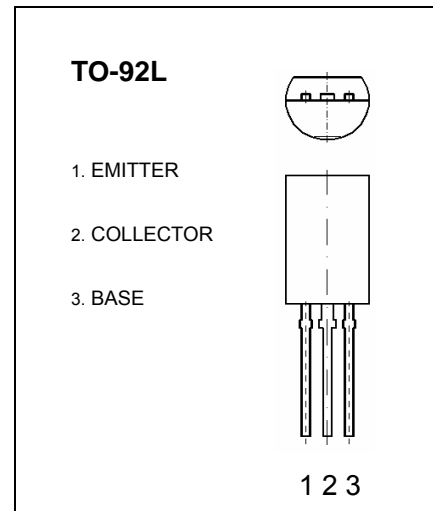


## 2SA1013 TRANSISTOR (PNP)

### FEATURE

- High voltage:  $V_{CE0} = -160V$
- Large continuous collector current capability
- Complementary to 2SC2383



### MAXIMUM RATINGS ( $T_A = 25^\circ C$ unless otherwise noted)

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	-160	V
$V_{CEO}$	Collector-Emitter Voltage	-160	V
$V_{EBO}$	Emitter-Base Voltage	-6	V
$I_C$	Collector Current -Continuous	-1	A
$P_C$	Collector Power Dissipation	0.9	W
$T_j$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature	-55 to +150	$^\circ C$

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

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu A, I_E = 0$	-160		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1mA, I_B = 0$	-160		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-6		V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -150V, I_E = 0$		-1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -6V, I_C = 0$		-1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE} = -5V, I_C = -200mA$	60	300	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500mA, I_B = -50mA$		-1.5	V
Base-emitter voltage	$V_{BE}$	$I_C = -5mA, V_{CE} = -5V$		-0.75	V
Transition frequency	$f_T$	$V_{CE} = -5V, I_C = -200mA$	15		MHz
Collector Output capacitance	$C_{ob}$	$V_{CB} = -10V, I_E = 0, f = 1MHz$		35	pF

### CLASSIFICATION OF $h_{FE}$

Rank	R	O	Y
Range	60-120	100-200	200-300

# Typical characteristics

2SA1013

