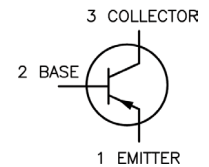
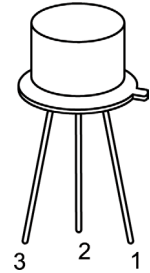


**RoHS  
Compliant**



## Description:

A Silicon PNP transistor in a TO-39 type case designed primarily for amplifier and switching applications. This device features high breakdown voltage, low leakage current. Low capacity, and beta useful over an extremely wide current range.

## Pin Configurations:

1. Emitter
2. Base
3. Collector

## Maximum Ratings:

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CB0}$	60	V
Collector-Emitter Voltage	$V_{CEO}$		
Emitter Base Voltage	$V_{EBO}$		
Continuous Collector Current	$I_C$	1	A
Total Device Dissipation $-(T_A = +25^\circ\text{C})$ , Derate Above $25^\circ\text{C}$	$P_D$	0.8	W
Total Device Dissipation $-(T_C = +25^\circ\text{C})$ , Derate Above $25^\circ\text{C}$		4.56	
Operating Junction Temperature Range	$T_J$	-65 to +200	$^\circ\text{C}$
Storage Temperature Range,	$T_{stg}$		
Thermal Resistance, Junction-to-Case	$R_{thJC}$	20	$^\circ\text{C/W}$
Thermal Resistance, Junction-to-Ambient	$R_{thJA}$	140	
Lead temperature (During Soldering, 1/16" from case, 60sec max)	$T_L$	300	$^\circ\text{C}$

## Electrical Characteristics: ( $T_C = +25^\circ\text{C}$ Unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Max	Unit
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### OFF Characteristics

Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 100\text{mA}, I_B = 0$	60	-	V
Collector-Base Breakdown Voltage		$I_C = 100\mu\text{A}, I_B = 0$			
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 100\mu\text{A}, I_C = 0$	5		
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 50\text{V}, I_E = 0$	-	50	nA
		$V_{CB} = 50\text{V}, I_E = 0, T_A = +150^\circ\text{C}$			$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{BE} = 5\text{V}, I_C = 0$		10	

### ON Characteristics

DC Current Gain	$h_{FE}$	$V_{CE} = 5\text{V}, I_C = 100\mu\text{A}$	75	-	-
		$V_{CE} = 5\text{V}, I_C = 100\text{mA}$	100	300	
		$V_{CE} = 5\text{V}, I_C = 100\mu\text{A}, T_A = -55^\circ\text{C}$	40		
		$V_{CE} = 5\text{V}, I_C = 500\text{mA}$	70		
		$V_{CE} = 5\text{V}, I_C = 1\text{A}$	40		
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	$V_{BE(on)}$	$V_{CE} = 500\text{mV}, I_C = 500\text{mA}$		1.1	

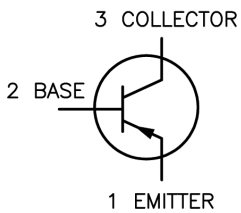
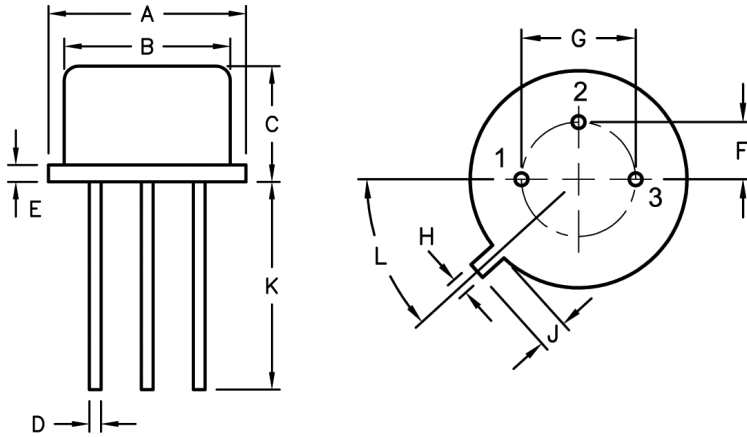
### Small - Signal Characteristics

Output Capacitance	$C_{obo}$	$V_{CE} = 10\text{V}, f = 1\text{MHz}$	-	20	$\mu\text{F}$
Input Capacitance	$C_{IBO}$	$V_{EB} = 500\text{mV}, f = 1\text{MHz}$		110	
Small Signal Current Gain	$h_{fe}$	$V_{CE} = 10\text{V}, I_C = 50\text{mA}, f = 500\text{MHz}$	1	4	-

### Switching Characteristics

Storage Time	$t_s$	$I_C = 500\text{mA}, I_{B1} = I_{B2} = 50\text{mA}$	-	350	ns
Turn-On-Time	$t_{on}$	$I_C = 500\text{mA}, I_{B1} = 50\text{mA}$		100	
Fall Time	$t_f$	$I_C = 500\text{mA}, I_{B1} = I_{B2} = 50\text{mA}$		50	

# Power Transistor



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

Dimensions : Millimetres

## Part Number Table

Description	Part Number
Transistor, PNP, 1A, 60V, TO-39	2N4032

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