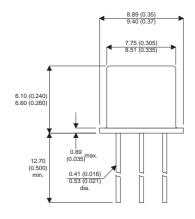




MECHANICAL DATA

Dimensions in mm(inches)



0.66 (0.026) **TO39**

Pin 1 = Emitter

Pin 3 = Collector Pin 2 = Base

NPN SILICON TRANSISTOR

FEATURES

- FAST SWITCHING
- HIGH PULSE POWER

APPLICATIONS

- POWER SWITCHING CIRCUITS
- MOTOR CONTROL

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

^V CBO	Collector – Base Voltage	100V	
^V CEO	Collector - Emitter Voltage	80V	
V_{EBO}	Emitter – Base Voltage	5V	
$I_{\mathbb{C}}$	Collector Current	3A	
I_{B}	Base Current	2A	
P _{tot}	Total Power Dissipation at T _{case} ≤ 25°C	1W	
T_{amb}	Ambient Operating Temperature	-55°C to +200°C	
T _{stg} ,	Storage Temperature	-55°C to +200°C	

Semelab PIc 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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ELECTRICAL CHARACTERISTICS (T_{amb} = 25°C unless otherwise stated)

Parameter		Test Conditions		Min.	Тур.	Max.	Unit
h21E	Static Value of Common	V _{CE} = 10V	I _C = 0.15	50		250	
	Emitter Forward Current	V _{CE} = 10V	I _C = 2A	15] —
	Transfer Ratio	V _{CE} = 10V	I _C = 1mA	20			
f _T	Transistion Frequency	V _{CE} = 5V	I _C = 100mA	50			MHz
	Transistion Frequency	f = 20MHz					
I _{CBO}	Collector Base	V _{CB} = 80V	I _E = 0			100	nA
	Cut- Off Current.		t = 150°C			100	μΑ
I _{EBO}	Emitter-Base Cut-off Current	V _{EB} = 4V				100	nA
h _{21e}	Small Signal Common Emitter	V _{CE} = 5V	$I_C = 10mA$	25			
	Forward Current Transfer Ratio	f = 1KHz					_
V _{CE(sat)*}	Collector – Emitter	I _C = 150mA	$I_B = 15mA$			0.3	V
	Saturation Voltage*	I _C = 1A	$I_{B} = 0.1A$			0.6	
V _{BE(sat)*}	Base – Emitter	I _C = 150mA	$I_B = 15mA$			0.95	V
	Saturation Voltage*	I _C = 1A	$I_{B} = 0.1A$			1.3	
C _{22b}	Common – Base	V _{CB} = 10V	I _E = 0			80	pF
	Output Capacitance	f = 1MHz					

^{*}Pulse Conditions: Pulse Length = 300µs duty cycle = 1.5%

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