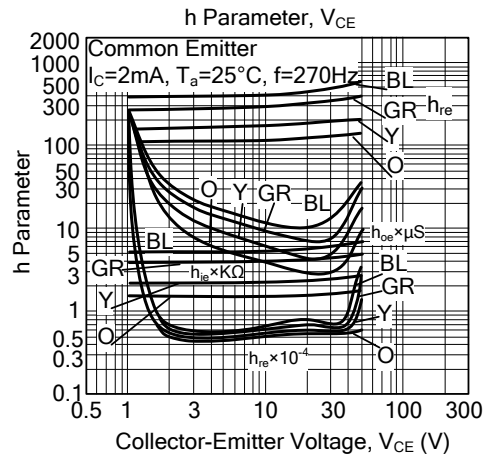
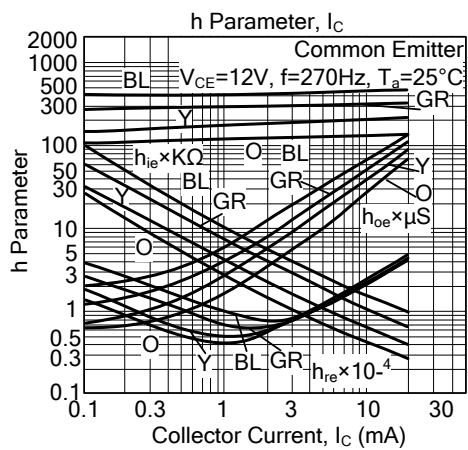
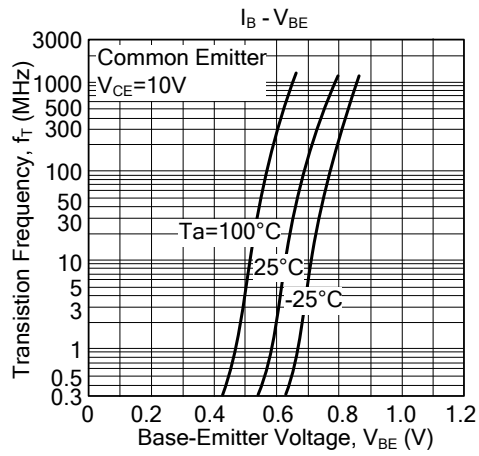
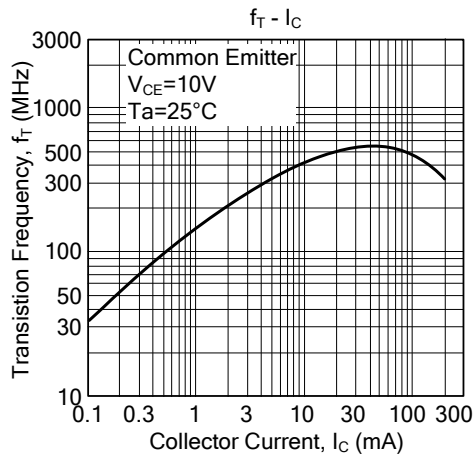
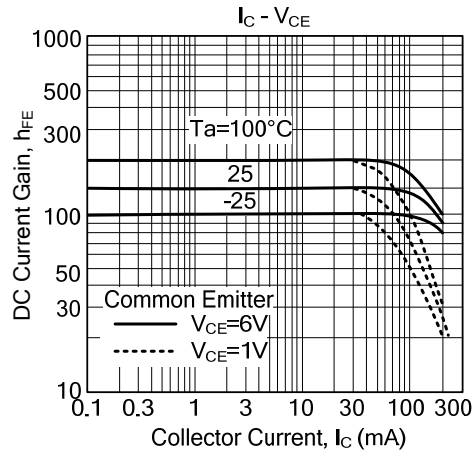
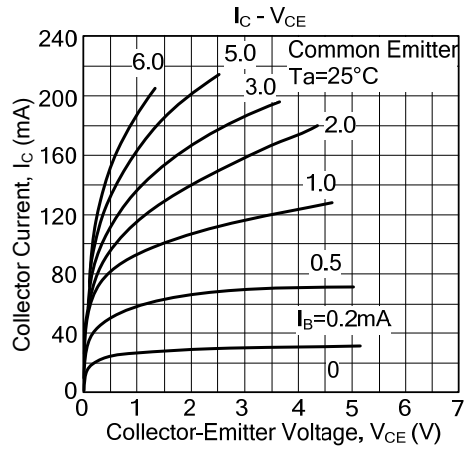
■ ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise stated)

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

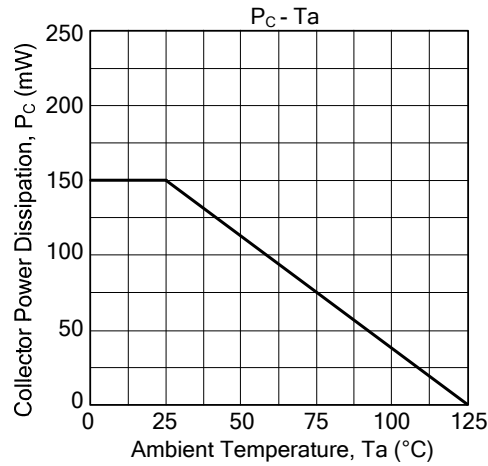
■ CLASSIFICATION OF  $h_{FE}$

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

## TYPICAL CHARACTERISTICS



## ■ TYPICAL CHARACTERISTICS(Cont.)



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