



Wespack Rectifier Diode

Types W3409NK240 and W3409NK280

Absolute Maximum Ratings

	VOLTAGE RATINGS	MAXIMUM LIMITS	UNITS
V _{RRM}	Repetitive peak reverse voltage, (note 1)	2400-2800	V
V _{RSM}	Non-repetitive peak reverse voltage, (note 1)	2500-2900	V

	OTHER RATINGS	MAXIMUM LIMITS	UNITS
I _{F(AV)M}	Maximum average forward current, T _{sink} =55°C, (note 2)	3409	A
I _{F(AV)M}	Maximum average forward current. T _{sink} =85°C, (note 2)	2765	A
I _{F(AV)M}	Maximum average forward current. T _{sink} =85°C, (note 3)	1852	A
I _{F(AV)M}	Maximum average forward current. T _{sink} =85°C, (note 4)	1652	A
I _{F(RMS)M}	Nominal RMS forward current, T _{sink} =25°C, (note 2)	6236	A
I _{F(d.c.)}	D.C. forward current, T _{sink} =25°C, (note 5)	5570	A
I _{FSM}	Peak non-repetitive surge t _p =10ms, V _{rm} =60%V _{RRM} , (note 6)	28	kA
I _{FSM2}	Peak non-repetitive surge t _p =10ms, V _{rm} ≤10V, (note 6)	30.8	kA
I ² t	I ² t capacity for fusing t _p =10ms, V _{rm} =60%V _{RRM} , (note 6)	3.92×10 ⁶	A ² s
I ² t	I ² t capacity for fusing t _p =10ms, V _{rm} ≤10V, (note 6)	4.74×10 ⁶	A ² s
T _{j op}	Operating temperature range	-55 to +160	°C
T _{stg}	Storage temperature range	-55 to +190	°C

Notes:-

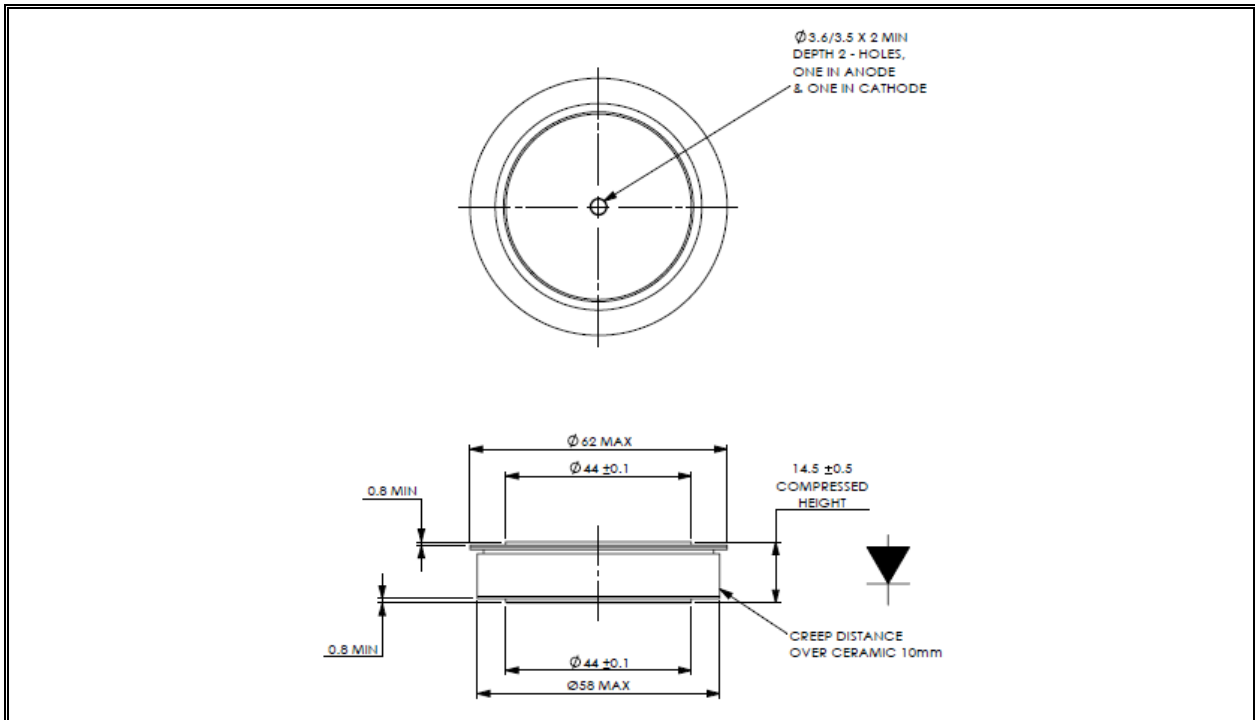
- 1) De-rating factor of 0.13% per °C is applicable for T_j below 25°C.
- 2) Double side cooled, single phase; 50Hz, 180° half-sinewave.
- 3) Single side cooled (Anode), single phase; 50Hz, 180° half-sinewave.
- 4) Single side cooled (Cathode), single phase; 50Hz, 180° half-sinewave.
- 5) Double side cooled.
- 6) Half-sinewave, 160°C T_j initial.

