

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)	3.92×10^6	A^2s
I^2t	I^2t capacity for fusing $t_p=10ms$, $V_{rm}\leq 10V$, (note 6)	4.81×10^6	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° 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, $175^{\circ}C$ 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		m Ω
I_{RRM}	Peak reverse current	-	-	50	Rated V_{RRM}	mA
I_{RRM}	Peak reverse current	-	-	50	Rated V_{RRM} , $T_J=25^{\circ}C$	mA
Q_{rr}	Recovered charge	-	2400	-	$I_{TM}=1000A$, $t_p=1000\mu s$, $di/dt=10A/\mu s$, $V_i=50V$	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 $T_J=175^{\circ}C$.
- 2) For other clamp forces, please consult factory.

Outline Drawing & Ordering Information

