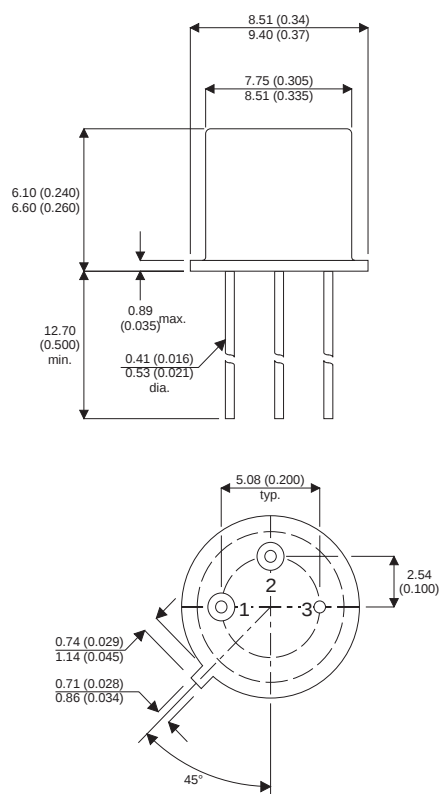


MECHANICAL DATA

Dimensions in mm(Inches)



TO39 PACKAGE(TO205AD)

Pin 1 = Emitter Pin 2 = Base Pin 3 = Collector

PNP SILICON TRANSISTORS

FEATURES

- SILICON PLANAR EPITAXIAL PNP TRANSISTOR
- HERMETICALLY SEALED TO-39 PACKAGE
- CECC LEVEL SCREENING OPTIONS
- JAN LEVEL SCREENING OPTIONS

APPLICATIONS:

Hermetically sealed, the 2N6190 silicon planar epitaxial PNP transistor is intended for general purpose applications.

ABSOLUTE MAXIMUM RATINGS $T_{CASE} = 25^{\circ}C$ unless otherwise stated

V_{CBO}	Collector – Base Voltage($I_E = 0$)	80V
V_{CEO}	Collector – Emitter Voltage ($I_B = 0$)	80V
V_{EBO}	Emitter – Base Voltage ($I_C = 0$)	6V
I_C	Collector Current	5A
I_B	Base Current	1A
P_{tot}	Total Dissipation at $T_C \leq 25^{\circ}C$	10W
	derate above $25^{\circ}C$	17.5°C/W
T_{stg}	Storage Temperature Range	-55 to +200°C
T_j	Junction temperature	200°C

Semelab Plc reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.

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Document Number 5912

Issue: 1

ELECTRICAL CHARACTERISTICS ($T_{\text{case}} = 25^{\circ}\text{C}$ unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$V_{(\text{BR})\text{CEO}}^*$ Collector Emitter Breakdown Voltage	$I_C = 50\text{mA}$	80			V
I_{CBO} Collector-Base Cut Off Current	$I_E = 0$ $V_{\text{CB}} = 80\text{V}$			10	μA
I_{CEX} Collector-Emitter Cut Off Current	$V_{\text{BE}} = 1.5\text{V}$ $V_{\text{CE}} = 75\text{V}$			10	μA
	$T_A = 150^{\circ}\text{C}$			1.0	mA
I_{CEO} Collector-Emitter Cut Off Current	$I_B = 0$ $V_{\text{CE}} = 75\text{V}$			100	μA
I_{EBO} Collector-Emitter Cut Off Current	$V_{\text{BE}} = 6\text{V}$			100	μA
$V_{\text{CE(sat)}}^*$ Collector Emitter Saturation Voltage	$I_C = 2\text{A}$ $I_B = 0.2\text{A}$			0.7	V
	$I_C = 5\text{A}$ $I_B = 0.5\text{A}$			1.2	
$V_{\text{BE(sat)}}^*$ Base Emitter Voltage	$I_C = 2\text{A}$ $I_B = 0.2\text{A}$			1.2	V
	$I_C = 5\text{A}$ $I_B = 0.5\text{A}$			1.8	
h_{FE}^* DC Current Gain	$I_C = 0.5\text{A}$ $V_{\text{CE}} = 2\text{V}$	30			—
	$I_C = 2\text{A}$ $V_{\text{CE}} = 2\text{V}$	30		120	
	$I_C = 5\text{A}$ $V_{\text{CE}} = 2\text{V}$	20			
f_T Transition Frequency	$V_{\text{CE}} = 10\text{V}$ $I_C = 0.5\text{A}$ $f = 10\text{MHz}$	30			MHz
C_{IBO} Input Capacitance, Output Open Circuited	$V_{\text{BE}} = 2\text{V}$ $I_C = 0$ $f = 100\text{kHz}$			1250	pF
C_{OBO} Open Circuit Output Capacitance	$V_{\text{CB}} = 10\text{V}$ $I_E = 0$ $f = 100\text{kHz}$			300	
t_d Delay Time	$V_{\text{CC}} = 40\text{V}$ $I_E = 2.0\text{A}$			100	ns
t_r Rise Time	$V_{\text{BE(off)}} = 3.0$ $I_{\text{B1}} = 0.2\text{A}$			100	
t_s Storage Time	$V_{\text{CC}} = 40\text{V}$ $I_E = 2.0\text{A}$			20	μs
t_f Fall Time	$I_{\text{B1}} = I_{\text{B2}} = 0.2\text{A}$			200	ns

* Pulse Test: $t_p = 300\mu\text{s}$, $\delta = 1\%$.