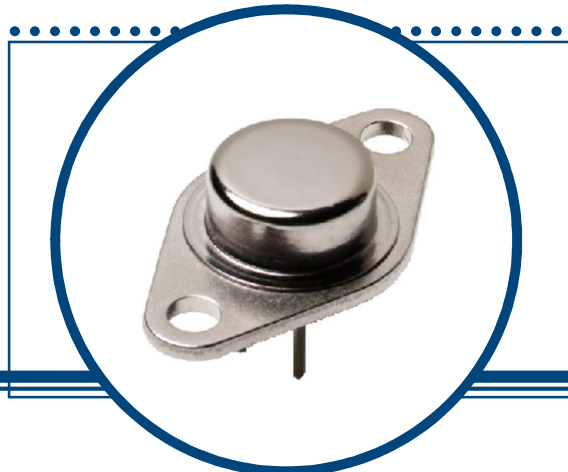


SILICON NPN BIPOLAR TRANSISTOR

BUX62

- Hermetic TO66 Metal Package
- Designed For Driver Circuits, Switching and Amplifier Applications
- Screening Options Available



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

V_{CEO}	Collector - Emitter Voltage	250V
I_C	Continuous Collector Current	7A
P_D	Total Power Dissipation at $T_C = 25^\circ\text{C}$	50W
	Derate Above 25°C	0.333W/ $^\circ\text{C}$
T_J	Junction Temperature Range	-65 to $+175^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65 to $+175^\circ\text{C}$

THERMAL PROPERTIES

Symbols	Parameters	Min.	Typ.	Max.	Units
$R_{\theta JC}$	Thermal Resistance, Junction To Case			3.0	$^\circ\text{C/W}$

Semelab Limited 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.

SILICON NPN BIPOLAR TRANSISTOR BUX62

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

Symbols	Parameters	Test Conditions	Min.	Typ.	Max.	Units
I_{CEO}	Collector – Emitter Cut-Off Current	$V_{CE} = 200\text{V}$ $I_B = 0$			1.5	mA
I_{EBO}	Emitter – Base Cut-Off Current	$V_{EB} = 5\text{V}$ $I_C = 0$			1.0	
B_{VCEO}	Emitter-Base Cut-Off Current	$V_{EB} = 6\text{V}$ $I_C = 0$	250			V
$V_{CE(sat)}^{(1)}$	Collector-Base Cut-Off Current	$I_C = 2.5\text{A}$ $I_B = 250\text{mA}$			0.7	
$h_{FE}^{(1)}$	Forward-current transfer ratio	$V_{CE} = 4\text{V}$ $I_C = 2.5\text{A}$	20		60	-

DYNAMIC CHARACTERISTICS

$f_T^{(2)}$	Current-Gain Bandwidth Product	$I_C = 250\text{mA}$ $V_{CE} = 10\text{V}$ $f = 10\text{MHz}$	8			MHz
-------------	--------------------------------	--	---	--	--	-----

SWITCHING CHARACTERISTICS

t_r	Rise Time	$I_C = 1.0\text{A}$ $V_{CC} = 200\text{V}$ $I_B = 0.1\text{A}$		0.5		μs
t_s	Storage Time	$I_C = 1.0\text{A}$ $V_{CC} = 200\text{V}$		3.5		
t_f	Fall Time	$I_{B1} = I_{B2} = 0.1\text{A}$		0.5		

Notes

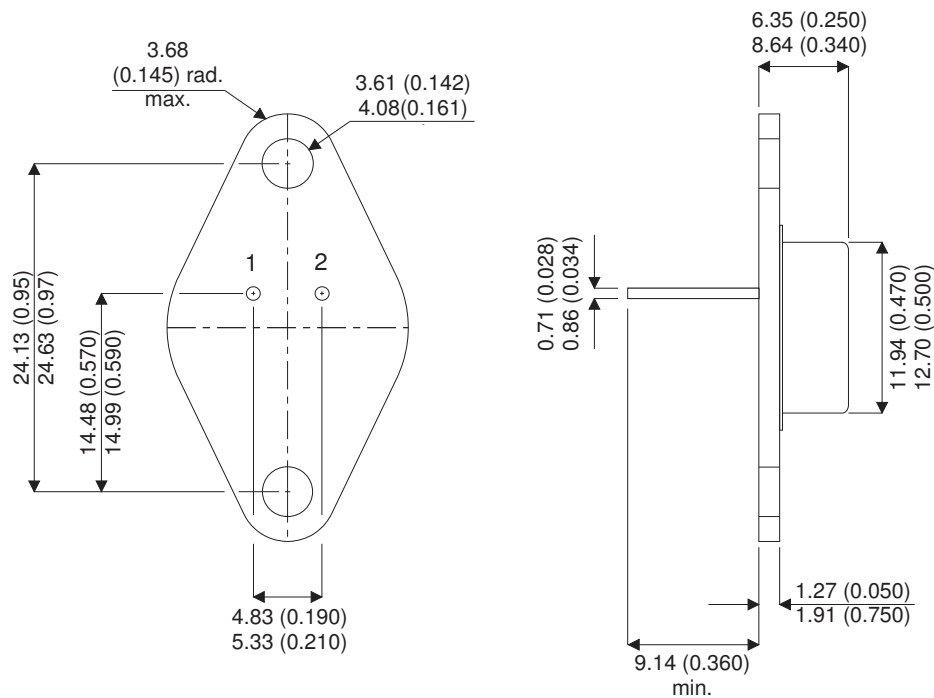
(1) Pulse Width $\leq 380\mu\text{s}$, $\delta \leq 2\%$

(2) $f_T = |h_{fe}| \times f_{\text{test}}$

SILICON NPN BIPOLAR TRANSISTOR BUX62

Mechanical Data

Dimensions in mm (inches)



TO66 (TO-213AA)

Pin 1 - Base

Pin 2 - Emitter

Case - Collector