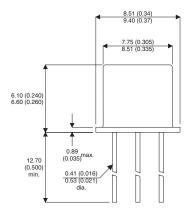
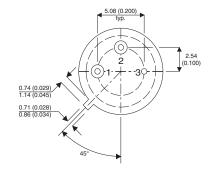




MECHANICAL DATA

Dimensions in mm (inches)





NPN SILICON TRANSISTOR

FEATURES

- SILICON PLANAR EPITAXIAL NPN **TRANSISTOR**
- SCREENING OPTIONS AVAILABLE

APPLICATIONS:

- General Purpose Amplifier
- Switching Circuits

TO-39(TO205AD) METAL PACKAGE **Underside View**

PIN 1 - Emitter PIN 2 - Base PIN 3 - Collector

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

$\overline{V_{CBO}}$	Collector – Base Voltage	60V			
V_{CER}	Collector – Emitter Voltage (I _B = 0)	40V			
V_{EBO}	Emitter – Base Voltage (I _B = 0)	5V			
P_{D}	Total Device Dissipation @ T _A = 25°C	0.6W			
P_{D}	Total Device Dissipation @ $T_C = 25^{\circ}C$	2.0W			
T_J , T_STG	Operating and Storage Junction Temperature Range	−65 to +200°C			
$R_{ hetaJA}$	Thermal Resistance Junction to Ambient	292°C/W			
$R_{ hetaJC}$	Thermal Resistance Junction to Case	87.5°C/W			

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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ELECTRICAL CHARACTERISTICS (T_{case} = 25°C unless otherwise stated)

	Parameter		Test Conditions		Тур.	Max.	Unit
V _{CBO(BR)*}	Collector - Base Breakdown	I _C = 100μA	I _B = 0A	60			V
	Voltage		ıB – ov				•
V _{CER(BR)*}	Collector - Emitter Breakdown	I _C = 100mA	P - 100	40			V
	Voltage		$R_{BE} = 10\Omega$				
V _{EBO(BR)*}	Emitter - Base Breakdown	I _E = 100μA	I _C = 0	5			V
	Voltage		IC = 0				_ v
I _{CBO}	Collector Cut-off Current	V _{CB} = 30V	$V_{BE} = 0V$			1.0	μΑ
			T _C = 150°C			100	
V _{CE(sat)*}	Collector – Emitter	I _C = 150mA	_ 15mA			1.5	V
	Saturation Voltage		I _B = 15mA			1.5	
V _{BE(sat)*}	Base – Emitter	_ 150mA	1 - 15m1			1.3	V
	Saturation Voltage	I _C = 150mA	$I_B = 15mA$			1.3	
h _{FE}	DC Current Gain	V _{CE} = 10V	I _C = 150mA	20		60	-
C _{ob}	Output Capacitance	V _{CB} = 10V	I _E = 0			35	pF
		f= 1.0 MHz				33	
f _T	Current Gain Bandwidth	V _{CB} = 10V f= 20 MHz	I _C = 50mA	40			MHz
	Product			40			

(*) Pulse test: $t_p \leq 300 \mu s$, $\delta \leq 1.5\%$

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