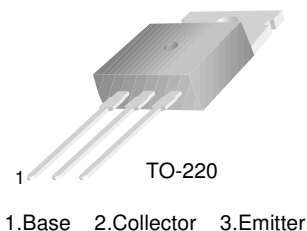


BUT12/12A

BUT12/12A

High Voltage Power Switching Applications



NPN Silicon Transistor

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage		
	: BUT12	850	V
	: BUT12A	1000	V
V_{CEO}	Collector-Emitter Voltage		
	: BUT12	400	V
	: BUT12A	450	V
I_C	Collector Current (DC)	8	A
I_{CP}	*Collector Current (Pulse)	20	A
I_B	Base Current	4	A
P_C	Collector Dissipation ($T_C=25^\circ\text{C}$)	100	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	- 65 ~ 175	$^\circ\text{C}$

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$V_{CEO(sus)}$	* Collector-Emitter Sustaining Voltage	$I_C = 100\text{mA}$, $L = 25\text{mH}$	400			V
I_{CES}	Collector Cut-off Current	$V_{CE} = V_{CES}$, $V_{BE} = 0$			1	mA
I_{EBO}	Emitter Cut-off Current	$V_{BE} = 9\text{V}$, $I_C = 0$			10	mA
$V_{CE(sat)}$	* Collector-Emitter Saturation Voltage	$I_C = 6\text{A}$, $I_B = 1.2\text{A}$			1.5	V
$V_{BE(sat)}$	* Base-Emitter Saturation Voltage	$I_C = 6\text{A}$, $I_B = 1.2\text{A}$			1.5	V
t_{ON}	Turn On Time	$V_{CC} = 250\text{V}$, $I_C = 6\text{A}$ $I_{B1} = - I_{B2} = 1.2\text{A}$ $R_L = 41.6\Omega$			1	μs
t_{STG}	Storage Time				4	μs
t_F	Fall Time				0.8	μs

* Pulsed Test: $PW = 300\mu\text{s}$, duty cycle = 1.5%

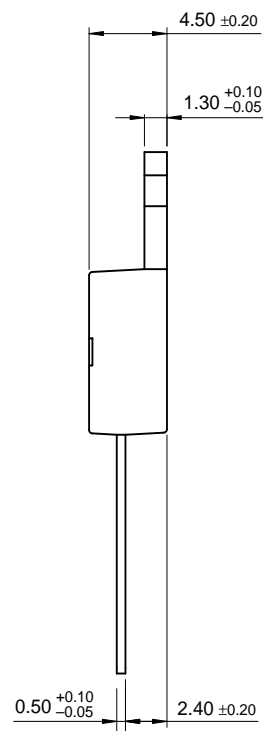
Technical drawing of a 3-pin connector, showing front and top views with dimensions and tolerances.

Front View Dimensions:

- Overall Width: 9.90 ± 0.20
- Overall Height: 18.95 MAX.
- Pin Spacing (Center-to-Center): 1.27 ± 0.10 and 1.52 ± 0.10
- Pin Diameter: $\phi 3.60 \pm 0.10$
- Pin Length: 13.08 ± 0.20
- Pin Chamfer: 45°
- Pin Tip Diameter: 0.80 ± 0.10
- Pin Material: 2.54 TYP / $[2.54 \pm 0.20]$
- Pin Thickness: 1.00 (typical)
- Pin Width: 1.30 ± 0.10
- Pin Position: 1.70 (typical)
- Pin Mounting: 2.80 ± 0.10
- Pin Mounting: 3.00 (typical)
- Pin Mounting: 3.70 (typical)
- Pin Mounting: 15.90 ± 0.20

Top View Dimensions:

- Overall Width: 10.00 ± 0.20
- Pin Spacing (Center-to-Center): 1.27 ± 0.10 and 1.52 ± 0.10
- Pin Length: 13.08 ± 0.20
- Pin Chamfer: 45°
- Pin Tip Diameter: 0.80 ± 0.10
- Pin Material: 2.54 TYP / $[2.54 \pm 0.20]$
- Pin Thickness: 1.00 (typical)
- Pin Width: 1.30 ± 0.10
- Pin Position: 1.70 (typical)
- Pin Mounting: 2.80 ± 0.10
- Pin Mounting: 3.00 (typical)
- Pin Mounting: 3.70 (typical)
- Pin Mounting: 15.90 ± 0.20



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