

onse |



# FFSB10120A

## ABSOLUTE MAXIMUM RATINGS (T<sub>C</sub> = 25°C unless otherwise noted)

Symbol	Parameter	Value	Unit	
V <sub>RRM</sub>	Peak Repetitive Reverse Voltage	1200	V	
E <sub>AS</sub>	Single Pulse Avalanche Energy (Note 1)	100	mJ	
I <sub>F</sub>	Continuous Rectified Forward Current @ T <sub>C</sub> < 164°C	10	A	
	Continuous Rectified Forward Current @ T <sub>C</sub> < 135°C	21		
I <sub>F, Max</sub>	Non-Repetitive Peak Forward Surge Current	T <sub>C</sub> = 25°C, 10 μs	850	A
		T <sub>C</sub> = 150°C, 10 μs	800	A
I <sub>F, SM</sub>	Non-Repetitive Forward Surge Current	Half-Sine Pulse, t <sub>p</sub> = 8.3 ms	90	A
I <sub>F, RM</sub>	Repetitive Forward Surge Current	Half-Sine Pulse, t <sub>p</sub> = 8.3 ms	35	A
P <sub>tot</sub>	Power Dissipation	T <sub>C</sub> = 25°C	283	W
		T <sub>C</sub> = 150°C	47	W
T <sub>J</sub> , T <sub>STG</sub>	Operating and Storage Temperature Range	-55 to +175	°C	
	TO-247 Mounting Torque, M3 Screw	60	Ncm	

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

1. E<sub>AS</sub> of 100 mJ is based on starting T<sub>J</sub> = 25°C, L = 0.5 mH, I<sub>AS</sub> = 20 A, V = 50 V.

## THERMAL CHARACTERISTICS

Symbol	Parameter	Value	Unit
R <sub>θJC</sub>	Thermal Resistance, Junction to Case, Max	0.53	°C/W

## ELECTRICAL CHARACTERISTICS (T<sub>C</sub> = 25°C unless otherwise noted)

Symbol	Parameter
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# FFSB10120A

## TYPICAL CHARACTERISTICS

(T<sub>J</sub> = 25°C UNLESS OTHERWISE NOTED)

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## TYPICAL CHARACTERISTICS

( $T_J = 25^\circ$ )

TEST CIRCUIT AND WAVEFORMS

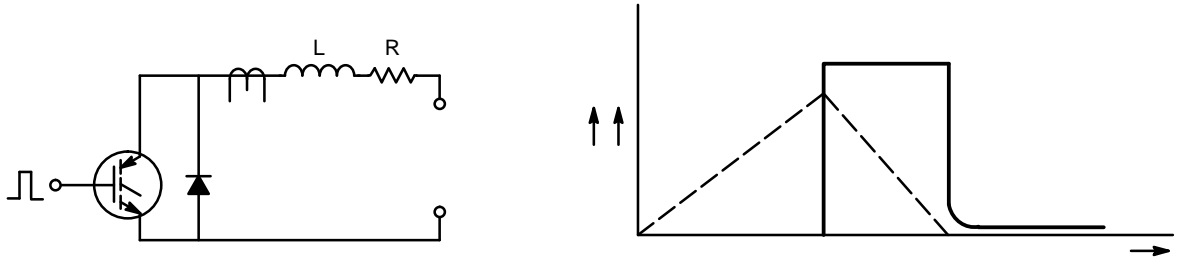
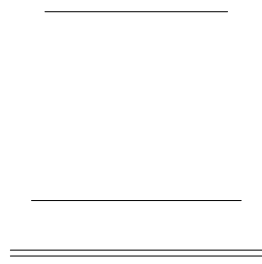
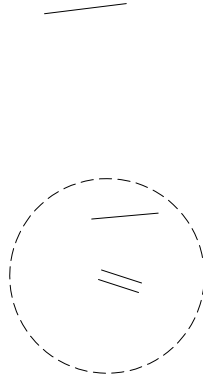


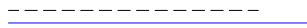
Figure 9. Unclamped Inductive Switching Test Circuit & Waveform

**D<sup>2</sup>PAK2 (TO-263-2L)**  
CASE 418BK  
ISSUE O

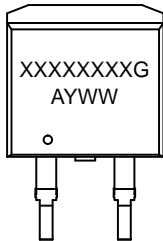
DATE 02 AUG 2018



DET/



**GENERIC  
MARKING DIAGRAM\***



- XXX = Specific Device Code
- A = Assembly Location
- Y = Year
- WW = Work Week
- G = Pb-Free Package

\*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "▪", may or may not be present. Some products may not follow the Generic Marking.

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