

# Wespack Rectifier Diode

## Types W4295NK200 and W4295NK220

### Absolute Maximum Ratings

	VOLTAGE RATINGS	MAXIMUM LIMITS	UNITS
$V_{RRM}$	Repetitive peak reverse voltage, (note 1)	2000-2200	V
$V_{RSM}$	Non-repetitive peak reverse voltage, (note 1)	2100-2300	V

	OTHER RATINGS	MAXIMUM LIMITS	UNITS
$I_{F(AV)M}$	Maximum average forward current, $T_{sink}=55^{\circ}C$ , (note 2)	4295	A
$I_{F(AV)M}$	Maximum average forward current. $T_{sink}=85^{\circ}C$ , (note 2)	3566	A
$I_{F(AV)M}$	Maximum average forward current. $T_{sink}=85^{\circ}C$ , (note 3)	2351	A
$I_{F(AV)M}$	Maximum average forward current. $T_{sink}=85^{\circ}C$ , (note 4)	2086	A
$I_{F(RMS)M}$	Nominal RMS forward current, $T_{sink}=25^{\circ}C$ , (note 2)	7765	A
$I_{F(d.c.)}$	D.C. forward current, $T_{sink}=25^{\circ}C$ , (note 5)	6764	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 $t_p=10ms$ , $V_{rm}\leq 10V$ , (note 6)	31	kA
$I^2t$	$I^2t$ capacity for fusing $t_p=10ms$ , $V_{rm}=60\%V_{RRM}$ , (note 6)	$3.92\times 10^6$	$A^2s$
$I^2t$	$I^2t$ capacity for fusing $t_p=10ms$ , $V_{rm}\leq 10V$ , (note 6)	$4.81\times 10^6$	$A^2s$
$T_{j\ op}$	Operating temperature range	-55 to +175	$^{\circ}C$
$T_{stg}$	Storage temperature range	-55 to +200	$^{\circ}C$

Notes:-

- 1) De-rating factor of 0.13% per  $^{\circ}C$  is applicable for  $T_j$  below  $25^{\circ}C$ .
- 2) Double side cooled, single phase; 50Hz,  $180^{\circ}$  half-sinewave.
- 3) Single side cooled (Anode), single phase; 50Hz,  $180^{\circ}$  half-sinewave.
- 4) Single side cooled (Cathode), single phase; 50Hz,  $180^{\circ}$  half-sinewave.
- 5) Double side cooled.
- 6) Half-sinewave,  $175^{\circ}C$   $T_j$  initial.

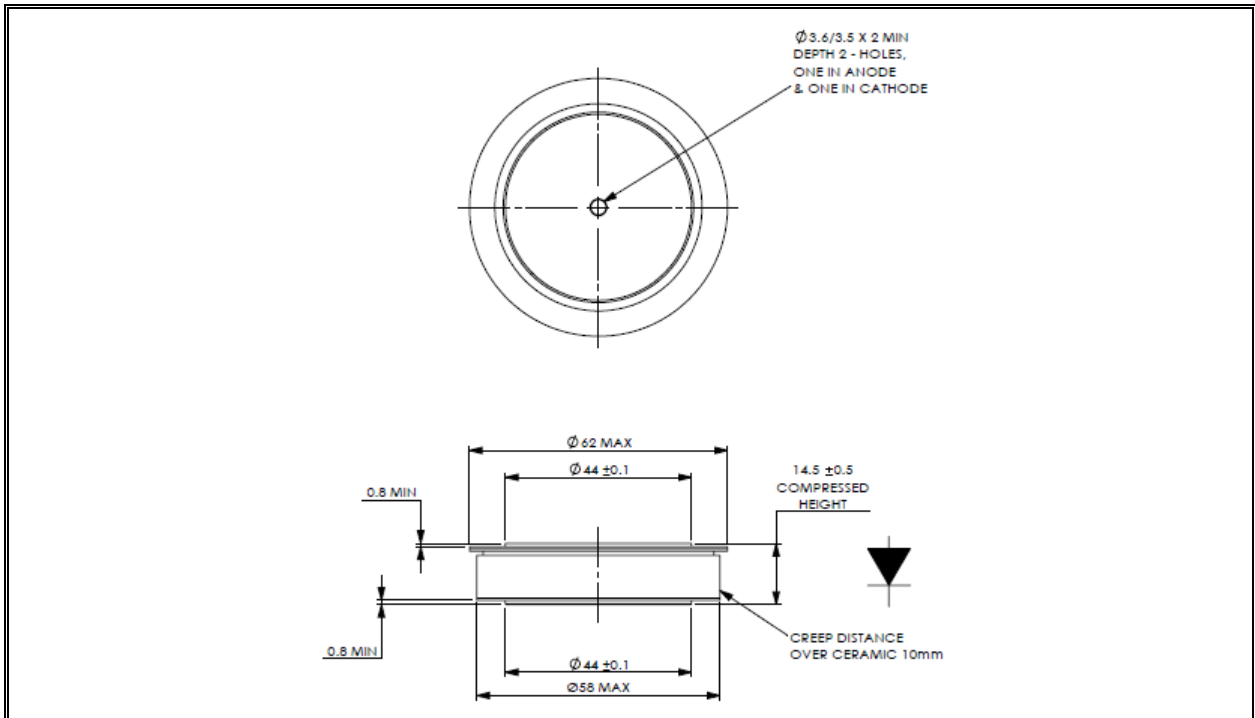
### Characteristics

	PARAMETER	MIN.	TYP.	MAX.	TEST CONDITIONS (Note 1)	UNITS
V <sub>FM</sub>	Maximum peak forward voltage	-	-	1.47	I <sub>TM</sub> =6400A	V
V <sub>FM</sub>	Maximum peak forward voltage	-	-	1.76	I <sub>TM</sub> =9800A	V
V <sub>T0</sub>	Threshold voltage	-	-	0.826		V
r <sub>T</sub>	Slope resistance	-	-	0.104		mΩ
I <sub>R<sub>RRM</sub></sub>	Peak reverse current	-	-	50	Rated V <sub>RRM</sub>	mA
I <sub>R<sub>RRM</sub></sub>	Peak reverse current	-	-	50	Rated V <sub>RRM</sub> , T <sub>j</sub> =25°C	mA
Q <sub>rr</sub>	Recovered charge	-	2400	-		μC
Q <sub>ra</sub>	Recovered charge, 50% Chord	-	1900	2350	I <sub>TM</sub> =1000A, t <sub>p</sub> =1000μs, di/dt=10A/μs, V <sub>r</sub> =50V	μC
I <sub>rr</sub>	Reverse recovery current	-	150	-		A
t <sub>rr</sub>	Reverse recovery time	-	25	-		μs
R <sub>thJK</sub>	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		kN
W <sub>t</sub>	Weight	-	250	-		g

Notes:-

- 1) Unless otherwise indicated T<sub>j</sub>=175°C.
- 2) For other clamp forces, please consult factory.

**Outline Drawing & Ordering Information**



**ORDERING INFORMATION**

(Please quote 10 digit code as below)

<b>W4295</b>	<b>NK</b>	<b>◆◆</b>	<b>0</b>
Fixed Type Code	Outline code	Voltage code V <sub>DRM</sub> /100 20 & 22	Fixed turn-off time code

Typical order code: W4295NK220 – 2200V V<sub>DRM</sub>, V<sub>RRM</sub>,

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