

## Silicon Epitaxial Planar Transistor

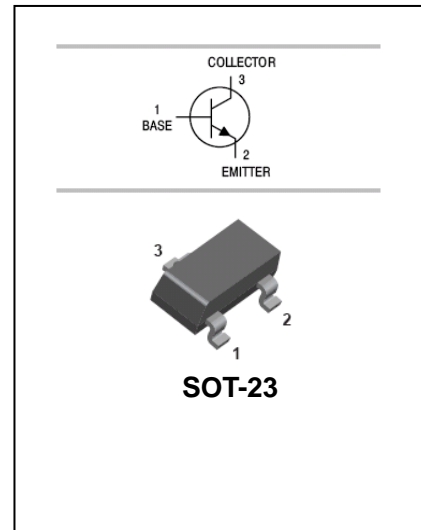
## 2SC1815

### FEATURES

- High voltage and high current  
 $V_{CE0}=50V(\text{Min}), I_C=150\text{mA}(\text{Max})$
- Excellent  $h_{FE}$  linearity :  $h_{FE(2)}=100$  (Typ) at  $V_{CE}=6V, I_C=150\text{mA}$   
 $h_{FE}(I_C=0.1\text{mA}) / h_{FE}(I_C=2\text{mA})=0.95(\text{Typ})$
- Low noise.
- Complementary to 2SA1015.



Lead-free



### APPLICATIONS

- Audio frequency general

### ORDERING INFORMATION

Type No.	Marking	Package Code
2SC1815	HF	SOT-23

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

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	60	V
$V_{CEO}$	Collector-Emitter Voltage	50	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current -Continuous	150	mA
$P_C$	Collector Dissipation	200	mW
$T_j, T_{stg}$	Junction and Storage Temperature	-55~150	$^\circ\text{C}$

**Silicon Epitaxial Planar Transistor****2SC1815****ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified**

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=0.1mA, I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_C=0.1mA, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=60V, I_E=0$			0.1	$\mu A$
Collector cut-off current	$I_{CEO}$	$V_{CE}=50V, I_B=0$			0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5V, I_C=0$			0.1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE}=6V, I_C=2mA$	130		400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100mA, I_B=10mA$		0.1	0.25	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=100mA, I_B=10mA$			1	V
Transition frequency	$f_T$	$V_{CE}=10V, I_C=1mA$ $f=30MHz$	80			MHz

