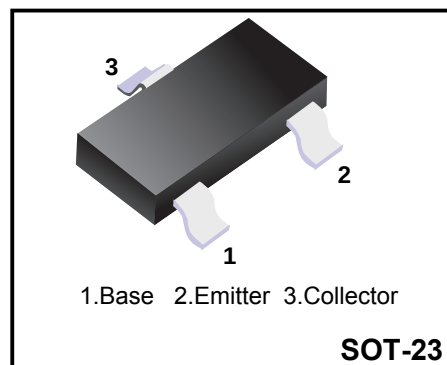


PNP Silicon Epitaxial Planar Transistor

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

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



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

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	60	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.	Max.	Unit
DC Current Gain at $-V_{CE}=6\text{V}$, $-I_C=1\text{mA}$	Q h_{FE}	120	270	-
	R h_{FE}	180	390	-
	S h_{FE}	270	560	-
Collector Cutoff Current at $-V_{CB}=60\text{V}$	$-I_{CBO}$	-	0.1	μA
Emitter Cutoff Current at $-V_{EB}=6\text{V}$	$-I_{EBO}$	-	0.1	μA
Collector Saturation Voltage at $-I_C=50\text{mA}$, $-I_B=5\text{mA}$	$-V_{CE(sat)}$	-	0.5	V
Collector Base Breakdown Voltage at $-I_C=50\mu\text{A}$	$-V_{(BR)CBO}$	60	-	V
Collector Emitter Breakdown Voltage at $-I_C=1\text{mA}$	$-V_{(BR)CEO}$	50	-	V
Emitter Base Breakdown Voltage at $-I_E=50\mu\text{A}$	$-V_{(BR)EBO}$	6	-	V
Transition Frequency at $-V_{CE}=12\text{V}$, $-I_C=2\text{mA}$, $f=30\text{MHz}$	f_T	120	-	MHz

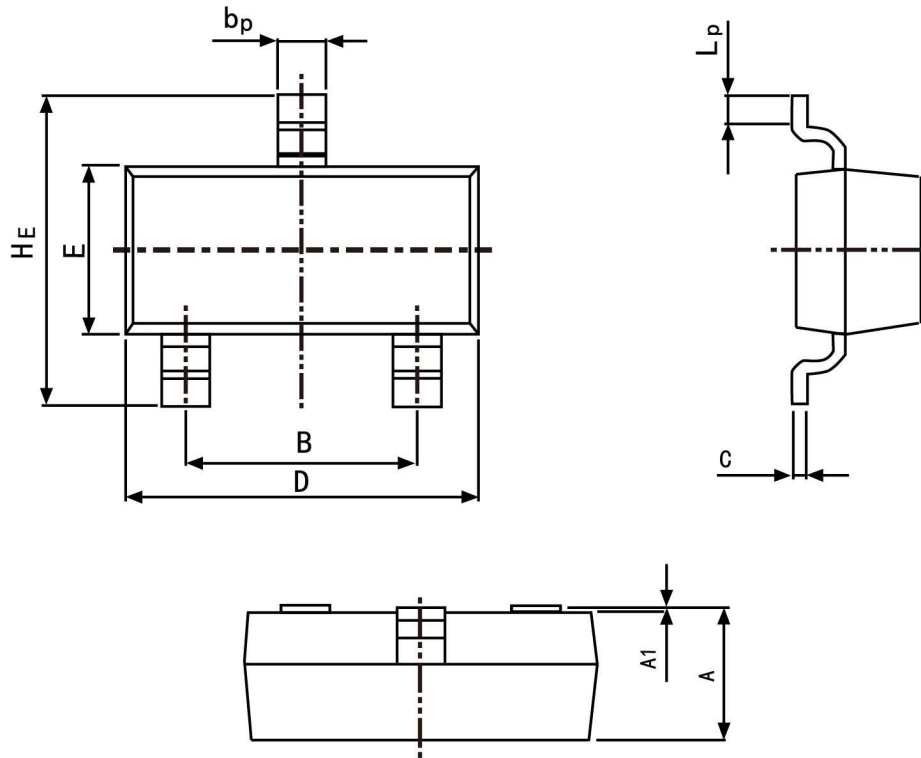
h_{FE} Classification

Classification	Q	R	S
Range	120-270	180-390	270-560
Marking	FQ	FR	FS

Package Outline

SOT-23

Plastic surface mounted package; 3 leads



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

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SOT-23	Tape/Reel, 7" reel	3000	EIA-481-1