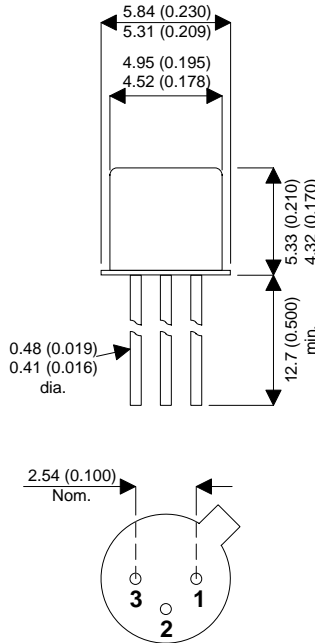


**MECHANICAL DATA**

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 $^{\circ}C$

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**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	
$I_{\text{CBO}}$ Collector Cut-off Current	$V_{\text{CB}} = 65\text{V}$ $I_{\text{E}} = 0$			0.5	$\mu\text{A}$
$I_{\text{EBO}}$ Emitter - Base Reverse Current	$V_{\text{EB}} = 5\text{V}$ $I_{\text{C}} = 0$			0.1	$\mu\text{A}$
$h_{\text{FE}}$ 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			
$f_{\text{T}}$ Transition Frequency	$V_{\text{CE}} = 6\text{V}$ $I_{\text{C}} = 10\text{mA}$	50			MHz
$C_{\text{ob}}$ Output Capacitance	$V_{\text{CE}} = 6\text{V}$ $I_{\text{E}} = 0$ $f = 1\text{MHz}$			20	pF

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