IXYS UK WESTCODE

Date:- 12th January 2017

Data Sheet Issue:- 1P

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

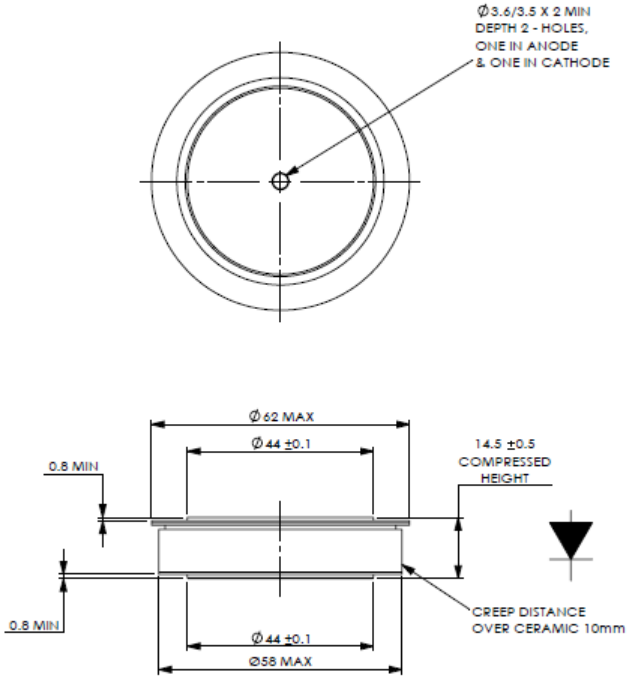
Notes:-
1) De-rating factor of 0.13% per °C is applicable for T_j below 25°C.
2) Double side cooled, single phase; 50Hz, 180° half-sinewave.
3) Single side cooled (Anode), single phase; 50Hz, 180° half-sinewave.
4) Single side cooled (Cathode), single phase; 50Hz, 180° half-sinewave.
5) Double side cooled.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

Characteristics

	PARAMETER	MIN.	TYP.	MAX.	TEST CONDITIONS (Note 1)	UNITS
V_{FM}	Maximum peak forward voltage	-	-	1.47	I_{TM}=6400A	V
V_{FM}	Maximum peak forward voltage	-	-	1.76	I_{TM}=9800A	V
V_{T0}	Threshold voltage	-	-	0.826		V
r_T	Slope resistance	-	-	0.104		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	-	2400	-	I_{TM}=1000A, t_p=1000µs, di/dt=10A/µs, V_r=50V	µC
Q_{ra}	Recovered charge, 50% Chord	-	1900	2350		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		kN
W_t	Weight	-	250	-		g

Notes:-
1) Unless otherwise indicated T_j=175°C.
2) For other clamp forces, please consult factory.

Outline Drawing & Ordering Information



ORDERING INFORMATION (Please quote 10 digit code as below)

W4295	NK	♦♦	0
Fixed Type Code	Outline code	Voltage code V_{DRM}/100 20 & 22	Fixed turn-off time code

Typical order code: W4295NK220 – 2200V V_{DRM}, V_{RRM},

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