

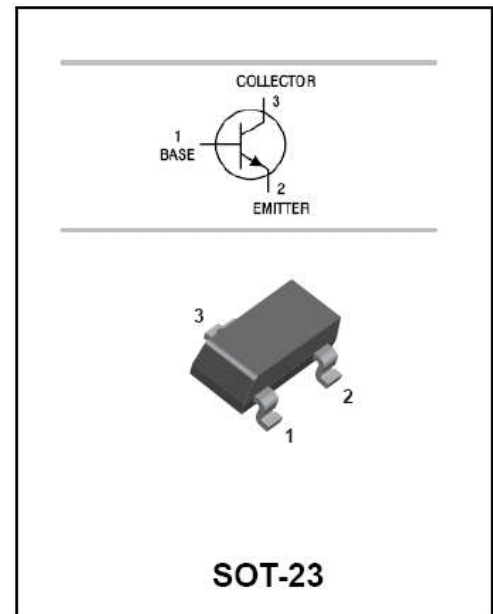
## Silicon Epitaxial Planar Transistor

### FEATURES

- High Collector Current.( $I_c= 500\text{mA}$ )
- Complementary To 2SB1197.
- Excellent  $H_{FE}$  Linearity.
- High total power dissipation.( $P_c=300\text{mW}$ )

### APPLICATIONS

- High Collector Current.



**MAXIMUM RATING** @  $T_a=25^\circ\text{C}$  unless otherwise specified

Symbol	Parameter	Value	Units
$V_{CB0}$	Collector-Base Voltage	40	V
$V_{CEO}$	Collector-Emitter Voltage	25	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_c$	Collector Current -Continuous	500	mA
$P_c$	Collector Dissipation	300	mW
$T_j, T_{stg}$	Junction and Storage Temperature	-55~150	$^\circ\text{C}$

### CLASSIFICATION OF $h_{FE}(1)$

Rank	Q	R
Range	120-270	180-390

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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=0.1mA, I_B=0$	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=40V, I_E=0$			0.1	$\mu A$
Collector cut-off current	$I_{CEO}$	$V_{CE}=20V, I_B=0$			0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5V, I_C=0$			0.1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE}=1V, I_C=50mA$	120		390	
		$V_{CE}=1V, I_C=500mA$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$			0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=500mA, I_B=50mA$			1.2	V
Transition frequency	$f_T$	$V_{CE}=6V, I_C=20mA$ $f=30MHz$	150			MHz



