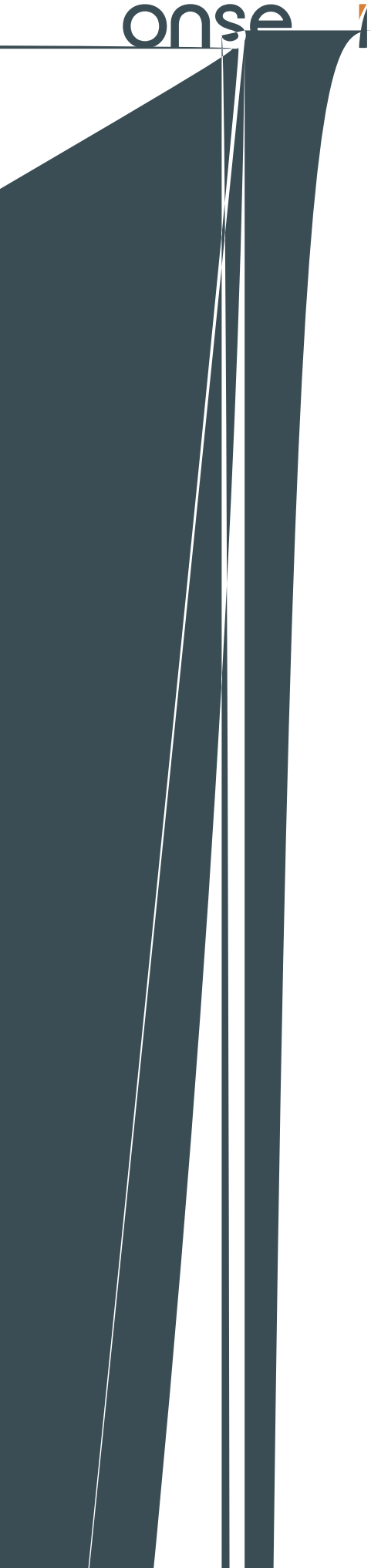


ABSOLUTE MAXIMUM RATINGS (T_C = 25°C unless otherwise noted)

Symbol	Parameter		Value	Unit
V_{RRM}	Peak Repetitive Reverse Voltage		1200	V
E_{AS}	Single Pulse Avalanche Energy (Note 1)		100	mJ
I_F	Continuous Rectified Forward Current @ T_C < 164°C		10	A
	Continuous Rectified Forward Current @ T_C < 135°C		21	
$I_{F, Max}$	Non-Repetitive Peak Forward Surge Current	T_C = 25°C, 10 μs	850	A
		T_C = 150°C, 10 μs	800	A
$I_{F,SM}$	Non-Repetitive Forward Surge Current	Half-Sine Pulse, t_p = 8.3 ms	90	A
$I_{F,RM}$	Repetitive Forward Surge Current	Half-Sine Pulse, t_p = 8.3 ms	35	A
Ptot	Power Dissipation	T_C = 25°C	283	W
		T_C = 150°C	47	W
T_J, T_{STG}	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_{AS} of 100 mJ is based on starting T_J = 25°C, L = 0.5 mH, I_{AS} = 20 A, V = 50 V.

THERMAL CHARACTERISTICS

Symbol	Parameter	Value	Unit
$R_{\theta JC}$	Thermal Resistance, Junction to Case, Max	0.53	°C/W

ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise noted)

Symbol	Parameter

TYPICAL CHARACTERISTICS

(T_J = 25°C UNLESS OTHERWISE NOTED)

TYPICAL CHARACTERISTICS

(T_J = 25°

TEST CIRCUIT AND WAVEFORMS

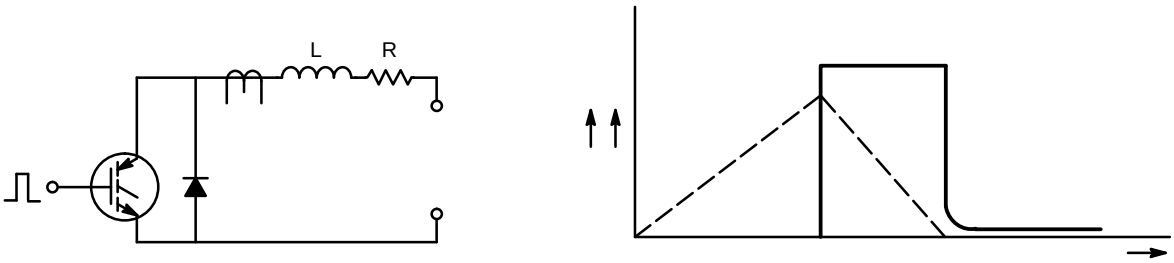


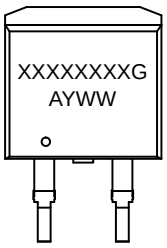
Figure 9. Unclamped Inductive Switching Test Circuit & Waveform

D²PAK2 (TO−263−2L)
CASE 418BK
ISSUE O

DATE 02 AUG 2018

DETA

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.