



## DESCRIPTION

The 2SC2712 is available in SOT-23 Package

## FEATURES

- Low noise: NF=1dB(Typ.), 10dB(Max.)
- Complementary to 2SA1162
- High Voltage:  $V_{CE0}=50V$
- High Collector Current:  $I_c=150mA$
- High  $h_{FE}$  linearity: 70 to 700
- Available in SOT-23 Package

## ORDERING INFORMATION

Package Type	Part Number
SOT-23	2SC2712-O
	2SC2712-Y
	2SC2712-G
	2SC2712-L
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

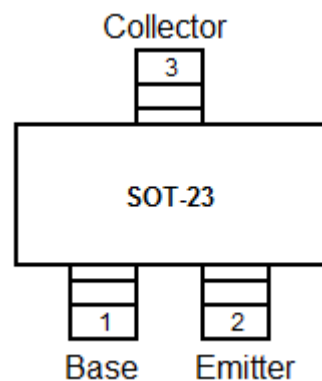
## APPLICATIONS

- Low-Frequency Amplifiers
- Audio frequency general purpose amplifier applications
- AM Amplifiers

## CLASSIFICATION OF $h_{FE}$

Part Number	$h_{FE}$ Range
2SC2712-O	70-140
2SC2712-Y	120-240
2SC2712-G	200-400
2SC2712-L	350-700

## PIN DESCRIPTION





## ABSOLUTE MAXIMUM RATINGS

$V_{CBO}$ , Collector-Base Voltage( $I_E=0$ )	60V
$V_{CEO}$ , Collector-Emitter Voltage( $I_B=0$ )	50V
$V_{EBO}$ , Emitter-Base Voltage( $I_C=0$ )	5V
$I_C$ , Collector Current-Continuous	150mA
$P_C$ , Collector Dissipation( $T_A = 25^\circ\text{C}$ ) <sup>NOTE1</sup>	150mW
$T_J, T_{STG}$ , Junction and Storage Temperature	$-55^\circ\text{C} \sim 150^\circ\text{C}$

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

NOTE1: Device is mounted on a printed circuit board.

## ELECTRICAL CHARACTERISTICS

$T_A=25^\circ\text{C}$ , unless otherwise specified

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit	
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	60	-	-	V	
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=0.1\text{mA}, I_B=0$	50	-	-	V	
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	5	-	-	V	
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	$h_{FE}$	$V_{CE}=6\text{V}, I_C=2\text{mA}$	O	70	-	140	
			Y	120	-	240	
			G	200	-	400	
			L	350	-	700	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=100\text{mA}, I_B=10\text{mA}$	-	0.1	0.25	V	
Transition Frequency	$f_T$	$V_{CE}=10\text{V}, I_C=1\text{mA}$	80	-	-	MHz	
Output Capacitance	$C_{ob}$	$V_{CB}=10\text{V}, I_E=0,$ $f=1\text{kHz}$	-	2.0	3.5	pF	
Noise Figure	NF	$V_{CE}=6\text{V}, I_C=0.1\text{mA},$ $f=1\text{kHz}$	-	1.0	10	dB	



