

PNP High Voltage Transistor



Pin Configuration

1. Emitter
2. Base
3. Collector

Features:

- PNP Silicon High Voltage Transistor
- High speed switching and linear amplifier appliances in Military, Industrial and Commercial Equipment

Absolute Maximum Ratings:

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

Characteristic	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	350	V
Collector-Emitter Voltage	V_{CEO}	300	
Emitter-Base Voltage	V_{EBO}	6	
Collector Current Continuous	I_C	1	A
Base Current	I_B	0.5	
Power Dissipation at $T_a = 25^\circ\text{C}$ Derate above 25°C	P_D	1	W mW/ $^\circ\text{C}$
Power Dissipation at $T_c = 25^\circ\text{C}$ Derate above 25°C		10	W
Operating Temperature	T_J	200	mW/ $^\circ\text{C}$
Storage Temperature Range	T_{stg}	-65 to +200	$^\circ\text{C}$

Thermal Resistance

Junction to Ambient	$R_{th(j-a)}$	150	$^\circ\text{C/W}$
Junction to Case	$R_{th(j-c)}$	17.5	

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Electrical Characteristics:

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

Parameter	Symbol	Test Condition		Unit
Collector Emitter Breakdown Voltage	$BV_{CEO(sus)}^*$	$I_C = 50\text{mA}, I_B = 0$	>300	V
Collector Cut off Current	I_{CBO}	$V_{CB} = 280\text{V}, I_E = 0$	<50	μA
	I_{CEO}	$V_{CE} = 250\text{V}, I_B = 0$		
Emitter Cut off Current	I_{EBO}	$V_{EB} = 6\text{V}, I_C = 0$	<20	
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 50\text{mA}, I_B = 5\text{mA}$	<2	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 50\text{mA}, I_B = 5\text{mA}$	<1.5	
DC Current Gain	h_{FE}^*	$I_C = 50\text{mA}, V_{CE} = 10\text{V}$	30 - 120	-

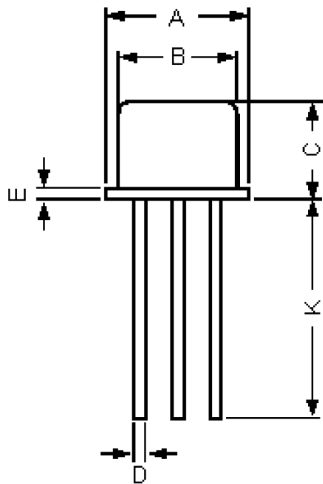
Dynamic Characteristics

Small Signal Current Gain	h_{fe}	$I_C = 5\text{mA}, V_{CE} = 10\text{V}, f = 1\text{kHz}$	>25	-
Transition Frequency	f_T	$I_C = 10\text{mA}, V_{CE} = 10\text{V}, f = 5\text{MHz}$	>15	MHz
Output Capacitance	C_{ob}	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$	<15	pF
Input Capacitance	C_{ib}	$V_{EB} = V_{EBO} \text{ max.}, I_C = 0, f = 1\text{MHz}$	<75	

*Pulsed: Pulse Width $\leq 30\mu\text{s}$, Duty Cycle $\leq 2\%$

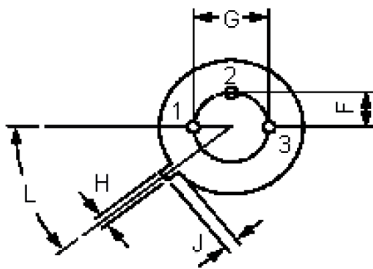
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TO-39 Metal Can Package



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



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Part Number Table

Description	Part Number
RF Transistor, PNP, TO-39	2N5416

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