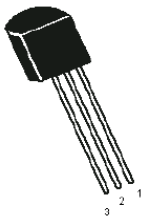
High Voltage Transistor

multicomp PRO

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°C T_C = 25°C	P_{TA} P_{TC}	625 1.5	mW W
Operating and Storage Junction Temperature Range	T_j, T_{stg}	-55 to +150	°C

Thermal Resistance

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

Electrical Characteristics (T_a = 25°C unless otherwise specified)

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

*Pulse Test : Pulse Width = 300µs, Duty Cycle = 2%.

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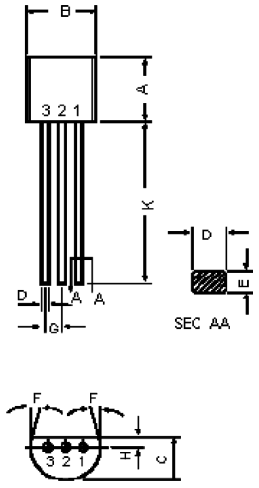
Electrical Characteristics (T_a = 25°C unless otherwise specified)

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 = 300µs, 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	1.14	1.4
H		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