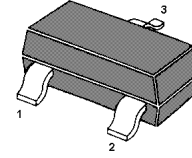




NPN Silicon Epitaxial Planar Transistor

for high frequency amplifier at FM,RF,MIX, and IF amplifier applications.

The transistor is subdivided into three groups, R, O and Y, according to its DC current gain.



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}	40	V
Collector Emitter Voltage	V_{CEO}	30	V
Emitter Base Voltage	V_{EBO}	4	V
Collector Current	I_C	20	mA
Base Current	I_B	4	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	125	$^\circ\text{C}$
Storage Temperature Range	T_s	-55 to +125	$^\circ\text{C}$

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 R O Y	h_{FE}	40	-	80	-
	h_{FE}	70	-	140	-
	h_{FE}	100	-	200	-
Collector Cutoff Current at $V_{CB}=18\text{V}$	I_{CBO}	-	-	0.5	μA
Emitter Cutoff Current at $V_{EB}=4\text{V}$	I_{EBO}	-	-	0.5	μA
Transition Frequency at $V_{CE}=6\text{V}$, $I_C=1\text{mA}$	f_T	-	550	-	MHz
Reverse Transfer Capacitance at $V_{CB}=6\text{V}$, $f=1\text{MHz}$	C_{re}	-	0.7	-	pF
Collector-Base Time Constant	$C_{c.rbb'}$	-	-	30	ps
Noise Figure at $V_{CE}=6\text{V}$, $I_E=-1\text{mA}$, $f=100\text{MHz}$	NF	-	2.5	5	dB
Power Gain at $V_{CE}=6\text{V}$, $I_E=-1\text{mA}$, $f=100\text{MHz}$	G_{pe}	17	23	-	dB



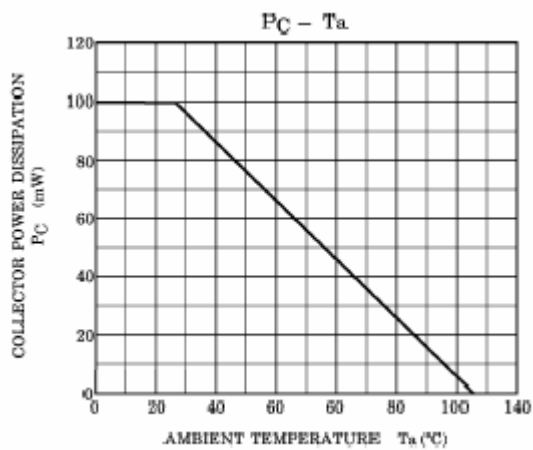
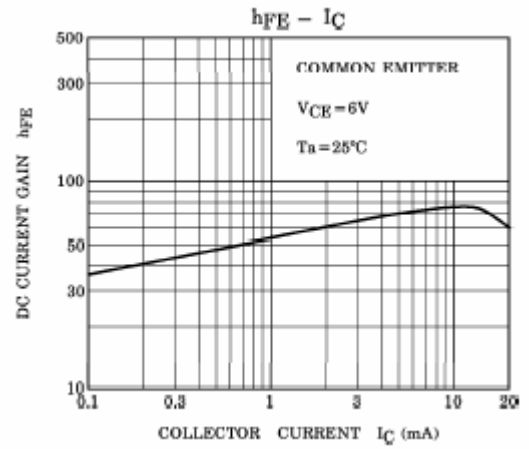
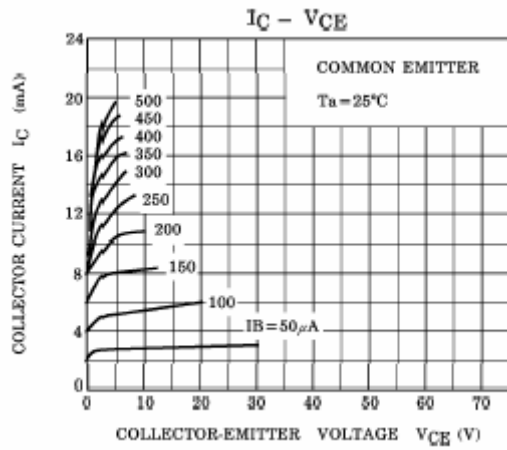
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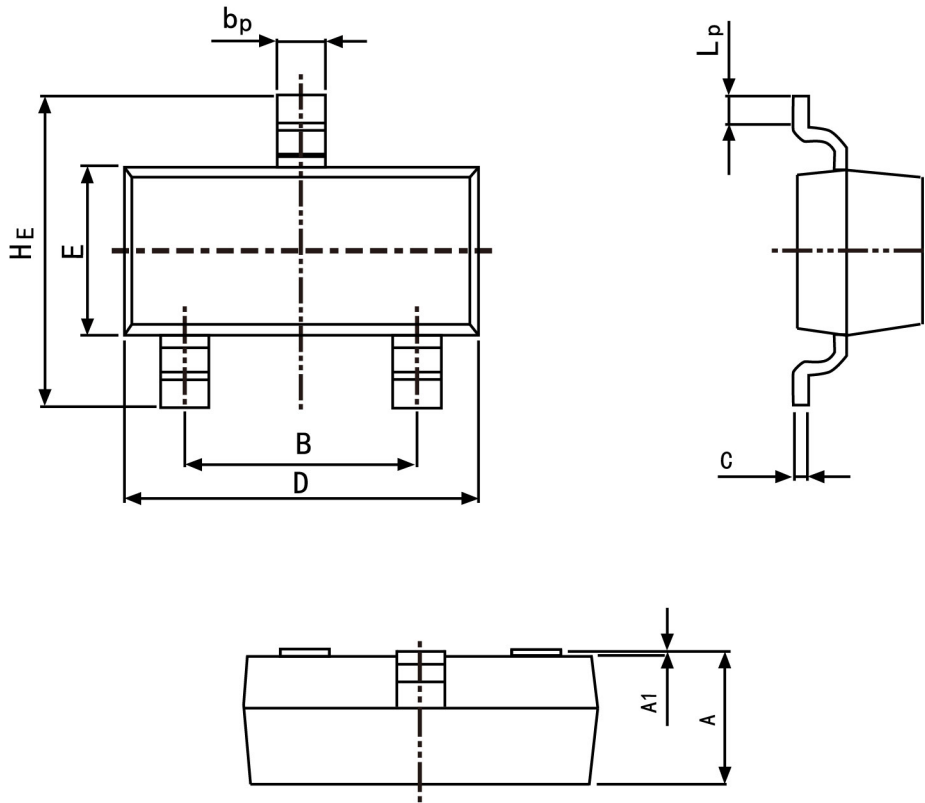
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PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



Symbol	Dimension in Millimeters	
	Min	Max
A	0.95	1.40
B	1.78	2.04
b_p	0.35	0.50
C	0.08	0.19
D	2.70	3.10
E	1.20	1.65
HE	2.20	3.00
A_1	0.100	0.013
L_p	0.20	0.50