

Description

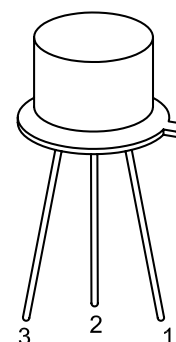
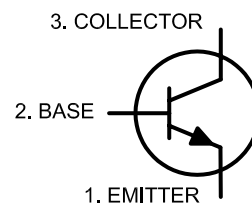
Transistor, Silicon, NPN, TO-39, Metal, High Current, General Purpose

Absolute Maximum Ratings

Characteristic	Symbol	2N5320	2N5322
Collector-Emitter Voltage	V_{CEO}	75V	
Collector-Base Voltage	V_{CBO}	100V	
Emitter - Base Voltage	V_{EBO}	7V	
Continuous Collector Current	I_C	2A	
Base Current	I_B	1A	
Total Device Dissipation ($T_c = +25^\circ\text{C}$) Derate above 25°C	P_D	1W	5.71mW/ $^\circ\text{C}$
Total Device Dissipation ($T_c = +25^\circ\text{C}$) Derate above 25°C		10W	57.14mW/ $^\circ\text{C}$
Operating Junction Temperature Range	T_J	-65°C to $+200^\circ\text{C}$	
Storage Temperature Range	T_{STG}	-65°C to $+200^\circ\text{C}$	
Junction to Ambient in free air	R_{thJA}	175 $^\circ\text{C}/\text{W}$	
Junction to Case	R_{thJC}	17.5 $^\circ\text{C}/\text{W}$	

RoHS
Compliant

NPN

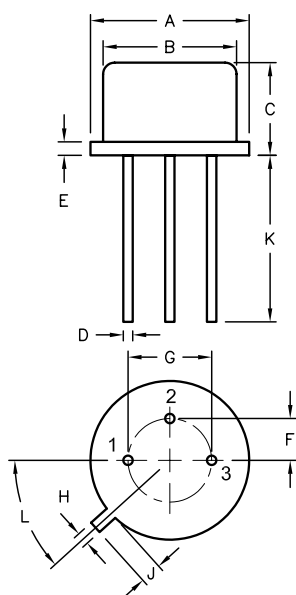


Electrical Characteristics: ($T_A = +25^\circ\text{C}$ Unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Max.	Unit.
OFF Characteristics					
Collector Emitter Voltage	V_{CEO}	$I_C = 100\text{mA}$, $I_B = 0$	75	-	V
Collector Cut off Current	I_{CEX}	$V_{CE} = 100\text{V}$, $V_{BE} = 1.5\text{V}$	-	100	μA
		$V_{CE} = 70\text{V}$, $V_{BE} = 1.5\text{V}$, $T_c = +150^\circ\text{C}$	-	5	mA
Emitter Cut-Off Current	I_{EBO}	$V_{BE} = 7\text{V}$, $I_C = 0$	-	100	μA
On Characteristics					
DC Current Gain (Note 1)	h_{FE}	$I_C = 500\text{mA}$, $V_{CE} = 4\text{V}$	30	130	-
		$I_C = 1\text{A}$, $V_{CE} = 2\text{V}$	10	-	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 500\text{mA}$, $I_B = 50\text{mA}$	-	0.5	V
Base-Emitter on Voltage	$V_{BE(on)}$	$I_C = 500\text{mA}$, $V_{CE} = 4\text{V}$	-	1.1	V
Small-Signal Characteristics					
Small-Signal Current Gain	h_{fe}	$V_{CE} = 50\text{mA}$, $V_{CE} = 4\text{V}$, $f = 10\text{MHz}$	5	-	-

Parameter	Symbol	Test Conditions	Min.	Max.	Unit.
Switching Characteristics					
Turn-on Time	t_{on}	$V_{CC} = 30V, I_c = 500mA, I_{B1} = 50mA$	-	80	ns
Turn-off Time	t_{off}	$V_{CC} = 30V, I_c = 500mA, I_{B1} = I_{B2} = 50mA$	-	800	

Note 1. Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$



1. EMITTER
2. BASE
3. COLLECTOR

Dimensions	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
Bipolar Transistor, NPN, 2A, 75V, TO-39	2N5320
	2N5322

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