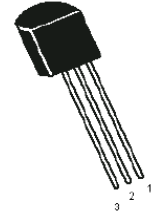


# High Voltage Transistor



## Features:

- Device with breakdown voltages of 160V minimum, for applications requiring relatively low collector current, such as lamp drivers and neon tubes
- NPN epitaxial planar silicon transistor
- Designed for General Purpose Applications Requiring High Breakdown Voltages, Low Saturation Voltages and Low Capacitance



## Pin Configuration:

1. Collector
2. Base
3. Emitter

## Absolute Maximum Ratings

Parameters	Symbol	Value	Units
Collector Emitter Voltage	$V_{CEO}$	400	V
Collector Base Voltage	$V_{CBO}$	500	
Emitter Base Voltage	$V_{EBO}$	6	
Collector Current Continuous	$I_C$	300	mA
Power Dissipation at $T_a = 25^\circ\text{C}$ $T_C = 25^\circ\text{C}$	$P_{TA}$	625	mW
	$P_{TC}$	1.5	W
Operating and Storage Junction Temperature Range	$T_j, T_{stg}$	-55 to +150	$^\circ\text{C}$

## Thermal Resistance

Junction to Ambient	$R_{th(j-a)}$	200	$^\circ\text{C/W}$
Junction to Case	$R_{th(j-c)}$	83.3	

## Electrical Characteristics ( $T_a = 25^\circ\text{C}$ unless otherwise specified)

Parameters	Symbol	Test Condition	Minimum	Units
Collector-Emitter Voltage	$V_{CEO}^*$	$I_C = 1\text{mA}, I_B = 0$	>400	V
	$V_{CES}$	$I_C = 100\mu\text{A}, V_{BE} = 0$	>500	
Collector-Base Voltage	$V_{CBO}$	$I_C = 100\mu\text{A}, I_E = 0$	>500	
Emitter-Base Voltage	$V_{EBO}$	$I_E = 10\mu\text{A}, I_C = 0$	>6	
Collector-Cut off Current	$I_{CBO}$	$V_{CB} = 400\text{V}, I_E = 0$	<100	nA
	$I_{CES}$	$V_{CE} = 400\text{V}, I_B = 0$	<500	

\*Pulse Test : Pulse Width = 300 $\mu\text{s}$ , Duty Cycle = 2%.

# High Voltage Transistor



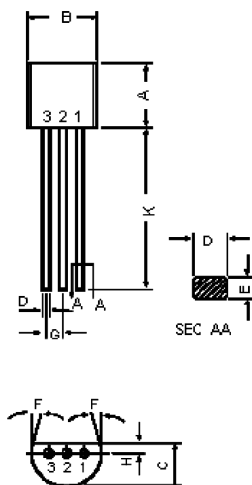
## Electrical Characteristics ( $T_a = 25^\circ\text{C}$ unless otherwise specified)

Parameters	Symbol	Test Condition	Minimum	Units
Emitter-Cut off Current	$I_{EBO}$	$V_{EB} = 4V, I_C = 0$	<100	nA
DC Current Gain	$h_{FE}^*$	$I_C = 1mA, V_{CE} = 10V$ $I_C = 10mA, V_{CE} = 10V$ $I_C = 50mA, V_{CE} = 10V$	>40 50-200 >45	-
Collector Emitter Saturation Voltage	$V_{CE(sat)}^*$	$I_C = 1mA, I_B = 0.1mA$ $I_C = 10mA, I_B = 1mA$ $I_C = 50mA, I_B = 5mA$	<0.4 <0.5 <0.75	V
Base Emitter Saturation Voltage	$V_{BE(sat)}^*$	$I_C = 10mA, I_B = 1mA$	<0.75	

## Dynamic Characteristics

Output Capacitance	$C_{ob}$	$V_{CB} = 20V, I_E = 0,$ $f = 1MHz$	<7	pF
Input Capacitance	$C_{ib}$	$V_{EB} = 0.5V, I_C = 0,$ $f = 1MHz$	<130	
Small Signal Current Gain	$h_{fe}$	$I_C = 10mA, V_{CE} = 10V,$ $f = 10MHz$	>2	-

\*Pulse Test : Pulse Width = 300 $\mu$ s, Duty Cycle = 2%.



Dimensions	Minimum	Maximum
A	4.32	5.33
B	4.45	5.2
C	3.18	4.19
D	0.41	0.55
E	0.35	0.5
F	5°	
G		1.4
H	1.14	1.53
K	12.7	-

Dimensions : Millimetres

## Pin Configuration:

1. Collector
2. Base
3. Emitter

## Part Number Table

Description	Part Number
Transistor, NPN, TO-92	MPSA44

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