

SILICON EPITAXIAL NPN TRANSISTOR

2N4914

- Low Collector Saturation Voltage.
- Hermetic TO3 Metal Package.
- Designed For General Purpose, Switching and Power Amplifier Applications
- Screening Options Available



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

V_{CBO}	Collector – Base Voltage	60V
V_{CEO}	Collector – Emitter Voltage	60V
V_{EBO}	Emitter – Base Voltage	5V
I_C	Continuous Collector Current	5A
I_B	Base Current	1.0A
P_D	Total Power Dissipation at $T_C = 25^\circ\text{C}$ Derate Above 25°C	87.5W 0.5W/ $^\circ\text{C}$
T_J	Junction Temperature Range	-65 to $+200^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65 to $+200^\circ\text{C}$

THERMAL PROPERTIES

Symbols	Parameters	Min.	Typ.	Max.	Units
$R_{\theta JC}$	Thermal Resistance, Junction To Case			2	$^\circ\text{C/W}$

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

Symbols	Parameters	Test Conditions	Min.	Typ	Max.	Units
$V_{(BR)CEO}^{(1)}$	Collector-Emitter Breakdown Voltage	$I_C = 10\text{mA}$	60			V
I_{CEV}	Collector Cut-Off Current	$V_{CE} = 60\text{V}$ $V_{BE} = -1.5\text{V}$			1.0	mA
		$T_C = 150^\circ\text{C}$			2	
I_{CEO}	Collector Cut-Off Current	$V_{CE} = 60\text{V}$ $I_B = 0$			1.0	
I_{CBO}	Collector Cut-Off Current	$V_{CB} = 60\text{V}$ $I_E = 0$			1.0	
I_{EBO}	Emitter Cut-Off Current	$V_{EB} = 5\text{V}$ $I_C = 0$			1.0	
$h_{FE}^{(1)}$	Forward-current transfer ratio	$I_C = 2.5\text{A}$ $V_{CE} = 2\text{V}$	25		100	
		$I_C = 5\text{A}$ $V_{CE} = 2\text{V}$	7			
$V_{BE(on)}^{(1)}$	Base-Emitter Voltage	$I_C = 2.5\text{A}$ $V_{CE} = 2\text{V}$			1.4	V
$V_{CE(sat)}^{(1)}$	Collector-Emitter Saturation Voltage	$I_C = 2.5\text{A}$ $I_B = 0.25\text{A}$			1.0	
		$I_C = 5\text{A}$ $I_B = 1.0\text{A}$			1.5	

DYNAMIC CHARACTERISTICS

h_{fe}	Small-Signal Current Gain	$I_C = 500\text{mA}$ $V_{CE} = 10\text{V}$ $f = 1.0\text{KHz}$	20			
f_T	Transition Frequency	$I_C = 1.0\text{A}$ $V_{CE} = 10\text{V}$ $f = 1.0\text{MHz}$	4			MHz

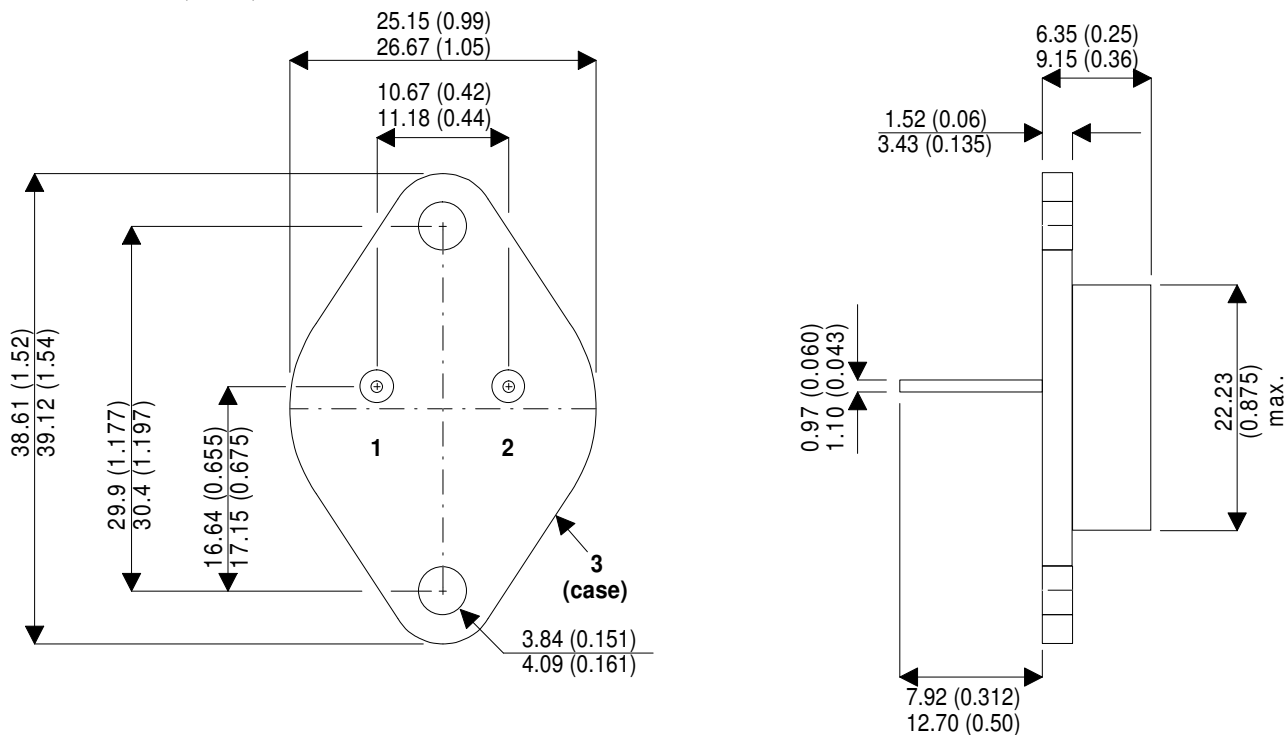
Notes

(1) Pulse Width $\leq 300\mu\text{s}$, $\delta \leq 2\%$

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MECHANICAL DATA

Dimensions in mm (inches)



TO3 (TO-204AA) METAL PACKAGE Underside View

Pin 1 - Base

Pin 2 - Emitter

Case - Collector