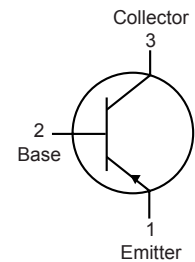
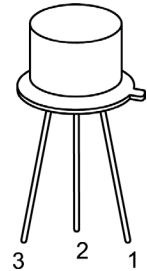


Bipolar Transistor



Description:

This is 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}	40	V
Collector - Emitter Voltage	V_{CEO}		
Emitter - Base Voltage	V_{EBO}	7	
Continuous Collector Current	I_C	1	A
Total Device Dissipation ($T_A = +25^\circ\text{C}$), Derate above 25°C	P_D	1	W
Total Device Dissipation ($T_C = +25^\circ\text{C}$), Derate above 25°C		5.7	
Operating Junction Temperature,	T_J	-65 to +200	$^\circ\text{C}$
Storage Temperature Range,	T_{stg}	-65 to +200	
Thermal Resistance, Junction-to-Case,	R_{thJC}	29	$^\circ\text{C/W}$
Lead Temperature (During Soldering, 1/16" from case, 60 sec max)	T_L	300	$^\circ\text{C}$

Bipolar Transistor



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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF Characteristics						
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 100\text{mA}, I_B = 0$	40	-	-	V
Collector Cut-Off Current	I_{CBO}	$V_{CB} = 40\text{V}, I_E = 0$	-	-	100	μA
Emitter Cut-Off Voltage	I_{EBO}	$V_{BE} = 7\text{V}, I_C = 0$			500	

ON Characteristics (Note 1)

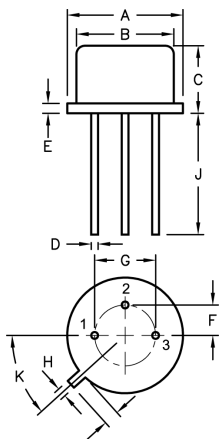
DC Current Gain	h_{FE}	$V_{CE} = 1\text{V}, I_C = 100\text{mA}$	40	-	-	-
		$V_{CE} = 1\text{V}, I_C = 250\text{mA}$	30		150	
		$V_{CE} = 1\text{V}, I_C = 500\text{mA}$	20		-	
		$V_{CE} = 1\text{V}, I_C = 1\text{A}$	10		-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 1\text{A}, I_B = 125\text{mA}$	-	-	0.6	V
Base-Emitter On Voltage	$V_{BE(sat)}$	$I_C = 1\text{A}, I_B = 100\text{mA}$			1.5	

Small-Signal Characteristics

Small-Signal Current Gain	h_{fe}	$V_{CE} = 10\text{V}, I_C = 50\text{mA}, f = 1\text{KHz}$	25	-	-	-
Output Capacitance	C_{cbo}	$V_{CB} = 10\text{V}, f = 0.1\text{MHz}$	-	-	100	μF
Input Capacitance	C_{ibo}	$V_{BE} = 500\text{mV}, f = 1\text{MHz}$			110	μF

Note:

1. Pulse Test : Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 1\%$



Dimensions	A	B	C	D	E	F	G	H	I	J	K
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

Pin Configuration:

1. Emitter
2. Base
3. Collector

Part Number Table

Description	Part Number
Transistor, PNP, 3A, 40V, TO39	2N4234

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