Characteristics

	PARAMETER	MIN.	TYP.	MAX.	TEST CONDITIONS (Note 1)	UNITS
V _{FM}	Maximum peak forward voltage	-	-	1.5	I _{TM} =4500A	V
V _{FM}	Maximum peak forward voltage	-	-	2.03	I _{TM} =7870A	V
V _{T0}	Threshold voltage	-	-	0.78		V
r _T	Slope resistance	-	-	0.16		mΩ
I _{RRM}	Peak reverse current	-	-	50	Rated V _{RRM}	mA
I _{RRM}	Peak reverse current	-	-	50	Rated V _{RRM} , T _j =25°C	mA
Q _{rr}	Recovered charge	-	3100	-	I _{TM} =1000A, t _p =1000μs, di/dt=10A/μs, V _r =50V	μC
Q _{ra}	Recovered charge, 50% Chord	-	2200	2600		μC
I _{rr}	Reverse recovery current	-	150	-		A
t _{rr}	Reverse recovery time	-	25	-		μs
R _{thJK}	Thermal resistance, junction to heatsink	-	-	0.0145	Double side cooled	K/W
		-	-	0.0268	Single side cooled (anode)	K/W
		-	-	0.0317	Single side cooled (Cathode)	K/W
F	Mounting force	19	-	26	(Note 2)	kN
W _t	Weight	-	250	-		g

Notes:-

- 1) Unless otherwise indicated T_j=160°C.
- 2) For other clamp forces, please consult factory.

Outline Drawing & Ordering Information

ORDERING INFORMATION

(Please quote 10-digit code as below)

W3409	NK	◆◆	0
Fixed Type Code	Outline code	Voltage code $V_{DRM}/100$ 24 & 28	Fixed turn-off time code

 Typical order code: W3409NK280 – 2800V V_{DRM} , V_{RRM} ,

IXYS Semiconductor GmbH
 Edisonstraße 15
 D-68623 Lampertheim
 Tel: +49 6206 503-0
 Fax: +49 6206 503-627
 E-mail: marcom@ixys.de

IXYS
 A Littelfuse Technology

IXYS UK Westcode Ltd
 Langley Park Way, Langley Park,
 Chippenham, Wiltshire, SN15 1GE.
 Tel: +44 (0)1249 444524
 E-mail: sales@ixysuk.com
IXYS Corporation
 1590 Buckeye Drive
 Milpitas CA 95035-7418
 Tel: +1 (408) 457 9000
 Fax: +1 (408) 496 0670
 E-mail: sales@ixys.net
www.littelfuse.com
www.ixysuk.com
www.ixys.com
IXYS Long Beach
 IXYS Long Beach, Inc
 2500 Mira Mar Ave, Long Beach
 CA 90815
 Tel: +1 (562) 296 6584
 Fax: +1 (562) 296 6585
 E-mail: service@ixyslongbeach.com

The information contained herein is confidential and is protected by Copyright. The information may not be used or disclosed except with the written permission of and in the manner permitted by the proprietors IXYS UK Westcode Ltd.

© IXYS UK Westcode Ltd.

In the interest of product improvement, IXYS UK Westcode Ltd reserves the right to change specifications at any time without prior notice.

Devices with a suffix code (2-letter, 3-letter or letter/digit/letter combination) added to their generic code are not necessarily subject to the conditions and limits contained in this report.



Disclaimer Notice - Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at www.littelfuse.com/disclaimer-electronics.