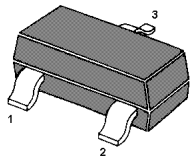
NPN Silicon Epitaxial Planar Transistor



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

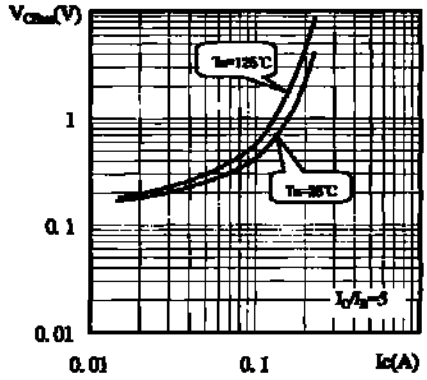
Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	700	V
Collector Emitter Voltage	V_{CEO}	420	V
Emitter Base Voltage	V_{EBO}	10	V
Collector Current	I_C	150	mA
Power Dissipation	P_{tot}	300	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

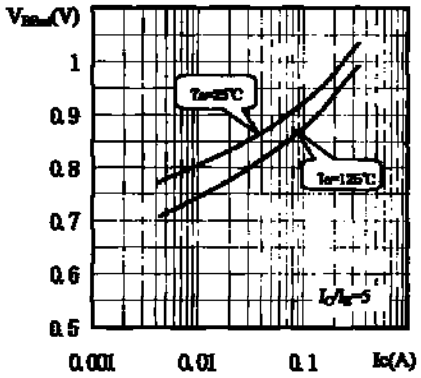
Characteristics at T_a = 25 °C

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at V_{CE} = 20 V, I_C = 10 mA	h_{FE}	15	25	-
Collector Base Cutoff Current at V_{CB} = 700 V	I_{CBO}	-	100	µA
Collector Emitter Cutoff Current at V_{CE} = 420 V	I_{CEO}	-	100	µA
Emitter Base Cutoff Current at V_{EB} = 10 V	I_{EBO}	-	100	µA
Collector Base Breakdown Voltage at I_C = 100 µA	$V_{(BR)CBO}$	700	-	V
Collector Emitter Breakdown Voltage at I_C = 1 mA	$V_{(BR)CEO}$	420	-	V
Emitter Base Breakdown Voltage at I_E = 100 µA	$V_{(BR)EBO}$	10	-	V
Collector Emitter Saturation Voltage at I_C = 50 mA, I_B = 10 mA	$V_{CE(sat)}$	-	1.05	V
Base Emitter Saturation Voltage at I_C = 50 mA, I_B = 10 mA	$V_{BE(sat)}$	-	1.55	V
Transition Frequency at V_{CE} = 10 V, I_C = 50 mA, f = 1 MHz	f_T	5	-	MHz
Storage Time at UI9600, I_C = 100 mA	t_s	-	3	µs
Rise Time at UI9600, I_C = 100 mA	t_r	-	1	µs
Fall Time at UI9600, I_C = 100 mA	t_f	-	1	µs

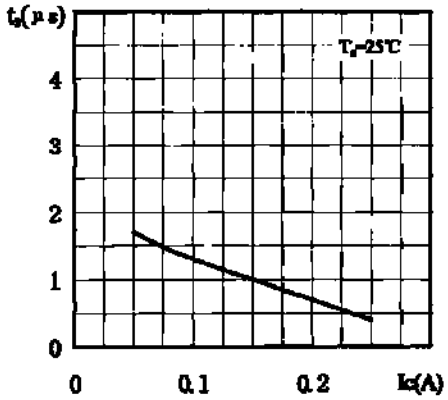
$V_{CE(sat)}$-I_C Characteristics(Typical)



$V_{BE(sat)}$-I_C Characteristics(Typical)

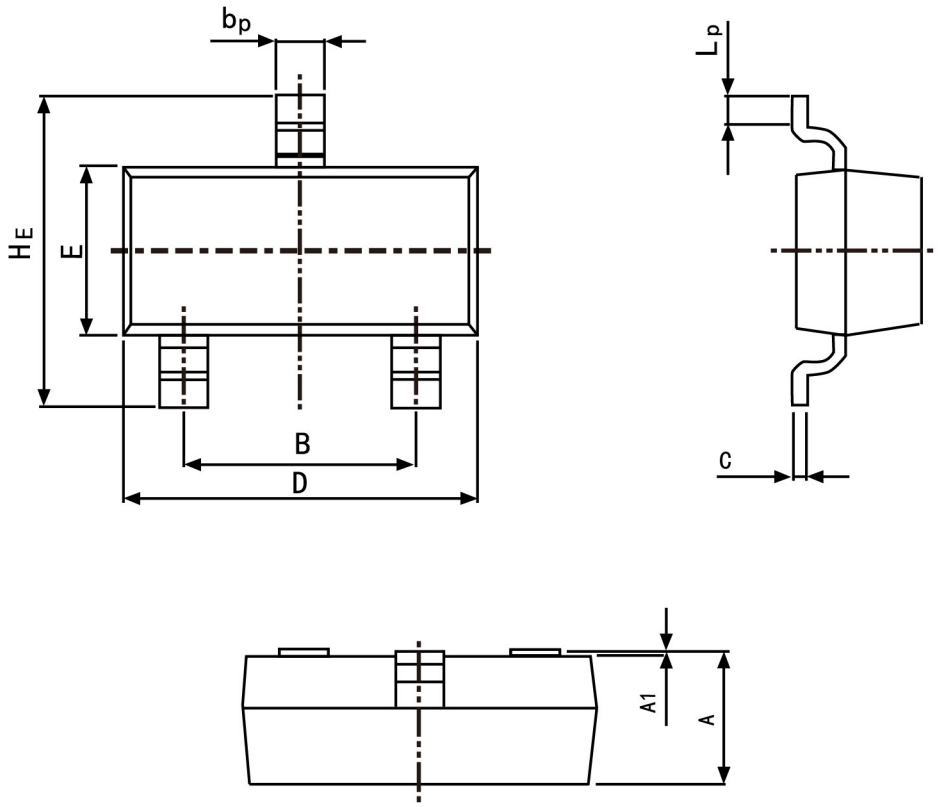


t_s-I_C Characteristics(Typical)



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