



High-end Power Semiconductor Manufacturer

ZK1500A 2100-3000V Fast Recovery Diode

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



Average forward current			I_{FAV}	1508 A		
Repetitive peak reverse voltage			V_{RRM}	2100 – 3000 V		
Reverse recovery time			t_{rr}	8.00 μ s		
V_{RRM} , V	2100	2200	2400	2600	2800	3000
Voltage code	21	22	24	26	28	30
T_j , °C	– 60 – 150					

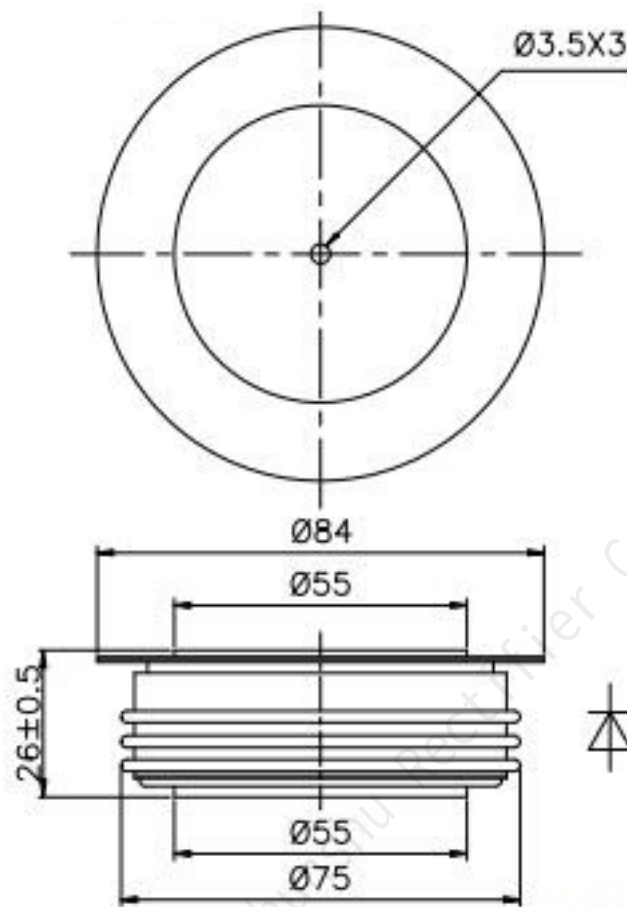
MAXIMUM ALLOWABLE RATINGS

Symbols and parameters		Units	Values	Test conditions	
ON-STATE					
I_{FAV}	Average forward current	A	1508	$T_c=85\text{ }^{\circ}\text{C}$; Double side cooled; 180° half-sine wave; 50 Hz	
I_{FSM}	Surge forward current	kA	20.0	$T_j=T_{j\text{ max}}$	180° half-sine wave; $t_p=10\text{ ms}$; $V_R=0.6V_{RRM}$
I^2t	Safety factor	$A^2s\cdot 10^3$	2000	$T_j=T_{j\text{ max}}$	180° half-sine wave; $t_p=10\text{ ms}$; $V_R=0.6V_{RRM}$
BLOCKING					
V_{RRM}	Repetitive peak reverse voltages	V	2100–3000	$t_p=10\text{ ms}$	
V_R	Reverse continuous voltages	V	$0.6\cdot V_{RRM}$	$T_j=T_{j\text{ max}}$;	
THERMAL					
T_{stg}	Storage temperature	$^{\circ}\text{C}$	–40–160		
T_j	Operating junction temperature	$^{\circ}\text{C}$	–60 –150		
MECHANICAL					
F	Mounting force	kN	21 – 30		

CHARACTERISTICS

Symbols and parameters		Units	Values	Conditions	
ON-STATE					
V_{FM}	Peak forward voltage, max	V	2.80	$T_j=25\text{ }^{\circ}\text{C}; I_{TM}=2000\text{A}, F=28.0\text{kN}$	
$V_{F(To)}$	Forward threshold voltage, max	V	1.58	$T_j=T_{j\text{ max}};$	
r_T	Forward slope resistance, max	mΩ	0.30		
BLOCKING					
I_{RRM}	Repetitive peak reverse current, max	mA	145	$T_j=T_{j\text{ max}};$ $V_R=V_{RRM}$	
SWITCHING					
Q_{rr}	Total recovered charge, max	μC	1010	$I_{TM}=2000\text{A}, t_p=1000\mu\text{s},$ $-di/dt=60\text{A}/\mu\text{s},$ $V_R=50\text{V}$	
t_{rr}	Reverse recovery time ¹⁾ , max	μs	8.00		
THERMAL					
R_{thjc}	Thermal resistance, junction to case, max	°C/W	0.0160	Clamping force 28.0kN	Double side cooled
R_{thck}	Thermal resistance, case to heatsink, max	°C/W	0.0040	Clamping force 28.0kN	Double side cooled
MECHANICAL					
w	Weight, max	g	640		

OVERALL DIMENSIONS



ZT60

All dimensions in millimeters