

Wespack Rectifier Diode

Types W1980JK180 & W1980JK220

Absolute Maximum Ratings

	VOLTAGE RATINGS	MAXIMUM LIMITS	UNITS
V_{RRM}	Repetitive peak reverse voltage, (note 1)	1800–2200	V
V_{RSM}	Non-repetitive peak reverse voltage, (note 1)	1900–2300	V

	OTHER RATINGS	MAXIMUM LIMITS	UNITS
$I_{F(AV)M}$	Maximum average forward current, $T_{sink}=55^{\circ}C$, (note 2)	1980	A
$I_{F(AV)M}$	Maximum average forward current. $T_{sink}=100^{\circ}C$, (note 2)	1470	A
$I_{F(AV)M}$	Maximum average forward current. $T_{sink}=100^{\circ}C$, (note 3)	820	A
$I_{F(RMS)}$	Nominal RMS forward current, $T_{sink}=25^{\circ}C$, (note 2)	3575	A
$I_{F(d.c.)}$	D.C. forward current, $T_{sink}=25^{\circ}C$, (note 4)	3160	A
I_{FSM}	Peak non-repetitive surge $t_p=10ms$, $V_{rm}=60\%V_{RRM}$, (note 5)	15.4	kA
I_{FSM2}	Peak non-repetitive surge $t_p=10ms$, $V_{rm}\leq 10V$, (note 5)	17.7	kA
I^2t	I^2t capacity for fusing $t_p=10ms$, $V_{rm}=60\%V_{RRM}$, (note 5)	1.18×10^6	A^2s
I^2t	I^2t capacity for fusing $t_p=10ms$, $V_{rm}\leq 10V$, (note 5)	1.56×10^6	A^2s
$T_{j\ op}$	Operating temperature range	-40 to +175	$^{\circ}C$
T_{stg}	Storage temperature range	-40 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) Cathode side cooled, single phase; 50Hz, 180° half-sinewave.
- 4) Double side cooled.
- 5) Half-sinewave, $175^{\circ}C$ T_j initial.

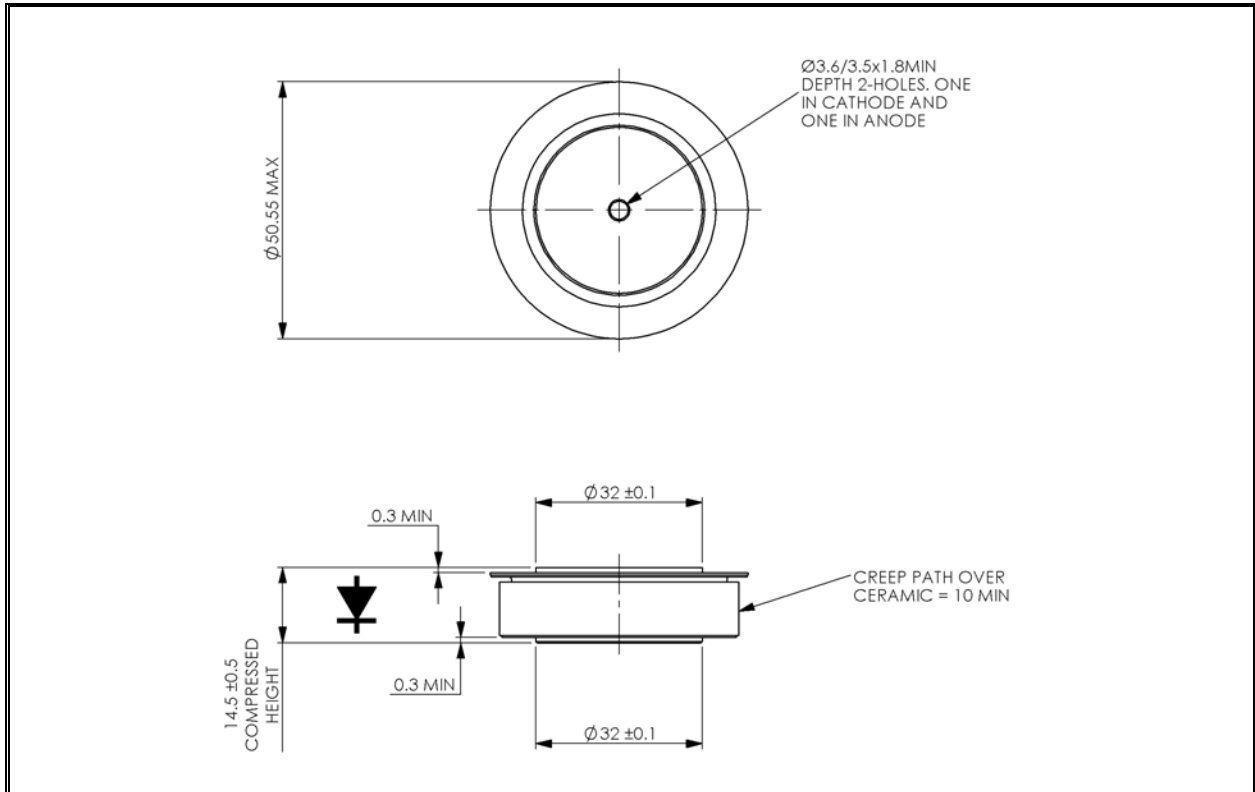
Characteristics

	PARAMETER	MIN.	TYP.	MAX.	TEST CONDITIONS (Note 1)	UNITS
V _{FM}	Maximum peak forward voltage	-	-	1.12	I _{FM} =1000A	V
V _{FM}	Maximum peak forward voltage	-	-	1.93	I _{FM} =3770A	V
V _{T0}	Threshold voltage	-	-	0.87		V
r _T	Slope resistance	-	-	0.28		mΩ
I _{RRM}	Peak reverse current	-	-	30	Rated V _{RRM}	mA
R _{thJK}	Thermal resistance, junction to heatsink	-	-	0.0270	Double side cooled	K/W
		-	-	0.0469	Anode side cooled	K/W
		-	-	0.0636	Cathode side cooled	K/W
F	Mounting force	16	-	20	Note 2	kN
W _t	Weight	-	135	-		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)			
W1980	JK	◆◆	0
Fixed Type Code	Fixed Outline Code	Voltage code $V_{RRM}/100$ 18 or 22	Fixed code

Typical order code: W1980JK220 – 2200V V_{RRM} , 14mm clamp height capsule.

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