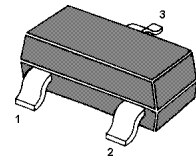


## NPN Silicon Epitaxial Planar Transistor

for audio frequency general purpose amplifier applications.

The transistor is subdivided into four groups O, Y, G and L, according to its DC current gain.



1.Base 2.Emitter 3.Collector  
SOT-23 Plastic Package

### Features

- High voltage and high current:  $V_{CEO}=50V$ ,  $I_C=150mA(max)$
- High  $h_{FE}$ :  $h_{FE}=70\sim700$
- Low noise:  $NF=1dB(typ.)$ ,  $10dB(max)$
- Small package

### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

	Symbol	Value	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
Power Dissipation	$P_{tot}$	200	mW
Junction Temperature	$T_j$	125	$^\circ\text{C}$
Storage Temperature Range	$T_s$	-55 to +125	$^\circ\text{C}$

### CLASSIFICATION OF $h_{FE}$

Rank	O	Y	GR	BL
Range	70-140	120-240	200-400	350-700
Marking	LO	LY	LG	LL



**Characteristics at T<sub>amb</sub>=25 °C**

	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at V <sub>CE</sub> =6V, I <sub>C</sub> =2mA	O	h <sub>FE</sub>	70	-	140	-
	Y	h <sub>FE</sub>	120	-	240	-
	G	h <sub>FE</sub>	200	-	400	-
	L	h <sub>FE</sub>	350	-	700	-
Collector Cutoff Current at V <sub>CB</sub> =60V	I <sub>CBO</sub>	-	-	0.1	μA	
Emitter Cutoff Current at V <sub>EB</sub> =5V	I <sub>EBO</sub>	-	-	0.1	μA	
Collector Saturation Voltage at I <sub>C</sub> =100mA, I <sub>B</sub> =10mA	V <sub>CE(sat)</sub>	-	-	0.25	V	
Transition Frequency at V <sub>CE</sub> =10V, I <sub>C</sub> =1mA	f <sub>T</sub>	80	-	-	MHz	
Collector Output Capacitance at V <sub>CB</sub> =10V, f=1MHz	C <sub>ob</sub>	-	2	3.5	pF	
Noise Figure at V <sub>CE</sub> =6V, I <sub>C</sub> =0.1mA, f=1KHz, R <sub>g</sub> =10KΩ	NF	-	1	10	dB	



