



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO.,LTD

TO-92 Plastic-Encapsulate Transistors

2SA1015 TRANSISTOR (PNP)

FEATURES

- Power dissipation

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-150	mA
P_D	Collector Power Dissipation	400	mW
T_j	Junction Temperature	125	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55-125	$^{\circ}\text{C}$

TO-92

1.EMITTER

2.COLLECTOR

3.BASE



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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu\text{A}$, $I_E = 0$	-50			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}	$V_{CB} = -50\text{V}$, $I_E = 0$			-0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE} = -50\text{V}$, $I_B = 0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5\text{V}$, $I_C = 0$			-0.1	μA
DC current gain	h_{FE}	$V_{CE} = -6\text{V}$, $I_C = -2\text{mA}$	70		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
Collector Output Capacitance	C_{ob}	$V_{CB} = -10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$			7	pF
Noise Figure	NF	$V_{CE} = -6\text{V}$, $I_C = -0.1\text{mA}$, $f = 1\text{KHz}$, $R_G = 10\text{K}$			6	dB

CLASSIFICATION OF h_{FE}

Rank	O	Y	GR
Range	70-140	120-240	200-400

Typical Characteristics

2SA1015

