

# General Purpose Transistor multcomp<sup>PRO</sup>



## Pin Configuration

1. Emitter
2. Base
3. Collector

## Features:

- PNP Silicon Planar RF Transistor
- Small Signal General Purpose Amplifier, Transistor

## Absolute Maximum Ratings:

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

Characteristic	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	80	V
Collector-Emitter Voltage	$V_{CEO}$		
Emitter-Base Voltage	$V_{EBO}$	5	
Collector Current	$I_{CM}$	1	A
Power Dissipation at $T_a = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	800 4.6	mW mW/ $^\circ\text{C}$
Power Dissipation at $T_C = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$		4 22.85	W mW/ $^\circ\text{C}$
Operating and Storage Temperature Range	$T_j, T_{stg}$	-65 to +200	$^\circ\text{C}$

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## Electrical Characteristics:

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

Parameter	Symbol	Test Condition	Min.	Max.	Unit
Collector Emitter Breakdown Voltage	$BV_{CEO}^*$	$I_C = 10\text{mA}, I_B = 0$	80	-	V
Collector Base Breakdown Voltage	$BV_{CBO}$	$I_C = 10\mu\text{A}, I_E = 0$			
Emitter Base Breakdown Voltage	$BV_{EBO}$	$I_E = 10\mu\text{A}, I_C = 0$	5		
Collector Leakage Current	$I_{CBO}$	$V_{CB} = 60\text{V}, I_E = 0$	-	50	nA
		$V_{CB} = 60\text{V}, T_a = 150^\circ\text{C}$			$\mu\text{A}$
Emitter Leakage Current	$I_{EBO}$	$V_{EB} = 5\text{V}, I_C = 0$	-	10	$\mu\text{A}$
Collector Emitter Saturation Voltage	$V_{CE(Sat)}^*$	$I_C = 150\text{mA}, I_B = 15\text{mA}$		0.15	V
		$I_C = 500\text{mA}, I_B = 50\text{mA}$		0.5	
Base Emitter Saturation Voltage	$V_{BE(Sat)}^*$	$I_C = 150\text{mA}, I_B = 15\text{mA}$		0.9	
Base Emitter On Voltage	$V_{BE(on)}^*$	$I_C = 500\text{mA}, V_{CE} = 0.5\text{V}$		1.1	
DC Current Gain	$h_{FE}^*$	$I_C = 100\text{mA}, V_{CE} = 5\text{V}$	75	300	-
		$I_C = 100\text{mA}, V_{CE} = 5\text{V}$	100		
		$I_C = 100\text{mA}, V_{CE} = 5\text{V}, T_a = -55^\circ\text{C}$	40		
		$I_C = 1\text{A}, V_{CE} = 5\text{V}$	25		

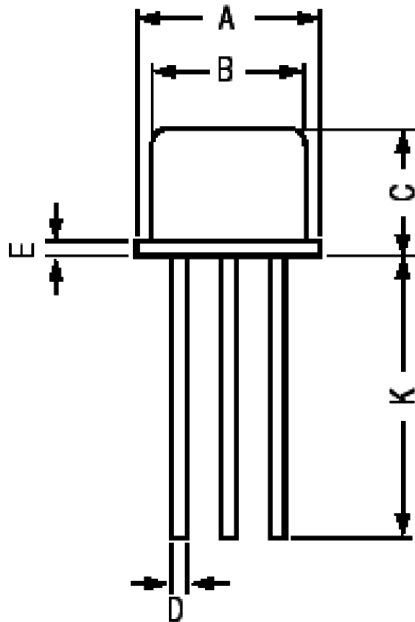
## Small Signal Characteristics

Transition Frequency	$f_T$	$I_C = 50\text{mA}, V_{CE} = 10\text{V}, f = 100\text{MHz}$	150	500	MHz
Output Capacitance	$C_{ob}$	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$	-	20	pF
Input Capacitance	$C_{ib}$	$V_{BE} = 0.5\text{V}, I_C = 0, f = 1\text{MHz}$		110	
Turn on Time	$t_{on}$	$I_C = 500\text{mA}, I_{B1} = 50\text{mA}$		100	ns
Storage Time		$I_C = 500\text{mA}, I_{B1} = I_{B2} = 50\text{mA}$		350	
Fall Time	$t_f$	$I_C = 500\text{mA}, I_{B1} = I_{B2} = 50\text{mA}$		50	

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

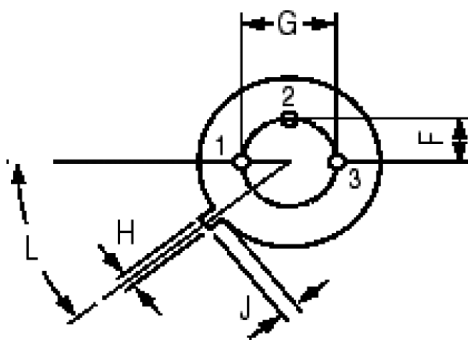
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## TO-39 Metal Can Package



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



### Pin Configuration

1. Emitter
2. Base
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### Part Number Table

Description	Part Number
Transistor, PNP, TO-39	2N4033

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