

Welding Diode

Parameters

ZP7100A/200V-400V

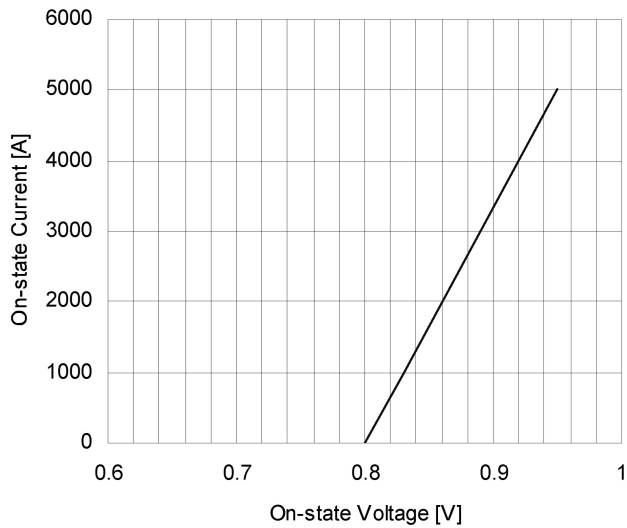
Symbol	Characteristic	Conditions	T _J [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		170	200-400	V
V _{RSM}	Non-repetitive peak reverse voltage		170	300-600	V
I _{RRM}	Repetitive peak reverse current	V=VRRM	170	60	mA
CONDUCTING					
I _{F (AV)}	Mean forward current	180° sin ,50 Hz, Tc=85°C, double side cooled		7110	A
I _{FSM}	Surge forward current	Sine wave, 10 ms without reverse voltage	170	55	kA
I ² t	I ² t			15000	kA²s
V _{FM}	Forward voltage	Forward current =5000 A	25	1.1	V
V _{F(TO)}	Threshold voltage		170	0.76	V
r _F	Forward slope resistance		170	0.03	mohm
SWITCHING					
t _{rr}	Reverse recovery time		170		µs
Q _{rr}	Reverse recovery charge			300	µC
I _{rr}	Peak reverse recovery current				A
MOUNTING					
R _{th(j-h)}	Thermal impedance, DC	Junction to heatsink, double side cooled		10	°C/kW
R _{th(c-h)}	Thermal impedance	Case to heatsink, double side cooled		5	°C/kW
T _j	Operating junction temperature			-40 / 170 °C	
F	Mounting force			20 / 24	kN
	Mass			150	g
ORDERING INFORMATION : ZP7100 02-06 standard specification VRRM/100					

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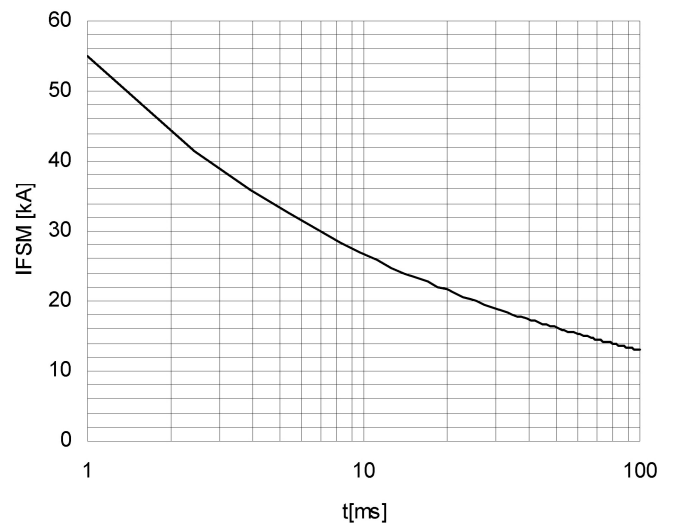
Characteristics

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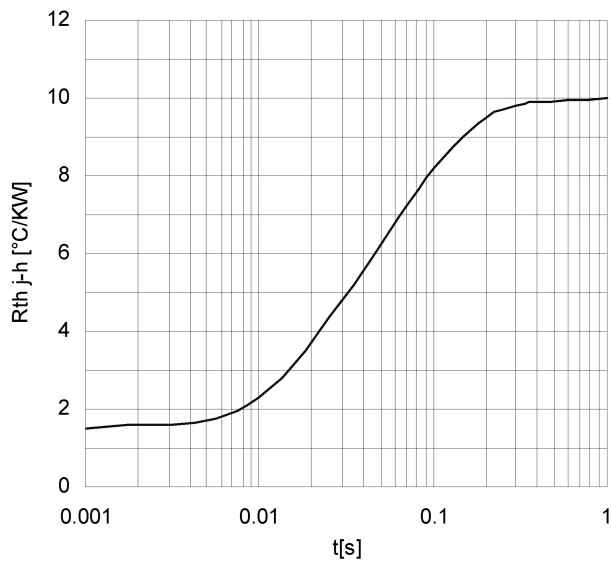
ON-STATE CHARACTERISTIC $T_J = 170\text{ }^{\circ}\text{C}$



