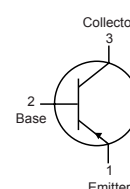
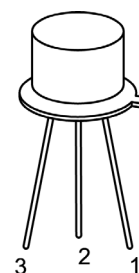


RoHS
Compliant



Description:

A Silicon NPN transistor in a TO-39 case intended for high voltage switching and linear amplifier applications

Pin Configurations:

1. Emitter
2. Base
3. Collector

Maximum Ratings:

Characteristic	Symbol	Rating	Unit
Collector-Emitter Voltage	V_{CEO}	350	V
Collector-Base Voltage	V_{CBO}	450	
Emitter-Base Voltage	V_{EBO}	7	
Continuous Collector Current - Base Current	I_C I_B	1 500	A mA
Total Device Dissipation ($T_A = +25^\circ\text{C}$), Note 1) Derate Above $25^\circ\text{C} = 5.7$	P_D	1 5.7	W mW/ $^\circ\text{C}$
Total Device Dissipation ($T_C = +25^\circ\text{C}$), Note 1), Derate Above 25°C	P_D	5 28.6	
Operating Junction Temperature Range,	T_J	-65 to +200	$^\circ\text{C}$
Storage Temperature Range	T_{stg}		
Thermal Resistance, Junction-to-case	R_{thjc}	35	$^\circ\text{C/W}$
Thermal Resistance, Junction-to-Ambient		175	

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

Parameter	Symbol	Test Conditions	Min.	Typ	Max.	Unit
-----------	--------	-----------------	------	-----	------	------

OFF Characteristics

Collector-Emitter Sustaining Voltage	$V_{CE(sus)}$	$I_C = 50\text{mA}$, $I_B = 0$, Not 1	350		-	V
Collector Cut-Off Current	I_{CEO}	$V_{CE} = 300\text{V}$, $I_B = 0$	-	-	20	μA
	I_{CEX}	$V_{CE} = 450\text{V}$, $I_{BE} = 1.5\text{V}$			500	
	I_{CBO}	$V_{CB} = 360\text{V}$, $I_E = 0$			20	
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = 6\text{V}$, $I_E = 0$				

ON Characteristics

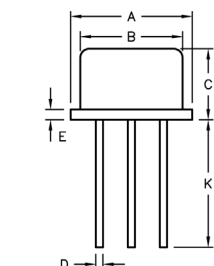
DC Current Gain (Note 1)	h_{FE}	$I_C = 2\text{mA}$, $V_{CE} = 10\text{V}$	30	-	-	-
		$I_C = 20\text{mA}$, $V_{CE} = 10\text{V}$	40		160	
Collector - Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 50\text{mA}$, $I_B = 4\text{mA}$	-	-	0.5	V
Base - Emitter Saturation Voltage	$V_{BE(sat)}$				1.3	

Small Signal Characteristics

Current Gain-Bandwidth Product	f_T	$I_C = 10\text{mA}$, $V_{CE} = 10\text{V}$, $f = 5\text{MHz}$	15	-	-	MHz
Output Capacitance	C_{ObO}	$V_{CB} = 10\text{V}$, $I_C = 0$, $f = 1\text{MHz}$	-		10	pF
Input Capacitance	C_{IbO}	$V_{CB} = 5\text{V}$, $I_C = 0$, $f = 1\text{MHz}$			75	
Small-Signal Current Gain	h_{fe}	$I_C = 5\text{mA}$, $V_{CE} = 10\text{V}$, $f = 1\text{MHz}$	25		-	
Real Part of Input Impedance	$\text{Re}(h_{ie})$	$V_{CE} = 10\text{V}$, $I_C = 5\text{mA}$, $f = 5\text{MHz}$			300	Ω

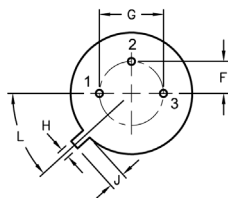
Note 1 : Pulse Test : Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

Caution: The Sustaining voltage must not be measured on a curve tracer



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



Pin Configurations:

1. Emitter
2. Base
3. Collector

Part Number Table

Description	Part Number
Transistor, NPN, 1A, 350V, TO-39	2N3439

Important Notice : This data sheet and its contents (the "Information") belong to the members of the AVNET group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp Pro is the registered trademark of Premier Farnell Limited 2019.