

Data Sheet Issue:- P1

Rectifier Diode Types W108CED180 to W108CED220

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)	10815	А
I _{F(AV)M}	Maximum average forward current. T _{sink} =100°C, (note 2)	8015	А
I _{F(AV)M}	Maximum average forward current. T _{sink} =100°C, (note 3)	5010	А
I _{F(RMS)M}	Nominal RMS forward current, T _{sink} =25°C, (note 2)	19495	А
I _{F(d.c.)}	D.C. forward current, T _{sink} =25°C, (note 4)	17240	А
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
l²t	$I^{2}t$ capacity for fusing t _p =10ms, V _{rm} =60%V _{RRM} , (note 5)	44.7	kA ² s
l²t	$I^{2}t$ 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, $175^{\circ}C T_{j}$ initial.



Characteristics

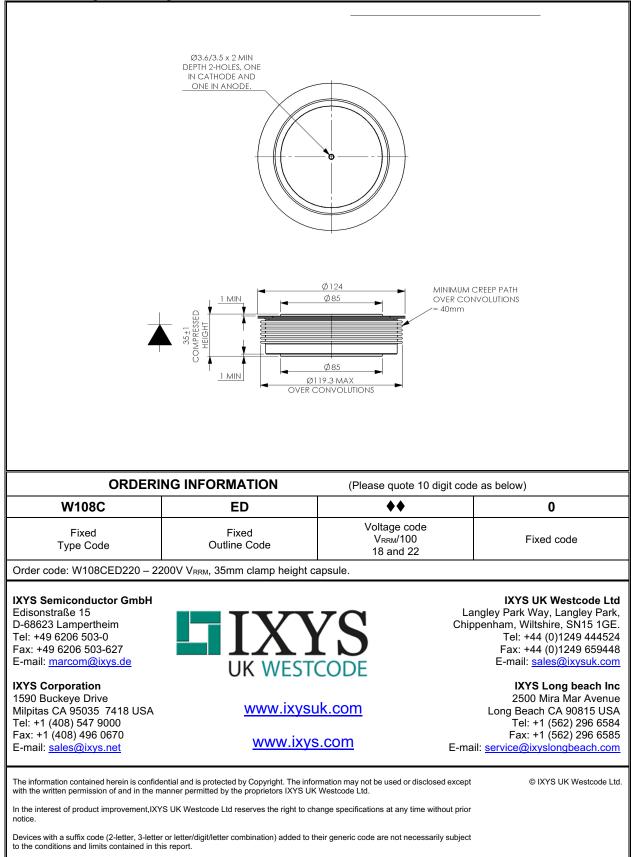
	PARAMETER	MIN.	TYP.	MAX.	TEST CONDITIONS (Note 1)	UNITS
V _{FM}	Maximum peak forward voltage	-	-	0.99	I _{FM} =6200A	V
V _{T0}	Threshold voltage	-	-	0.726		V
r⊤	Slope resistance	-	-	0.042		mΩ
I _{RRM}	Peak reverse current	-	-	150	Rated V _{RRM}	mA
Q _{rr}	Recovered charge	-	6500	7050		μC
Q _{ra}	Recovered charge, 50% Chord	-	5600	-	I _{TM} =2500A, t _p =2000μs, di/dt=10A/μs, V _r =100V	μC
I _{rm}	Reverse recovery current	-	320	-		А
t _{rr}	Reverse recovery time, 50% chord	-	35	-		μs
R _{thJK}	Thermal resistance, junction to heatsink	-	-	0.006	Double side cooled	K/W
		-	-	0.012	Single side cooled	K/W
I _{CNR}	Case non-rupture current	-	30	-		MA ² s
F	Mounting force	76	-	93	Note 2	kN
W _t	Weight		2.2			kg

Notes:-

Unless otherwise indicated T_j=175°C.
For other clamp forces, please consult factory.



Outline Drawing & Ordering Information





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