



High-end Power Semiconductor Manufacturer

ZK585A 5500V Fast Recovery Diode

- Low switching losses
- Low reverse recovery charge High
- power cycling capability



Average forward current	I_{FAV}	585 A
Repetitive peak reverse voltage	V_{RRM}	5500 V
$T_j, ^\circ\text{C}$	- 40 - 115	

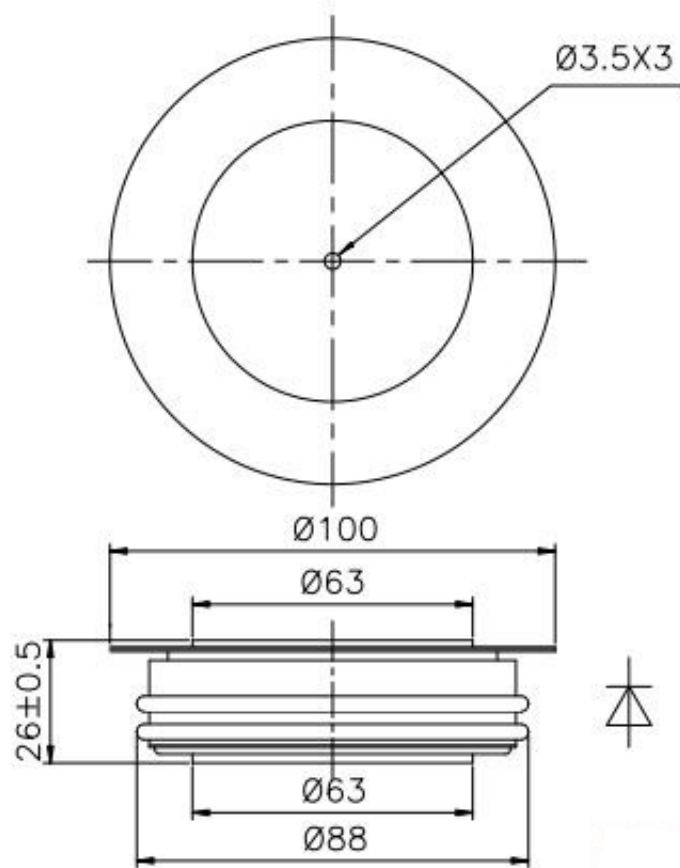
MAXIMUM ALLOWABLE RATINGS

Symbols and parameters		Units	Values	Test conditions	
ON-STATE					
I_{FAV}	Average forward current	A	585	$T_{\text{c}}=70\text{ }^{\circ}\text{C}$; Double side cooled; 180° half-sine wave; 50 Hz	
I_{FSM}	Surge forward current	kA	18.0	$T_{\text{j}}=T_{\text{j max}}$	$t_{\text{p}}=10\text{ ms}$; $V_{\text{R}}=0\text{V}$
I^2t	Safety factor	$\text{A}^2\text{s}\cdot 10^3$	1620	$T_{\text{j}}=T_{\text{j max}}$	$t_{\text{p}}=10\text{ ms}$; $V_{\text{R}}=0\text{V}$
BLOCKING					
V_{RRM}	Repetitive peak reverse voltages	V	5500	$t_{\text{p}}=10\text{ ms}$	
V_{R}	Reverse continuous voltages	V	$0.6\cdot V_{\text{RRM}}$	$T_{\text{j}}=T_{\text{j max}}$;	
THERMAL					
T_{stg}	Storage temperature	$^{\circ}\text{C}$	−40–125		
T_{j}	Operating junction temperature	$^{\circ}\text{C}$	−40 –115		
MECHANICAL					
F	Mounting force	kN	42–46		

CHARACTERISTICS

Symbols and parameters		Units	Values	Conditions	
ON-STATE					
V _{FM}	Peak forward voltage, max	V	6.85	T _j =115 °C; I _F =1800A	
V _{F(TO)}	Forward threshold voltage, max	V	4.50	T _j =T _{j max} ;I _F = 400...2500 A	
r _T	Forward slope resistance, max	mΩ	1.30		
BLOCKING					
I _{RRM}	Repetitive peak reverse current, max	mA	30	T _j =T _{j max} ; V _R =V _{RRM}	
THERMAL					
R _{thjc}	Thermal resistance, junction to case, max	K/kW	12.000	Clamping force 42-46.0kN	Double side cooled
R _{thck}	Thermal resistance, case to heatsink, max	K/kW	3.000	Clamping force 42-46.0kN	Double side cooled
MECHANICAL					
w	Weight, max	g	830		

OVERALL DIMENSIONS



ZT70

All dimensions in millimeters