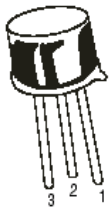
High Voltage Transistor

multicomp PRO



Pin Configuration
1. Emitter
2. Base
3. Collector

Features:

- NPN High Voltage Silicon Transistor
- High Voltage Silicon Planar Transistors used in High Voltage and High Power Amplifier Applications

Absolute Maximum Ratings:

(T_a = 25°C unless otherwise specified)

Characteristic	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	300	V
Collector-Emitter Voltage	V_{CES}	250	
Emitter-Base Voltage	V_{EBO}	7	
Collector Current Continuous	I_C	1	A
Base Current	I_B	0.5	
Power Dissipation at T_a = 25°C Derate above 25°C	P_D	1 5.7	W mW/°C
Power Dissipation at T_C = 25°C Derate above 25°C		5 28.6	
Operating Temperature	T_J	200	°C
Storage Temperature Range	T_{stg}	-65 to +200	

Thermal Resistance

Junction to Ambient	$R_{th(j-a)}$	175	°C/W
Junction to Case	$R_{th(j-c)}$	35	

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Electrical Characteristics:

(T_a = +25°C unless otherwise specified)

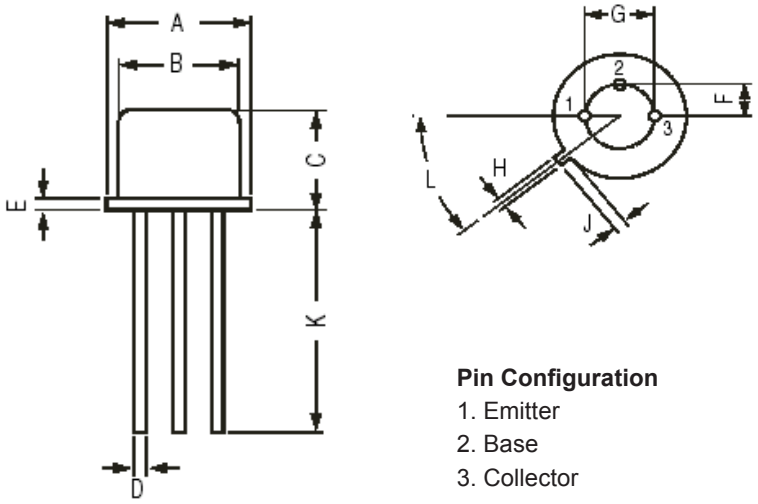
Parameter	Symbol	Test Condition		Unit
Collector-Emitter Voltage	$V_{CEO(sus)}$*	I_C = 50mA, I_B = 0	250	V
Collector-Cut off Current	I_{CBO}	V_{CB} = 250V, I_E = 0	<20	µA
	I_{CEO}	V_{CE} = 200V, I_B = 0	<50	
	I_{CEX}	V_{CE} = 300V, V_{BE} = 1.5V	<500	
Emitter-Cut off Current	I_{EBO}	V_{EB} = 6V, I_C = 0	<20	
DC Current Gain	h_{FE}*	I_C = 20mA, V_{CE} = 10V	40 - 160	-
Collector Emitter Saturation Voltage	$V_{CE(sat)}$*	I_C = 0.05A, I_B = 4mA	<0.5	V
Base Emitter Saturation Voltage	$V_{BE(Sat)}$*	I_C = 50mA, I_B = 4mA	<1.3	

Small Signal Characteristics

Small Signal Current Gain	h_{fe}	I_C = 5mA, V_{CE} = 10V, f = 1kHz	>25	-
Output Capacitance	Cob	V_{CB} = 10V, I_E = 0, f = 1MHz	<10	pF
Input Capacitance	Cib	V_{EB} = 5V, I_C = 0, f = 1MHz	<75	
Current Gain-Bandwidth Product	f_t	I_C = 10mA, V_{CE} = 10V, f = 5MHz	>15	MHz
Real Part of Input impedance	$R_{e(hie)}$	V_{CE} = 10V, I_C = 5mA, f = 1MHz	<300	Ω

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

TO-39 Metal Can Package



Dim.	Min.	Max.
A	8.5	9.39
B	7.74	8.5
C	6.09	6.6
D	0.4	0.53
E	-	0.88
F	2.41	2.66
G	4.82	5.33
H	0.71	0.86
J	0.73	1.02
K	12.7	-
L	42°	48°

Dimensions : Millimetres

Pin Configuration

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Part Number Table

Description	Part Number
Transistor, NPN, TO-39	2N3440