

NPN POWER TRANSISTOR



BUX48A

Features:

- Hermetic TO3 (TO-204AA) Metal Package
- High Voltage (HV) / High Current
- Ideally suited for HV power switching applications
- High Reliability Screening Options Available



Absolute Maximum Ratings ($T_C = 25^\circ\text{C}$ unless otherwise noted)

V_{CER}	Collector – Emitter Voltage	$R_{BE} = 10\Omega$	1000V
V_{CES}	Collector – Emitter Voltage		1000V
V_{CEO}	Collector – Emitter Voltage		450V
V_{EBO}	Emitter – Base Voltage		7V
I_C	Collector Current – Continuous		15A
I_{CM}	Collector Current – Peak	$T_P = 5\text{ms}$	30A
I_B	Base Current		4A
I_{BM}	Base Current – Peak	$T_P = 5\text{ms}$	20A
P_D	Total Power Dissipation at	$T_C = 25^\circ\text{C}$	175W
		Derate Above 25°C	1.0W/ $^\circ\text{C}$
T_J	Junction Temperature Range		-65 to $+200^\circ\text{C}$
T_{stg}	Storage Temperature Range		-65 to $+200^\circ\text{C}$

Thermal Properties ($T_C = 25^\circ\text{C}$ unless otherwise noted)

$R_{\theta JC}$	Thermal Resistance Junction to Case	Max. 1.0°C/W
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General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

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Classification: Public

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Electrical Specifications

Electrical Characteristics ($T_C = 25^\circ\text{C}$ unless otherwise noted)

SYMBOL	PARAMETER	TEST CONDITIONS		MIN	TYP	MAX	UNITS
$V_{(BR)CEO}^{(1)}$	Collector-Emitter Breakdown Voltage	$I_C = 10\text{mA}$	$I_B = 0$	450			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = 100\mu\text{A}$	$I_C = 0$	7		30	
I_{CES}	Collector Cut-Off Current	$V_{CE} = 1000\text{V}$	$V_{BE} = 0$			0.2	mA
			$T_C = +125^\circ\text{C}$			2	
I_{CER}	Collector Cut-Off Current	$V_{CE} = 1000\text{V}$	$R_{BE} = 10\Omega$			0.5	
			$T_C = +125^\circ\text{C}$			4	
I_{EBO}	Emitter Cut-Off Current	$V_{EB} = 5\text{V}$	$I_C = 0$			1.0	
$V_{CE(sat)}^{(1)}$	Collector-Emitter Saturation Voltage	$I_C = 8\text{A}$	$I_B = 1.6\text{A}$			1.5	V
		$I_C = 12\text{A}$	$I_B = 2.4\text{A}$			5	
$V_{BE(sat)}^{(1)}$	Base-Emitter Saturation Voltage	$I_C = 8\text{A}$	$I_B = 1.6\text{A}$			1.6	

Dynamic Characteristics ($T_C = 25^\circ\text{C}$ unless otherwise noted)

SYMBOL	PARAMETER	TEST CONDITIONS		MIN	TYP	MAX	UNITS
$t_{on}^{(2)}$	Turn-On Time	$I_C = 8\text{A}$	$V_{CC} = 150\text{V}$		0.8	1.0	μs
		$I_{B1} = 1.6\text{A}$					
$t_f^{(2)}$	Fall Time	$I_C = 8\text{A}$	$V_{CC} = 150\text{V}$		0.4	0.8	
$t_s^{(2)}$	Storage Time	$I_{B1} = -I_{B2} = 1.6\text{A}$			2	3	

Notes

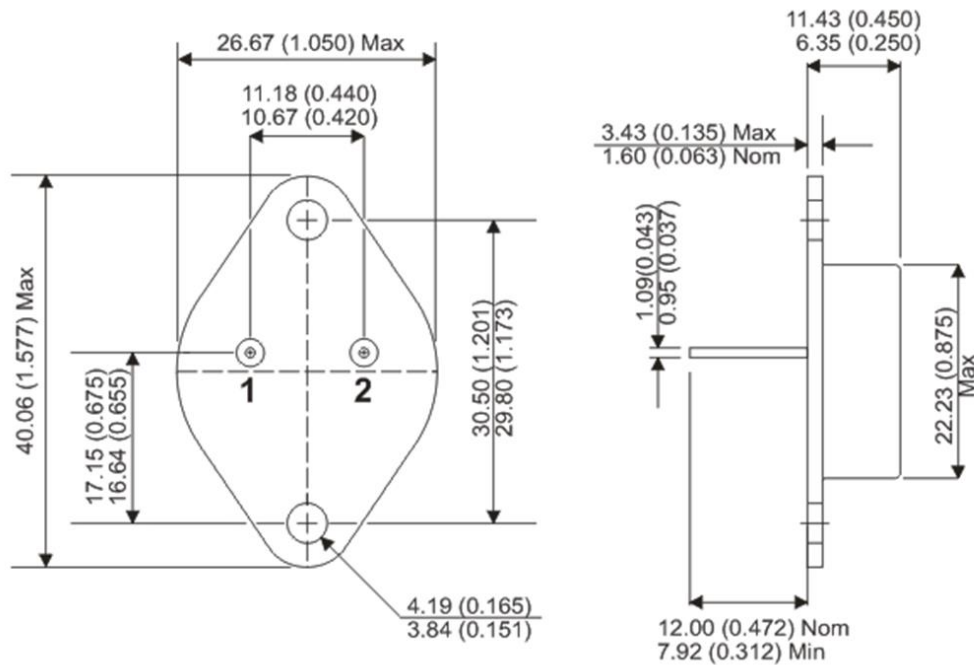
- (1) Pulse Width $\leq 380\mu\text{s}$, $\delta \leq 2\%$
 (2) By design, not a production test

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Mechanical Data

Dimensions in mm (Inches)



T03 (TO-204AA) METAL PACKAGE

Underside View

Pin 1 - Base

Pin 2 - Emitter

Case - Collector

Lead Finish:

Hot solder dip (Sn63/Pb37) lead finish as standard.

RoHS compliant options available but must be specified on purchase order.