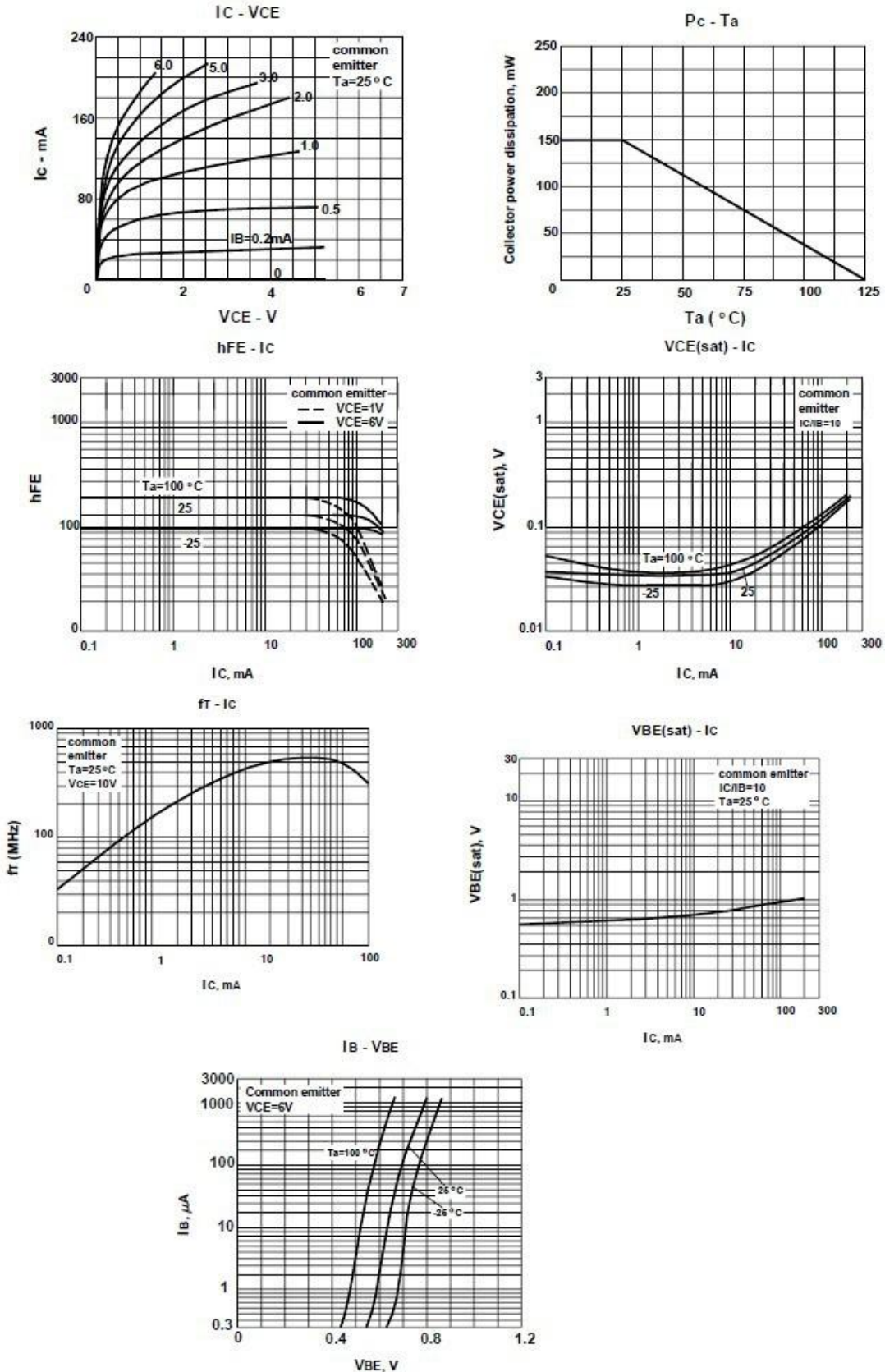
**CHINA BASE**  
INTERNATIONAL

**SOT-23**



**MMBTSC2712**

www.china-base.com.hk

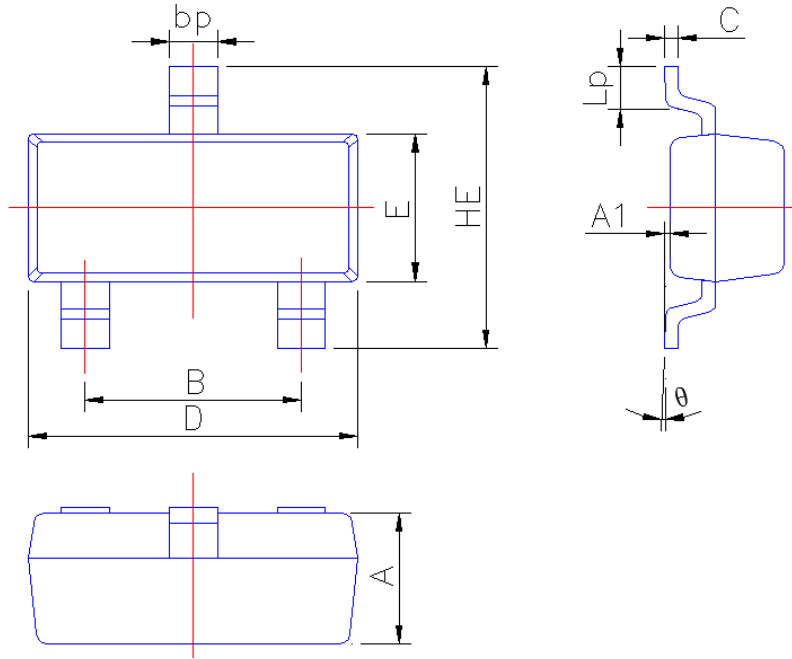




## PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



Symbol	Dimension in Millimeters	
	Min	Max
A	0.90	1.10
A1	0.013	0.100
B	1.80	2.00
bp	0.35	0.50
C	0.09	0.150
D	2.80	3.00
E	1.20	1.40
HE	2.20	2.80
Lp	0.20	0.50
$\theta$	0°	5°