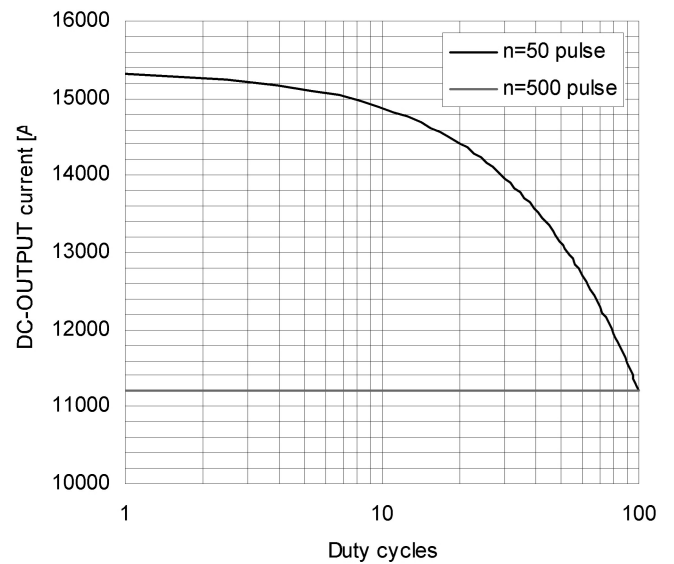
SURGE CHARACTERISTIC $T_J = 170\text{ }^{\circ}\text{C}$



TRANSIENT THERMAL IMPEDANCE



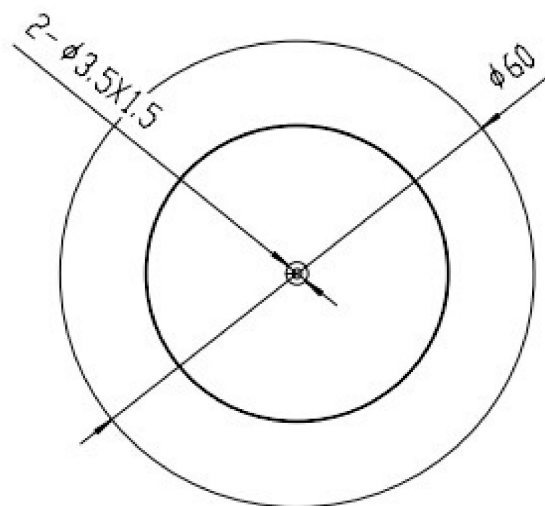
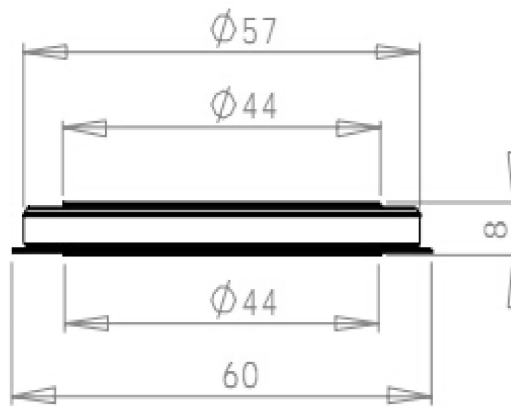
single phase welding rating



Welding Diode

ZP7100A/200V-400V

Outline and Drawing



ZP7100A/200V-400V

Welding diode

Properties

- High forward current capability
- Low forward voltage drop
- International standard cases

Applications

- Welding equipment
- High current application up to 1000 Hz

Key parameters

V_{RRM}	=	200-400 V
I_{FAVm}	=	7 110 A
I_{FSM}	=	55 000 A
V_{TO}	=	0.750 V
r_T	=	0.025 mΩ

Types

type	V_{RRM}
ZP7100-400	400 V
ZP7100-200	200 V
Conditions: $T_j = -40 - 170\text{ °C}$, half sine waveform, $f = 50\text{ Hz}$	

Mechanical data

F_m	Mounting force	$22 \pm 2\text{ kN}$
m	Weight	0.14 kg
D_s	Surface creepage distance	4 mm
D_a	Air strike distance	4 mm

