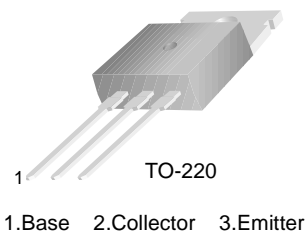


## BUT12/12A

### 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	$\mu\text{s}$
$t_{STG}$	Storage Time				4	$\mu\text{s}$
$t_F$	Fall Time				0.8	$\mu\text{s}$

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

# Package Dimensions

## TO-220



Dimensions in Millimeters

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## PRODUCT STATUS DEFINITIONS

### Definition of Terms

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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