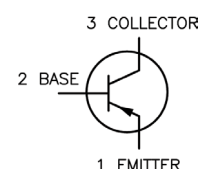
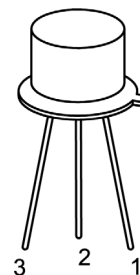


Power Transistor



RoHS
Compliant



Pin Configurations:

1. Emitter
2. Base
3. Collector

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.

Maximum Ratings:

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	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°C	P_D	0.8 4.56	W mW/ $^{\circ}\text{C}$
Total Device Dissipation $-(T_C = +25^{\circ}\text{C})$, Derate Above 25°C		4 22.8	
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
		$V_{CB} = 50\text{V}, I_E = 0, T_A = +150^\circ\text{C}$			μA
Emitter Cut-off Current	I_{EBO}	$V_{BE} = 5\text{V}, I_C = 0$		10	

ON Characteristics

DC Current Gain	h_{FE}	$V_{CE} = 5V, I_C = 100\mu A$	75	-	-
		$V_{CE} = 5V, I_C = 100mA$	100	300	
		$V_{CE} = 5V, I_C = 100\mu A, T_A = -55^{\circ}C$	40	-	
		$V_{CE} = 5V, I_C = 500mA$	70		
		$V_{CE} = 5V, I_C = 1A$	40		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 150mA, I_B = 15mA$	-	0.15	V
		$I_C = 500mA, I_B = 50mA$		0.5	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 150mA, I_B = 15mA$		0.9	
Base-Emitter ON Voltage	$V_{BE(on)}$	$V_{CE} = 500mV, I_C = 500mA$		1.1	

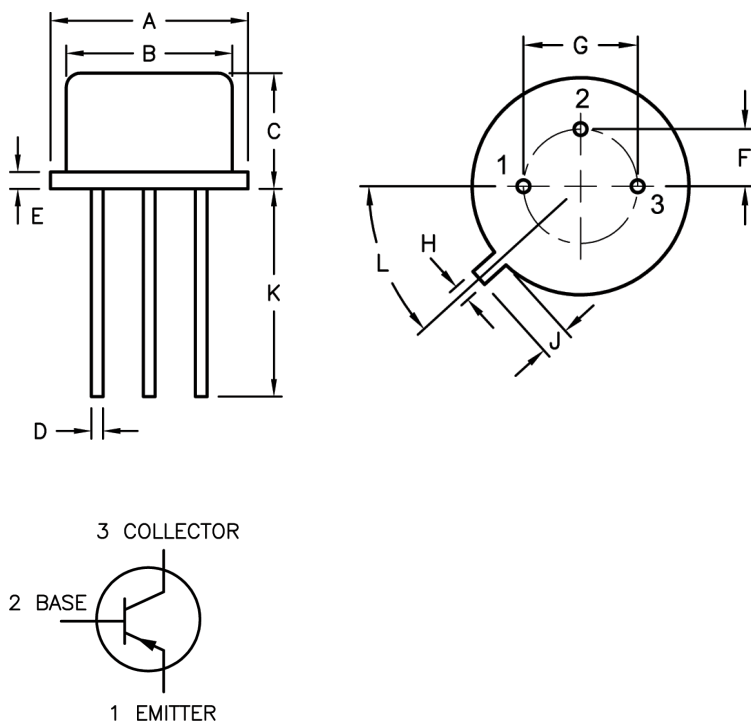
Small - Signal Characteristics

Output Capacitance	C_{obo}	$V_{CE} = 10\text{V}, f = 1\text{MHz}$	-	20	pF
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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