

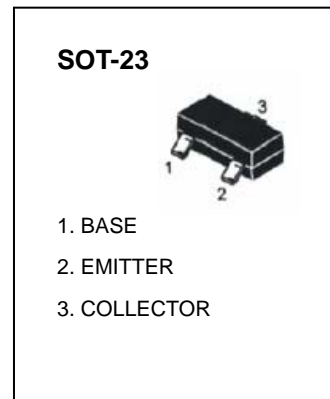
## TRANSISTOR (NPN)

### FEATURES

Power dissipation

MARKING : C1815=HF

MAXIMUM RATINGS ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)



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 Power Dissipation	200	mW
$T_j$	Junction Temperature	150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	-55-150	$^{\circ}\text{C}$

### ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

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

### CLASSIFICATION OF $h_{FE}$

Rank	L	H
Range	130-200	200-400

# Typical Characteristics

