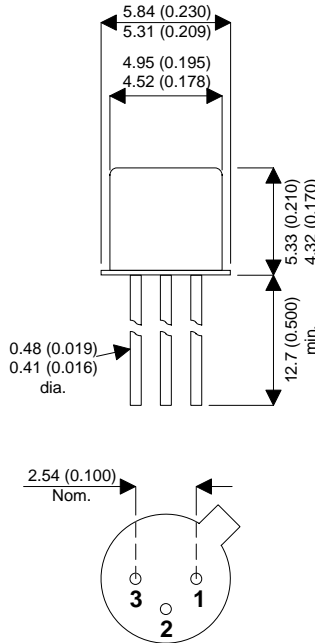


MECHANICAL DATA

Dimensions in mm (inches)



**MEDIUM POWER SILICON
NPN PLANAR TRANSISTOR**

**General Purpose Bipolar NPN
Transistor in a hermetically sealed
TO18 (TO-206AA) Metal Package.**

$V_{CEO} = 65V$

$I_C = 500mA$

$P_{TOT} = 300mW$

TO18 PACKAGE (TO-206AA)

Underside View

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

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

V_{CBO}	Collector – Base Voltage	65V
V_{CEO}	Collector – Emitter Voltage	65V
V_{EBO}	Emitter – Base Voltage	5V
I_C	Collector Current	500mA
P_{TOT}	Dissipation @ $T_{amb} = 25^{\circ}C$ Derating linearly	300mW 2mW/ $^{\circ}C$
$R_{\theta JC}$	Thermal Resistance	500 $^{\circ}C/W$
T_{stg}, T_j	Storage and Operating Junction Temperature	-65 to 175 $^{\circ}C$

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.

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$V_{\text{CEO(SUS)}}$ Collector – Emitter Sustaining Voltage	$I_{\text{C}} = 10\text{mA}$ $I_{\text{B}} = 0$	65			V
$V_{\text{CE(sat)}}$ Collector – Emitter Saturation Voltage	$I_{\text{C}} = 50\text{mA}$ $I_{\text{B}} = 5\text{mA}$			0.2	
$V_{\text{BE(sat)}}$ Base – Emitter Saturation Voltage	$I_{\text{C}} = 75\text{mA}$ $I_{\text{B}} = 3\text{mA}$			1.2	
I_{CBO} Collector Cut-off Current	$V_{\text{CB}} = 65\text{V}$ $I_{\text{E}} = 0$			0.5	μA
I_{EBO} Emitter - Base Reverse Current	$V_{\text{EB}} = 5\text{V}$ $I_{\text{C}} = 0$			0.1	μA
h_{FE} DC Current Gain	$V_{\text{CE}} = 0.4\text{V}$ $I_{\text{C}} = 1\text{mA}$	35			
	$V_{\text{CE}} = 0.4\text{V}$ $I_{\text{C}} = 10\text{mA}$	50		200	
	$V_{\text{CE}} = 0.4\text{V}$ $I_{\text{C}} = 30\text{mA}$	35			
	$V_{\text{CE}} = 0.75\text{V}$ $I_{\text{C}} = 75\text{mA}$	25			
f_{T} Transition Frequency	$V_{\text{CE}} = 6\text{V}$ $I_{\text{C}} = 10\text{mA}$	50			MHz
C_{ob} Output Capacitance	$V_{\text{CE}} = 6\text{V}$ $I_{\text{E}} = 0$ $f = 1\text{MHz}$			20	pF

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