## ELECTRICAL CHARACTERISTICS CURVES

@  $T_A=25^\circ\text{C}$ , unless otherwise specified

Figure 1.  $I_C - V_{CE}$

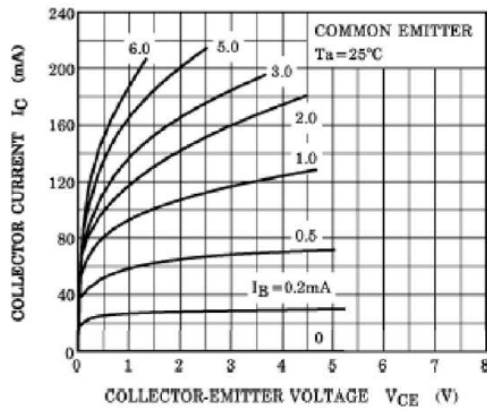


Figure 2.  $h_{FE} - I_C$

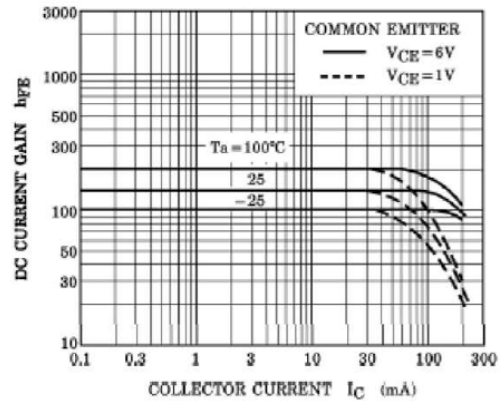


Figure 3.  $V_{CE(sat)} - I_C$

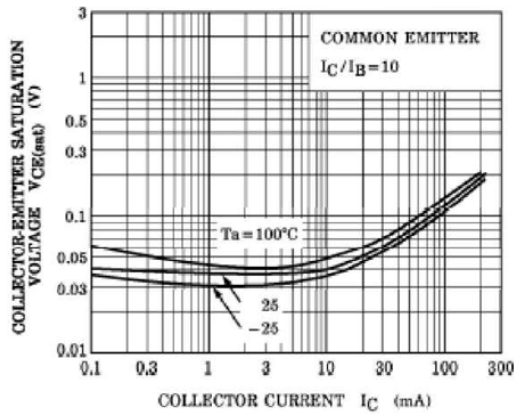


Figure 4.  $V_{BE(sat)} - I_C$

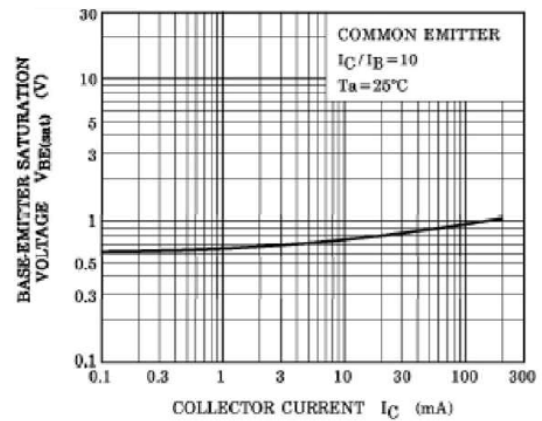


Figure 5.  $I_B - V_{BE}$

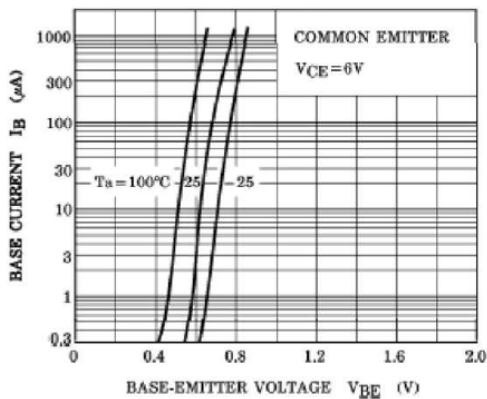
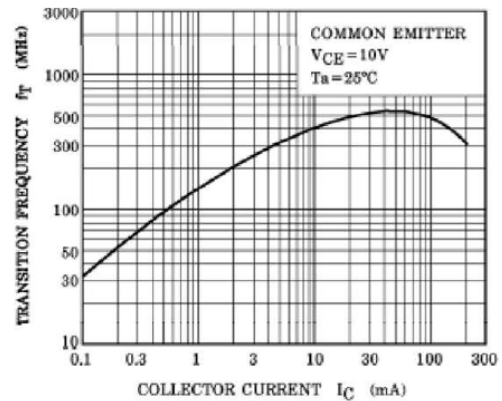


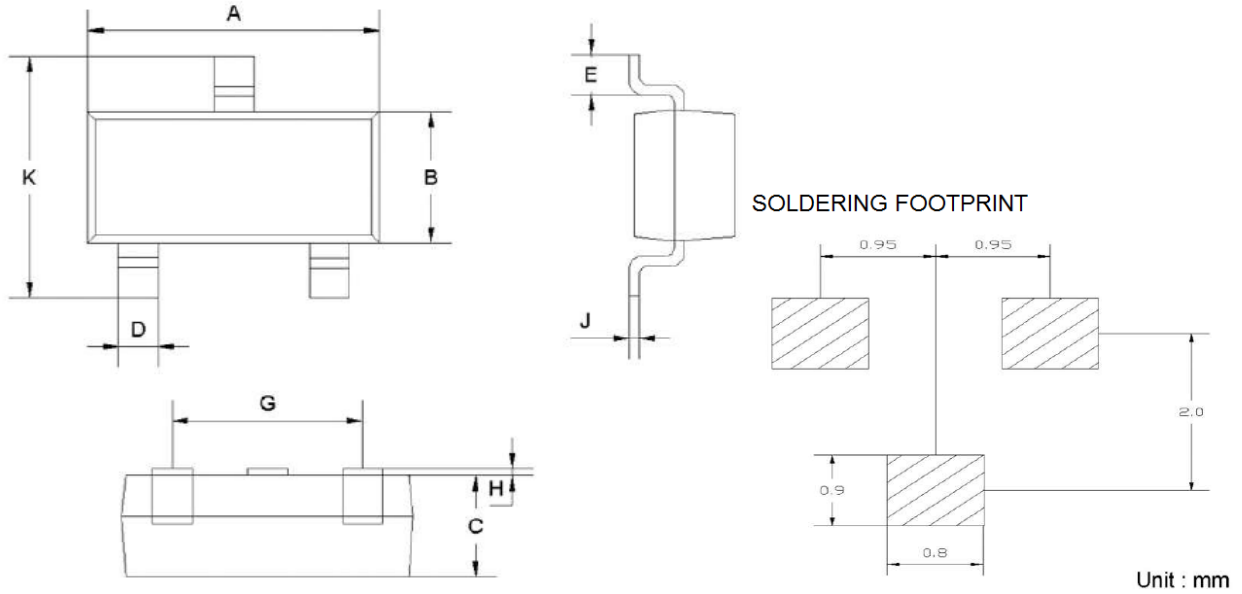
Figure 6.  $f_T - I_C$





## PACKAGE INFORMATION

Dimension in SOT-23 (Unit: mm)



Symbol	Min	Max
A	2.85	2.95
B	1.25	1.35
C	1.0 TYP.	
D	0.37	0.43
E	0.35	0.48
G	1.85	1.95
H	0.02	0.1
J	0.1 TYP.	
K	2.35	2.45



## IMPORTANT NOTICE

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