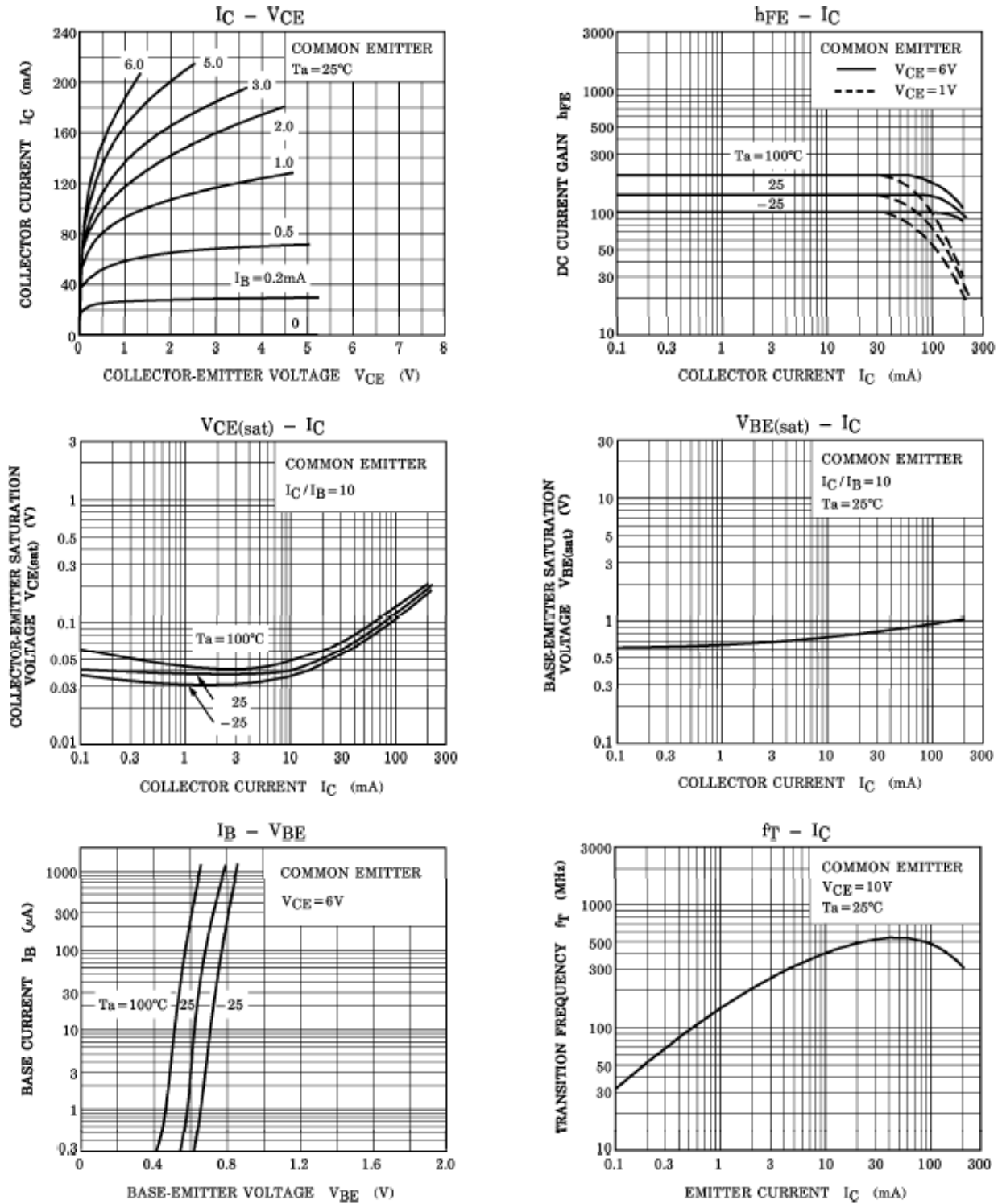
**CLASSIFICATION OF  $h_{FE(1)}$** 

Rank	L	H
Range	130-200	200-400

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TYPICAL CHARACTERISTICS @  $T_a=25^\circ\text{C}$  unless otherwise specified



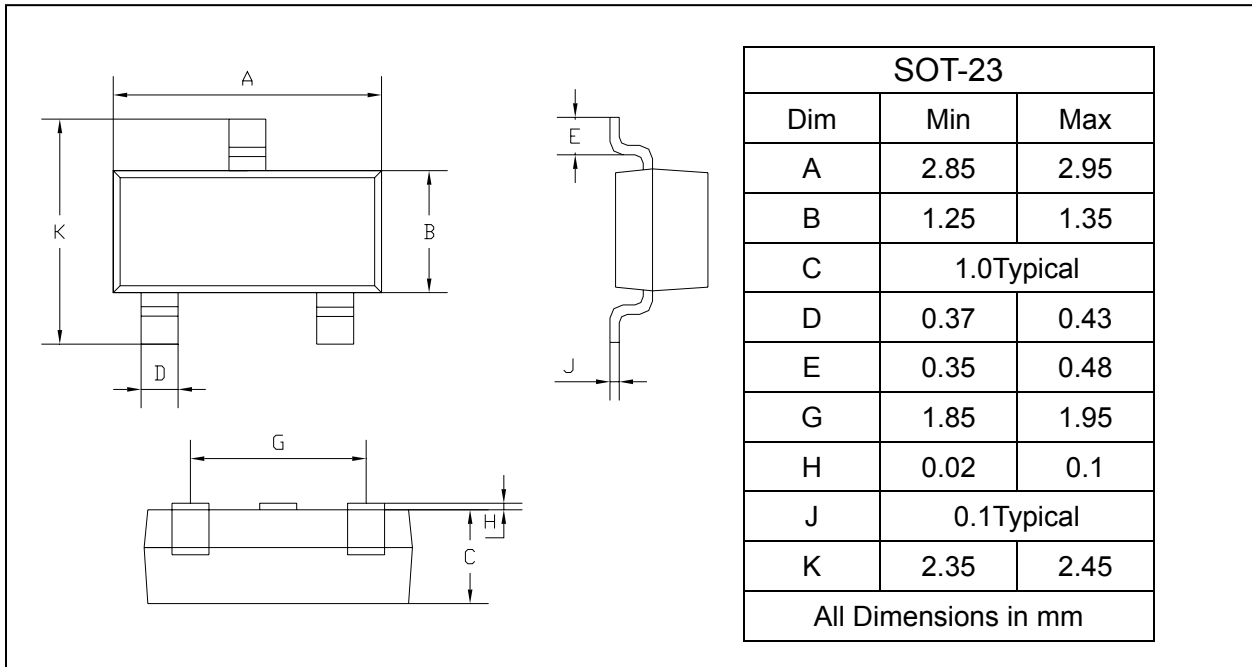
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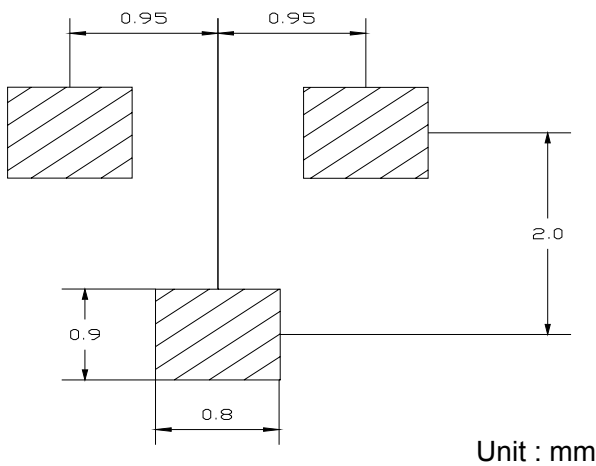
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



### SOLDERING FOOTPRINT



### PACKAGE INFORMATION

Device	Package	Shipping
2SC1815	SOT-23	3000/Tape&Reel