



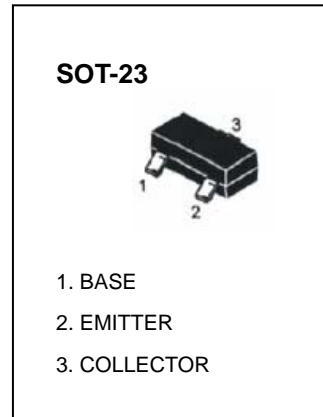
# SOT-23 Plastic-Encapsulate Transistors

# 2SA1015

**2SA1015** TRANSISTOR (PNP)

## FEATURES

- High voltage and high current
- Excellent  $h_{FE}$  Linearity
- Low noise
- Complementary to C1815



**MARKING: BA**

**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	125	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55-125	$^\circ\text{C}$

**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
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -100\mu\text{A}$ , $I_C = 0$	-5			V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -45\text{V}$ , $I_E = 0$			-0.1	$\mu\text{A}$
Collector cut-off current	$I_{CEO}$	$V_{CE} = -40\text{V}$ , $I_B = 0$			-1.0	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -5\text{V}$ , $I_C = 0$			-0.1	$\mu\text{A}$
DC current gain	$h_{FE}$	$V_{CE} = -5\text{V}$ , $I_C = -1\text{mA}$	200		400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100\text{mA}$ , $I_B = -10\text{mA}$			-0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -100\text{mA}$ , $I_B = -10\text{mA}$			-1.1	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	200-300	300-400