

## Plastic-Encapsulate Transistors

TRANSISTOR (PNP)

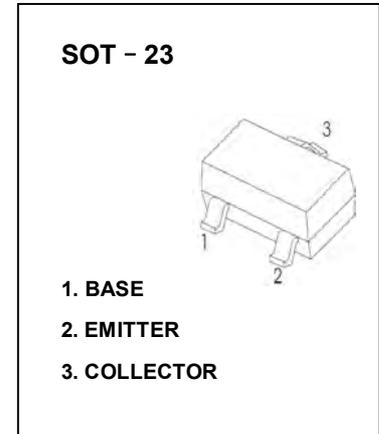
### FEATURES

- High Breakdown Voltage

**MARKING:4D**

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

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	-400	V
$V_{CEO}$	Collector-Emitter Voltage	-400	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current -Continuous	-200	mA
$I_{CM}$	Collector Current -Pulsed	-300	mA
$P_C$	Collector Power Dissipation	350	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	357	$^\circ\text{C}/\text{W}$
$T_j$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~+150	$^\circ\text{C}$



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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-100\mu\text{A}, I_E=0$	-400			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}, I_B=0$	-400			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-100\mu\text{A}, I_C=0$	-5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=-400\text{V}, I_E=0$			-0.1	$\mu\text{A}$
Collector cut-off current	$I_{CEO}$	$V_{CE}=-400\text{V}, I_B=0$			-5	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=-4\text{V}, I_C=0$			-0.1	$\mu\text{A}$
DC current gain	$h_{FE(1)}$	$V_{CE}=-10\text{V}, I_C=-10\text{mA}$	80		300	
	$h_{FE(2)}$	$V_{CE}=-10\text{V}, I_C=-1\text{mA}$	70			
	$h_{FE(3)}$	$V_{CE}=-10\text{V}, I_C=-100\text{mA}$	40			
	$h_{FE(4)}$	$V_{CE}=-10\text{V}, I_C=-50\text{mA}$	40			
Collector-emitter saturation voltage	$V_{CE(sat)1}$	$I_C=-10\text{mA}, I_B=-1\text{mA}$			-0.2	V
	$V_{CE(sat)2}$	$I_C=-50\text{mA}, I_B=-5\text{mA}$			-0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-10\text{mA}, I_B=-1\text{mA}$			-0.75	V
Transition frequency	$f_T$	$V_{CE}=-20\text{V}, I_C=-10\text{mA}, f=30\text{MHz}$	50			MHz

## Typical Characteristics

