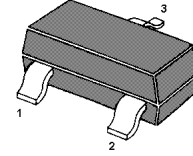


NPN Silicon Epitaxial Planar Transistor

for switching and AF amplifier applications.

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

On special request, these transistors can be manufactured in different pin configurations.



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

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

Parameter	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
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_s	-55 to +150	$^\circ\text{C}$



Characteristics at $T_{amb}=25\text{ }^{\circ}\text{C}$

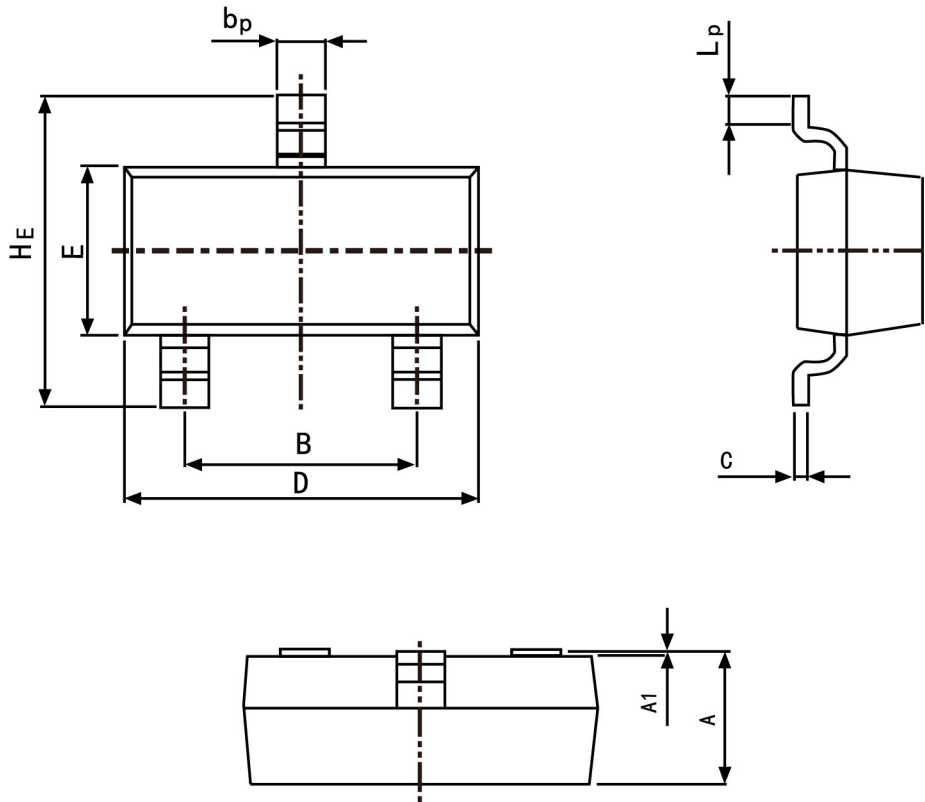
Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE}=6\text{V}$, $I_C=1\text{mA}$					
Current Gain Group O	h_{FE}	70	-	140	-
Y	h_{FE}	120	-	240	-
G	h_{FE}	200	-	400	-
L	h_{FE}	350	-	700	-
Collector Base Breakdown Voltage at $I_C=100\mu\text{A}$	$V_{(BR)CBO}$	60	-	-	V
Collector Emitter Breakdown Voltage at $I_C=10\text{mA}$	$V_{(BR)CEO}$	50	-	-	V
Emitter Base Breakdown Voltage at $I_E=10\mu\text{A}$	$V_{(BR)EBO}$	5	-	-	V
Collector Cutoff Current at $V_{CB}=40\text{V}$	I_{CBO}	-	-	0.1	μA
Emitter Cutoff Current at $V_{EB}=3\text{V}$	I_{EBO}	-	-	0.1	μA
Collector Saturation Voltage at $I_C=100\text{mA}$, $I_B=10\text{mA}$	$V_{CE(sat)}$	-	-	0.3	V
Gain Bandwidth Product at $V_{CE}=6\text{V}$, $I_C=10\text{mA}$	f_T	-	300	-	MHz
Output Capacitance at $V_{CB}=6\text{V}$, $f=1\text{MHz}$	C_{OB}	-	2.5	-	pF
Noise Figure at $V_{CE}=6\text{V}$, $I_E=0.5\text{mA}$, $f=1\text{KHz}$, $R_S=500\Omega$	NF	-	4	-	dB



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



Symbol	Dimension in Millimeters	
	Min	Max
A	0.95	1.40
B	1.78	2.04
bp	0.35	0.50
C	0.08	0.19
D	2.70	3.10
E	1.20	1.65
HE	2.20	3.00
A1	0.100	0.013
Lp	0.20	0.50