DESCRIPTION

The 2SC2712 is available in SOT-23 package

FEATURES

- Low noise: NF=1dB(Typ.), 10dB(Max.)
- Complementary to 2SA1162
- High Voltage and high Current
- High h_{EF} linearity
- Available in SOT-23 package

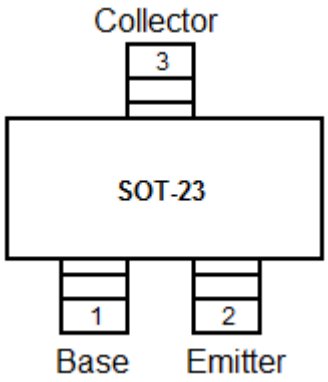
ORDERING INFORMATION

Package Type	Part Number
SOT-23	2SC2712O
	2SC2712Y
	2SC2712G
	2SC2712L
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

APPLICATIONS

- Audio frequency general purpose amplifier applications.

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°C)NOTE1	150mW
T_J, T_{STG}, Junction and Storage Temperature	-55°C ~150°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°C, unless otherwise specified

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

ELECTRICAL CHARACTERISTICS CURVES

@ T_A=25°C, unless otherwise specified

Figure 1. I_C - V_{CE}

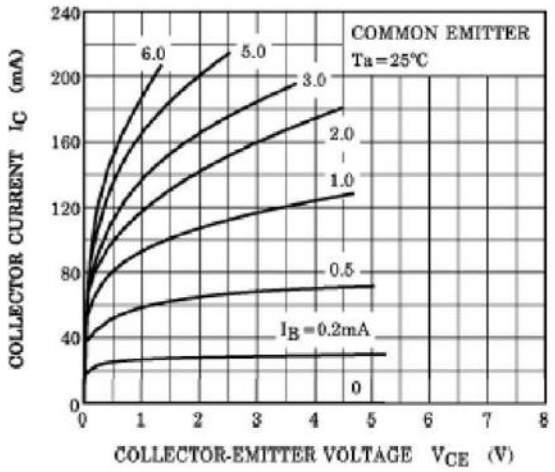


Figure 2. h_{FE} - I_C

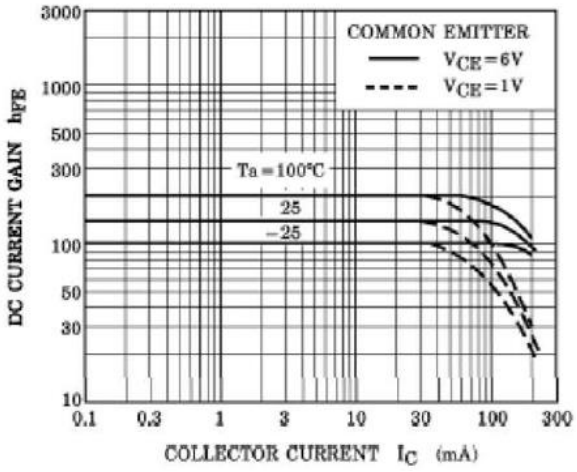


Figure 3. $V_{CE(sat)}$ – I_C

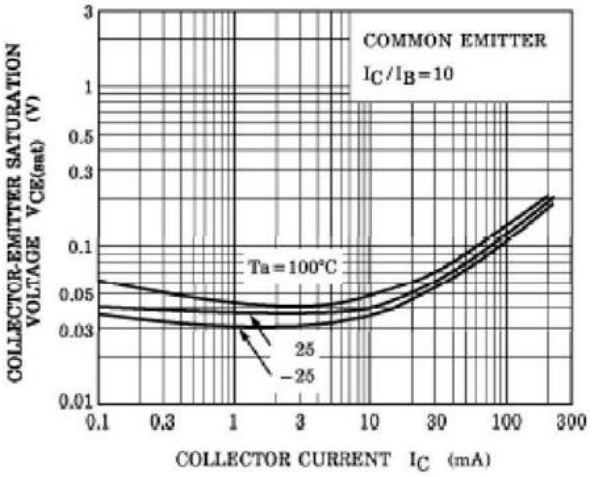


Figure 4. $V_{BE(sat)}$ – I_C

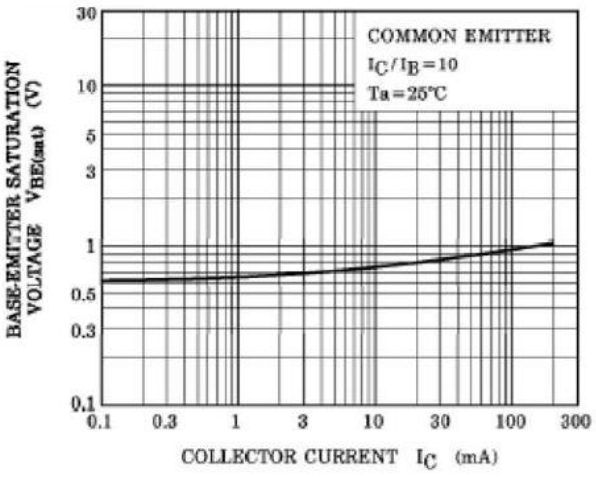


Figure 5. I_B – V_{BE}

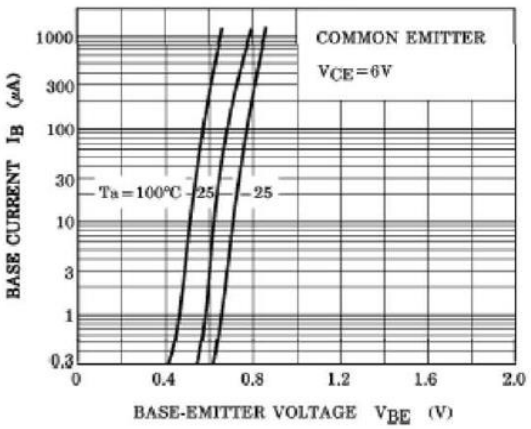
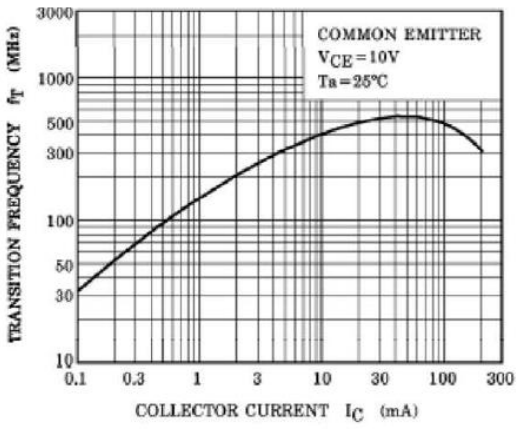
