



SOT-23 Plastic-Encapsulate Transistors

2SD2114 TRANSISTOR (NPN)

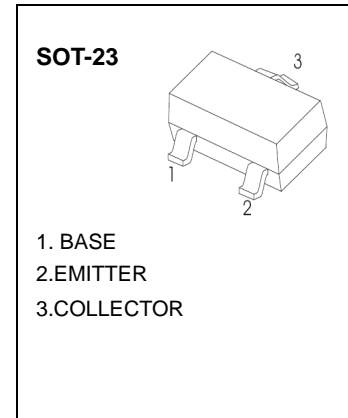
FEATURES

- High DC current gain.
- High emitter-base voltage.
- LOW $V_{CE(sat)}$.

MARKING: BBV,BBW

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	25	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	12	V
I_C	Collector Current -Continuous	0.5	A
P_C	Collector Power Dissipation	0.25	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	$V_{(BR)CBO}$	$I_C=10\ \mu\text{A}, I_E=0$	25			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\ \mu\text{A}, I_C=0$	12			V
Collector cut-off current	I_{CBO}	$V_{CB}=20\text{V}, I_E=0$			0.5	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=10\text{V}, I_C=0$			0.5	μA
DC current gain	h_{FE}	$V_{CE}=3\text{V}, I_C=10\text{mA}$	820		2700	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500\text{mA}, I_B=20\text{mA}$			0.4	V
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=50\text{mA}$ $f=100\text{MHz}$		350		MHz
output capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		8		pF

CLASSIFICATION OF h_{FE}

Rank	V	W
Range	820-1800	1200-2700