



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 ² t	I ² t capacity for fusing t _p =10ms, V _{rm} =60%V _{RRM} , (note 5)	44.7	kA ² s
I ² t	I ² t capacity for fusing t _p =10ms, V _{rm} ≤10V, (note 5)	54.0	kA ² s
T _{j op}	Operating temperature range	-40 to +175	°C
T _{stg}	Storage temperature range	-55 to +175	°C

Notes:-

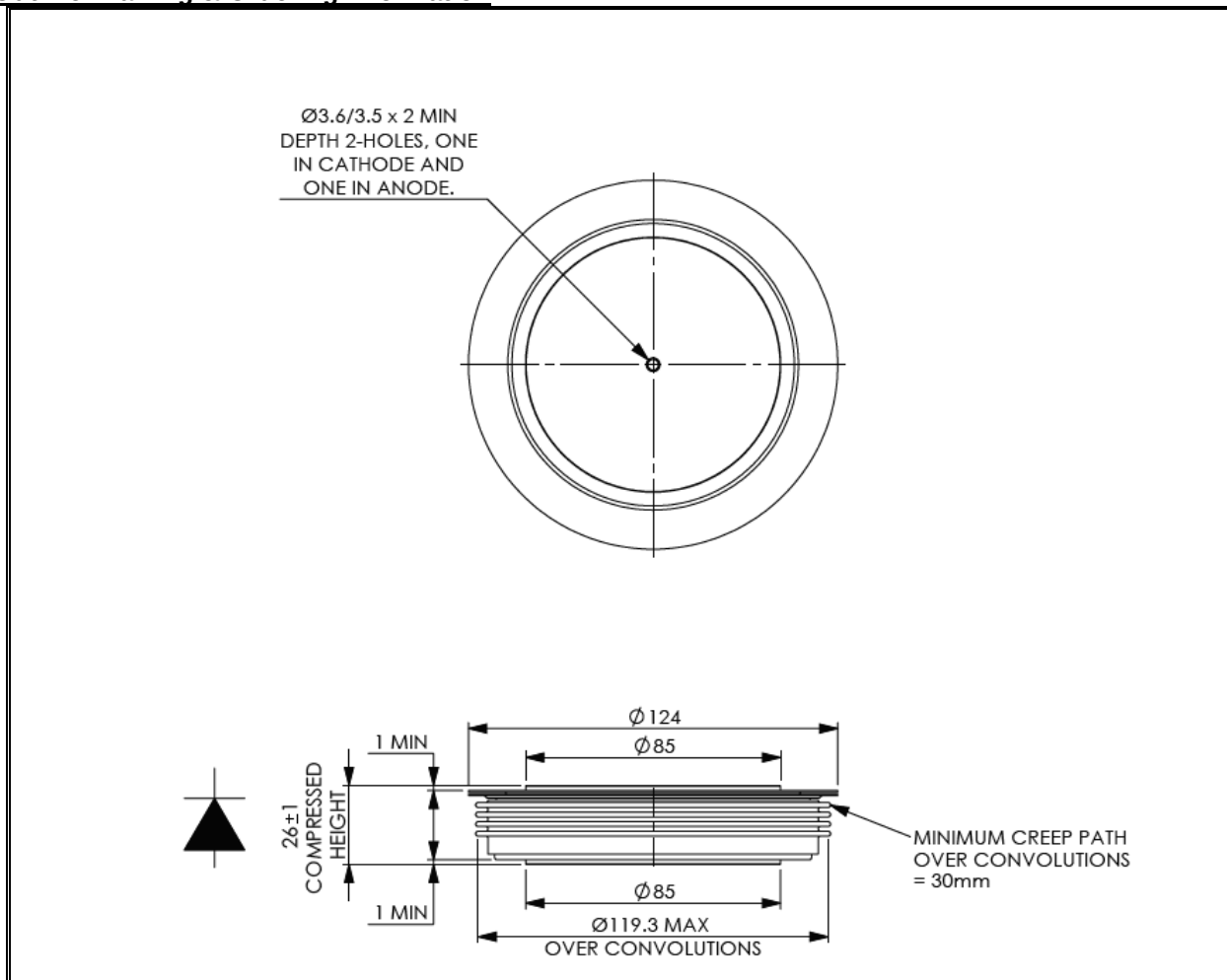
- 1) De-rating factor of 0.13% per °C is applicable for T_j below 25°C.
- 2) Double side cooled, single phase; 50Hz, 180° half-sinewave.
- 3) Single side cooled, single phase; 50Hz, 180° half-sinewave.
- 4) Double side cooled.
- 5) Half-sinewave, 175°C T_j initial.

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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