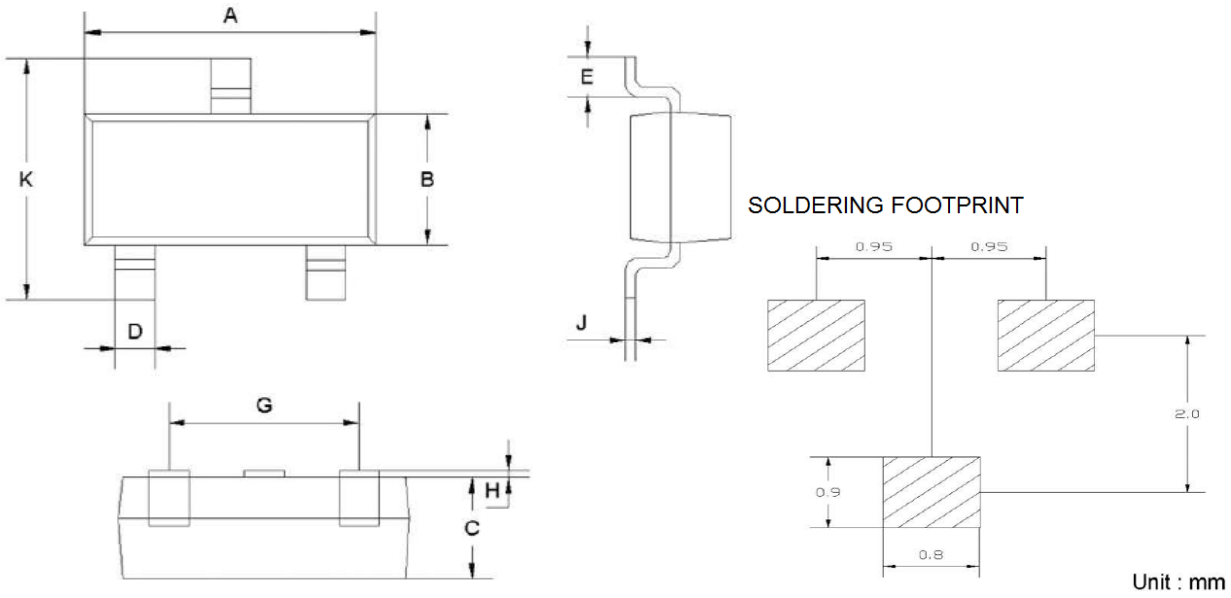


Figure 6. f_T - I_C



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

AiT Semiconductor Inc. (AiT) reserves the right to make changes to any its product, specifications, to discontinue any integrated circuit product or service without notice, and advises its customers to obtain the latest version of relevant information to verify, before placing orders, that the information being relied on is current.

AiT Semiconductor Inc.'s integrated circuit products are not designed, intended, authorized, or warranted to be suitable for use in life support applications, devices or systems or other critical applications. Use of AiT products in such applications is understood to be fully at the risk of the customer. As used herein may involve potential risks of death, personal injury, or servere property, or environmental damage. In order to minimize risks associated with the customer's applications, the customer should provide adequate design and operating safeguards.

AiT Semiconductor Inc. assumes to no liability to customer product design or application support. AiT warrants the performance of its products of the specifications applicable at the time of sale.