Date:- 2nd Jan, 2020

Data Sheet Issue:- P1

Rectifier Diode

Types W121CEC180 to W121CEC220

Development part number Wx587ED180-220

Absolute Maximum Ratings

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

	OTHER RATINGS	MAXIMUM LIMITS	UNITS
$I_{F(AV)M}$	Maximum average forward current, T_{sink}=55°C, (note 2)	12100	A
$I_{F(AV)M}$	Maximum average forward current. T_{sink}=100°C, (note 2)	9020	A
$I_{F(AV)M}$	Maximum average forward current. T_{sink}=100°C, (note 3)	5690	A
$I_{F(RMS)M}$	Nominal RMS forward current, T_{sink}=25°C, (note 2)	21770	A
$I_{F(d.c.)}$	D.C. forward current, T_{sink}=25°C, (note 4)	19450	A
I_{FSM}	Peak non-repetitive surge t_p=10ms, V_{rm}=60%V_{RRM}, (note 5)	94.5	kA
I_{FSM2}	Peak non-repetitive surge t_p=10ms, V_{rm}≤10V, (note 5)	103.9	kA
I^2t	I^2t capacity for fusing t_p=10ms, V_{rm}=60%V_{RRM}, (note 5)	44.7	kA^2s
I^2t	I^2t capacity for fusing t_p=10ms, V_{rm}≤10V, (note 5)	54.0	kA^2s
$T_{j\,op}$	Operating temperature range	-40 to +175	°C
T_{stg}	Storage temperature range	-55 to +175	°C

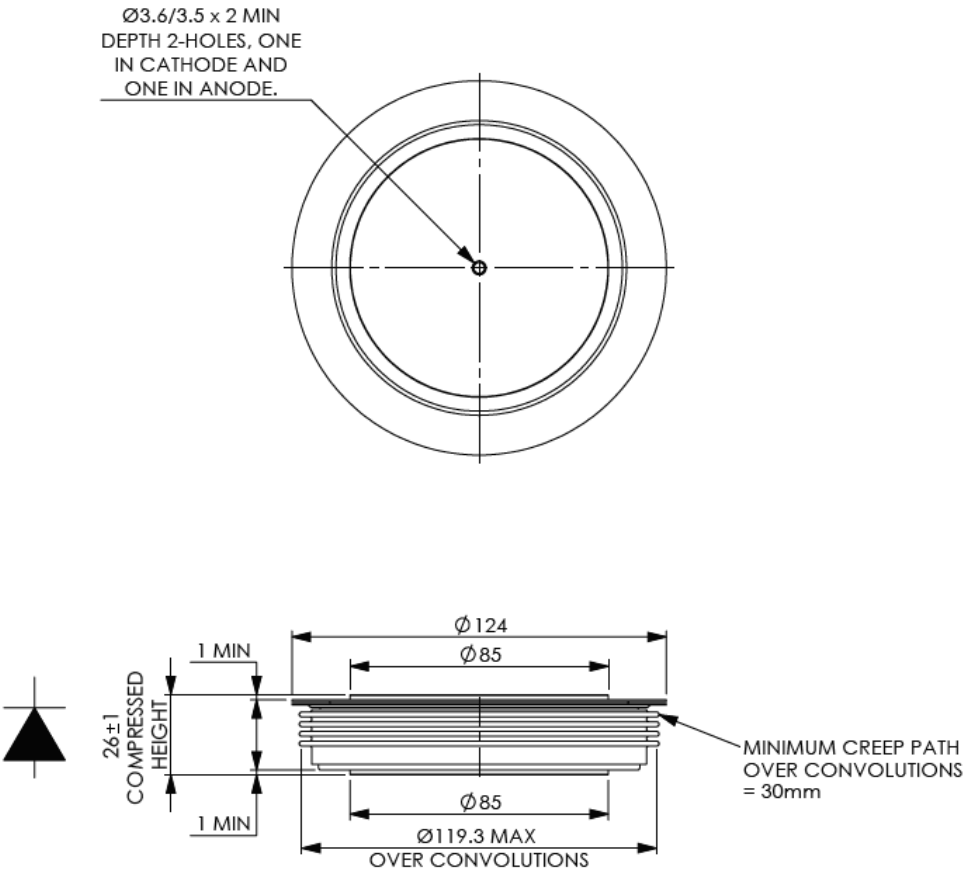
Notes:-
1) De-rating factor of 0.13% per °C is applicable for T_j below 25°C.
2) Double side cooled, single phase; 50Hz, 180° half-sinewave.
3) Single side cooled, single phase; 50Hz, 180° half-sinewave.
4) Double side cooled.
5) Half-sinewave, 175°C T_j initial.

Characteristics

	PARAMETER	MIN.	TYP.	MAX.	TEST CONDITIONS (Note 1)	UNITS
V_{FM}	Maximum peak forward voltage	-	-	0.99	I_{FM}=6200A	V
V_{T0}	Threshold voltage	-	-	0.726		V
r_T	Slope resistance	-	-	0.042		mΩ
I_{RRM}	Peak reverse current	-	-	150	Rated V_{RRM}	mA
Q_{rr}	Recovered charge	-	6500	7050	I_{TM}=2500A, t_p=2000µs, di/dt=10A/µs, V_r=100V	µC
Q_{ra}	Recovered charge, 50% Chord	-	5600	-		µC
I_{rm}	Reverse recovery current	-	320	-		A
t_{rr}	Reverse recovery time, 50% chord	-	35	-		µs
R_{thJK}	Thermal resistance, junction to heatsink	-	-	0.005	Double side cooled	K/W
		-	-	0.010	Single side cooled	K/W
F	Mounting force	76	-	93	Note 2	kN
W_t	Weight		2.2			kg

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)

W121C	EC	♦♦	0
Fixed Type Code	Fixed Outline Code	Voltage code V_{RRM}/100 18 and 22	Fixed code

Order code: W121CEC220 – 2200V V_{RRM}, 26mm clamp height capsule.

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