

## TO-92S Plastic-Encapsulate Transistors

### 2SA1515S TRANSISTOR (PNP)

#### FEATURES

- General Purpose Switching Application

#### MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	-40	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-32	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current	-1	A
P <sub>C</sub>	Collector Power Dissipation	0.3	W
R <sub>θJA</sub>	Thermal Resistance From Junction To Ambient	417	°C/W
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55~+150	°C

TO – 92S

1. EMITTER
2. COLLECTOR
3. BASE



#### ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = -0.05mA, I <sub>E</sub> =0	-40			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =-1mA, I <sub>B</sub> =0	-32			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =-0.05mA, I <sub>C</sub> =0	-5			V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =-20V, I <sub>E</sub> =0			-0.5	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =-4V, I <sub>C</sub> =0			-0.5	μA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> =-3V, I <sub>C</sub> =-0.1A	82		390	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =-500mA, I <sub>B</sub> =-50mA			-0.5	V
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =-10V, I <sub>E</sub> =0, f=1MHz			30	pF
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-50mA, f=30MHz	50			MHz

#### CLASSIFICATION OF h<sub>FE</sub>

RANK	P	Q	R
RANGE	82-180	120-270	180-390