

## 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)	$1.18\times 10^6$	$A^2s$
$I^2t$	$I^2t$ capacity for fusing $t_p=10ms$ , $V_{rm}\leq 10V$ , (note 5)	$1.56\times 10^6$	$A^2s$
$T_{j\ op}$	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,  $180^{\circ}$  half-sinewave.
- 3) Cathode side cooled, single phase; 50Hz,  $180^{\circ}$  half-sinewave.
- 4) Double side cooled.
- 5) Half-sinewave,  $175^{\circ}C$   $T_j$  initial.

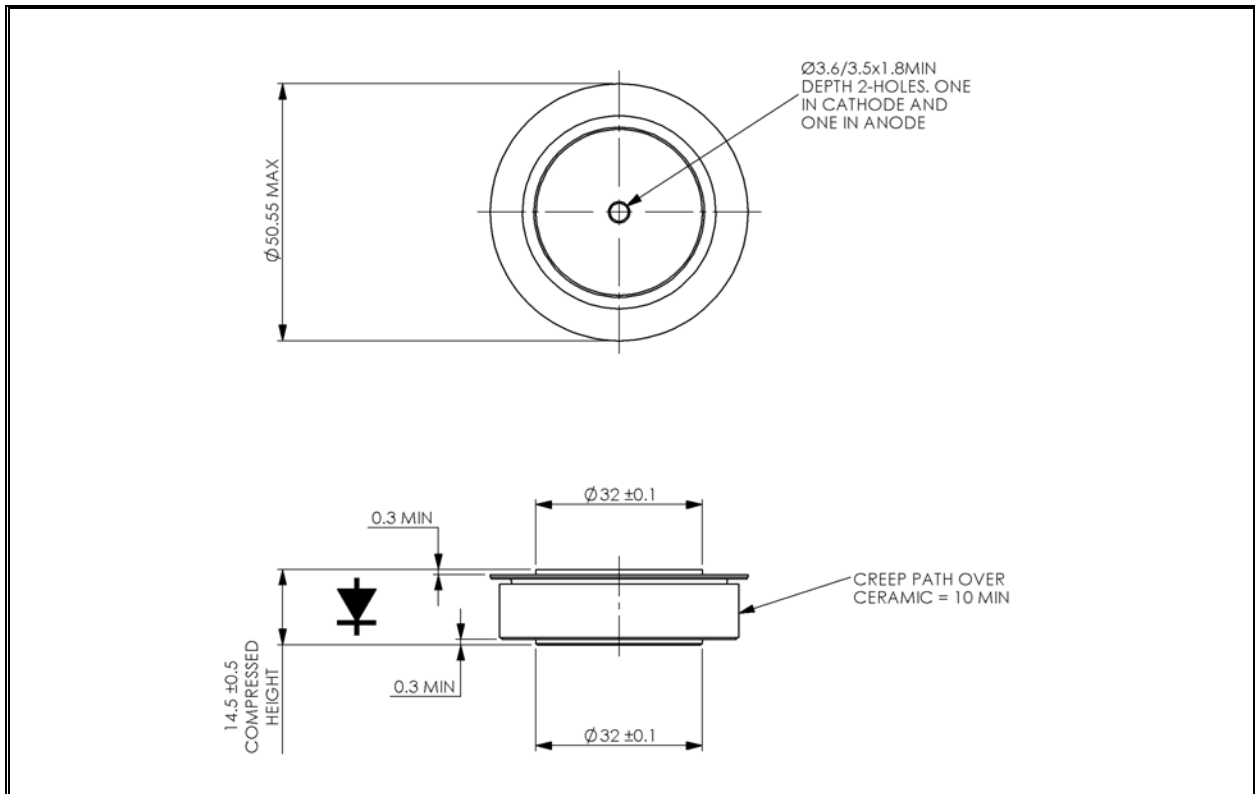
### Characteristics

	PARAMETER	MIN.	TYP.	MAX.	TEST CONDITIONS (Note 1)	UNITS
V <sub>FM</sub>	Maximum peak forward voltage	-	-	1.12	I <sub>FM</sub> =1000A	V
V <sub>FM</sub>	Maximum peak forward voltage	-	-	1.93	I <sub>FM</sub> =3770A	V
V <sub>T0</sub>	Threshold voltage	-	-	0.87		V
r <sub>T</sub>	Slope resistance	-	-	0.28		mΩ
I <sub>RRM</sub>	Peak reverse current	-	-	30	Rated V <sub>RRM</sub>	mA
R <sub>thJK</sub>	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 <sub>t</sub>	Weight	-	135	-		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>W1980</b>	<b>JK</b>	<b>◆◆</b>	<b>0</b>
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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