

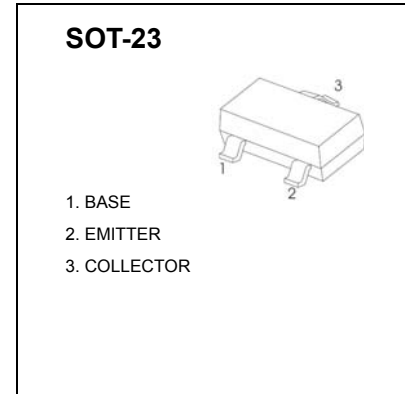
Plastic-Encapsulate Transistors

TRANSISTOR (NPN)

FEATURES

- Low voltage

MARKING : U1



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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	500	mA
P_C	Collector Power Dissipation	225	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	556	$^{\circ}\text{C}/\text{W}$
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-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-emitter breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	45			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}	$V_{CB}=20\text{V}, I_E=0$			0.1	μA
Collector cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			10	μA
DC current gain	h_{FE1}	$V_{CE}=1\text{V}, I_C=100\text{mA}$	100		600	
	h_{FE2}	$V_{CE}=1\text{V}, I_C=300\text{mA}$	70			
	h_{FE3}	$V_{CE}=1\text{V}, I_C=500\text{mA}$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$			0.62	V
Base-emitter voltage	$V_{BE(on)}$	$I_C=500\text{mA}, V_{CE}=1\text{V}$			1.2	V

Typical Characteristics