## TYPICAL CHARACTERISTICS

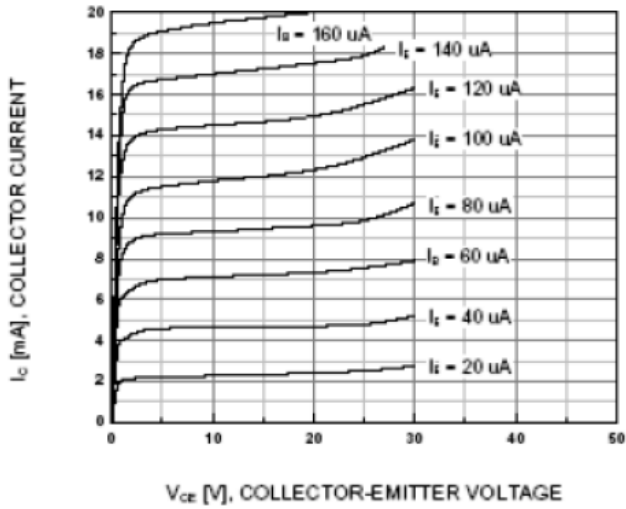


Figure 1. Static Characteristic

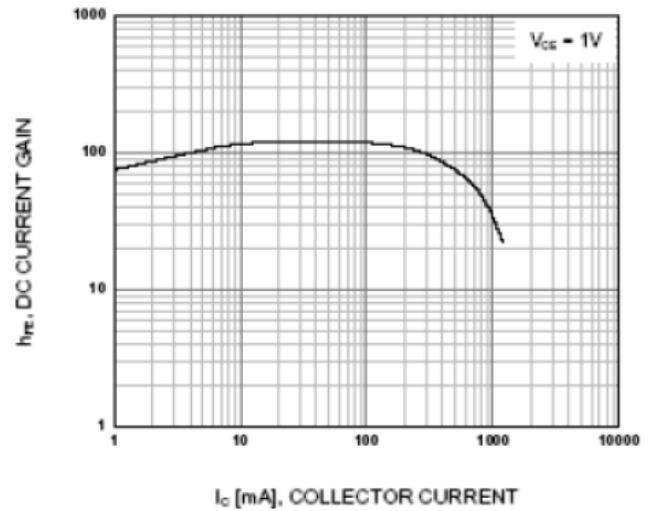


Figure 2. DC current Gain

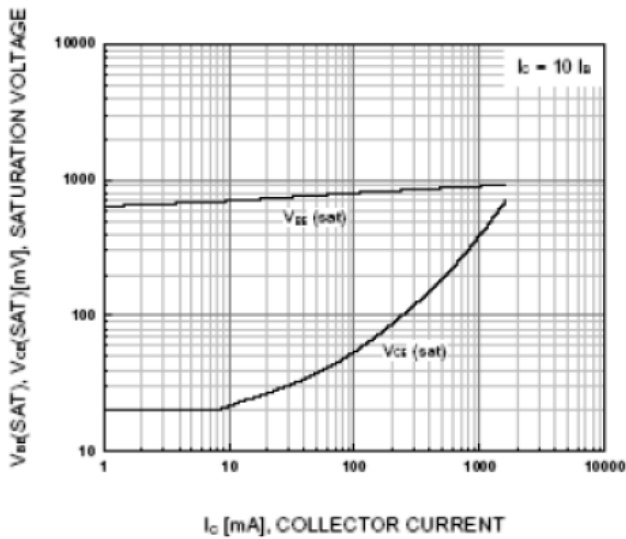


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

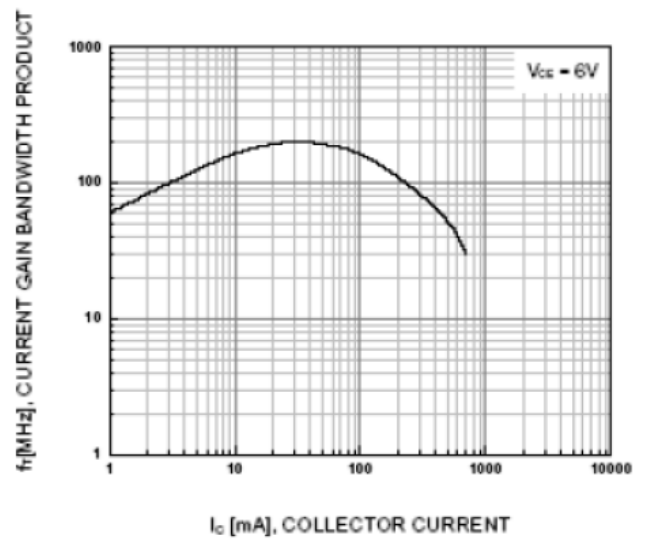


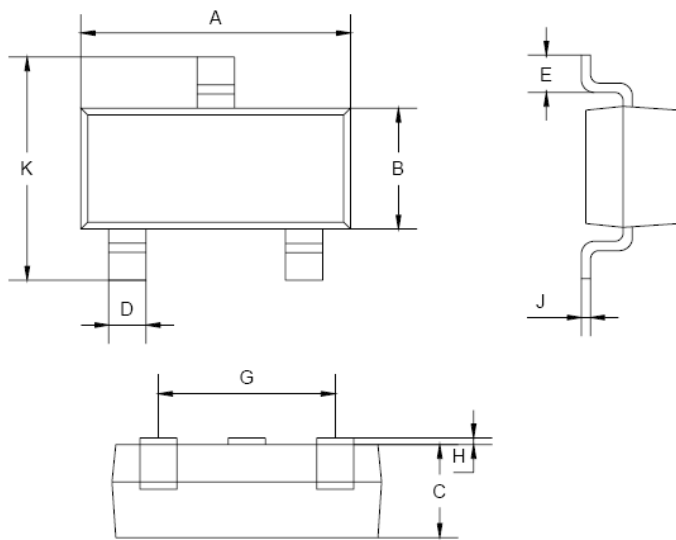
Figure 4. Current Gain Bandwidth Product



## PACKAGE OUTLINE

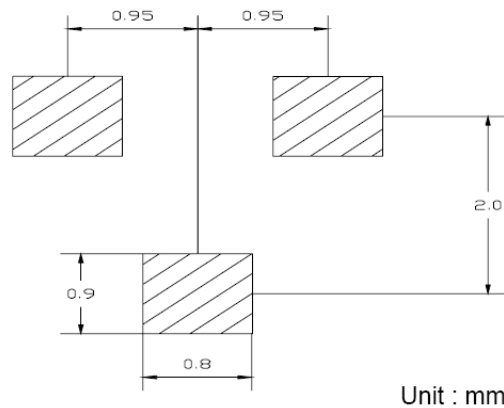
Plastic surface mounted package

SOT-23



SOT-23		
Dim	Min	Max
A	2.85	2.95
B	1.25	1.35
C	1.0Typical	
D	0.37	0.43
E	0.35	0.48
G	1.85	1.95
H	0.02	0.1
J	0.1Typical	
K	2.35	2.45
All Dimensions in mm		

## SOLDERING FOOTPRINT



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