

Welding diode (housingless)

Properties

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

Applications

- Welding equipment
- High current application up to 2000 Hz

Key parameters

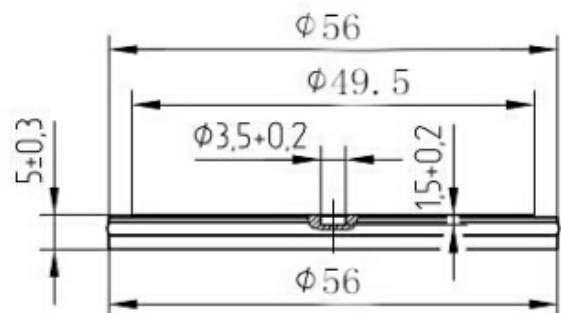
V_{RRM}	=	400	V
I_{FAVm}	=	10500	A
I_{FSM}	=	85 000	A
V_{TO}	=	0.800	V
r_T	=	0.025	mΩ

Types

type	V_{RRM}
ZP10500A/400V	400V
Conditions: $T_j = -40 - 180\text{ °C}$, half sine waveform, $f = 50\text{ Hz}$	

Mechanical data

F_m	Mounting force	35 - 70 kN
m	Weight	0.14 kg
D_s	Surface creepage distance	2 mm
D_a	Air strike distance	2 mm



Welding Diode

Parameters

ZP10500-400

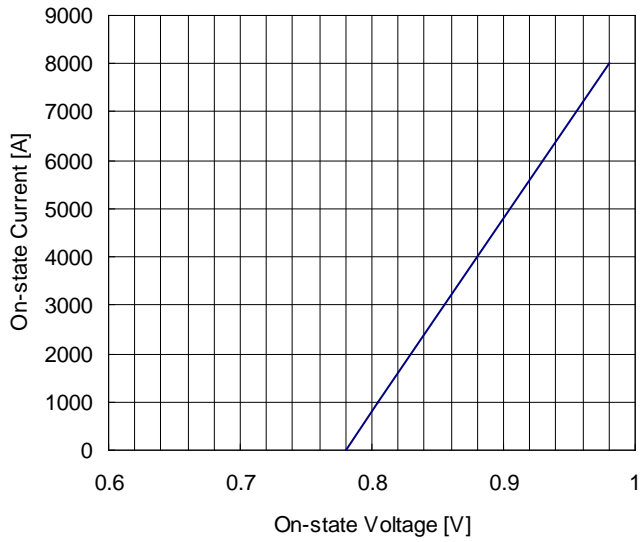
Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		180	400	V
V _{RSM}	Non-repetitive peak reverse voltage		180	400-600	V
I _{RRM}	Repetitive peak reverse current	V=VRRM	180	75	mA
CONDUCTING					
I _{F(AV)}	Mean forward current	180° sin ,50 Hz, Tc=85°C, double side cooled		10500	A
I _{FSM}	Surge forward current	Sine wave, 10 ms without reverse voltage	180	70	kA
I ² t	I ² t			35901	kA ² s
V _{FM}	Forward voltage	Forward current =8000 A	25	1.092	V
V _{F(TO)}	Threshold voltage		180	0.75	V
r _F	Forward slope resistance		180	0.022	mohm
SWITCHING					
t _{rr}	Reverse recovery time		180		μs
Q _{rr}	Reverse recovery charge			300-350	μC
I _{rr}	Peak reverse recovery current				A
MOUNTING					
R _{th(j-h)}	Thermal impedance, DC	Junction to heatsink, double side cooled		6.5	°C/kW
R _{th(c-h)}	Thermal impedance	Case to heatsink, double side cooled		2.6	°C/kW
T _j	Operating junction temperature			-40 / 180	°C
F	Mounting force			35 / 70	kN
	Mass			160	g
ORDERING INFORMATION : ZP10500 02-04 standard specification VRRM/100					

Welding Diode

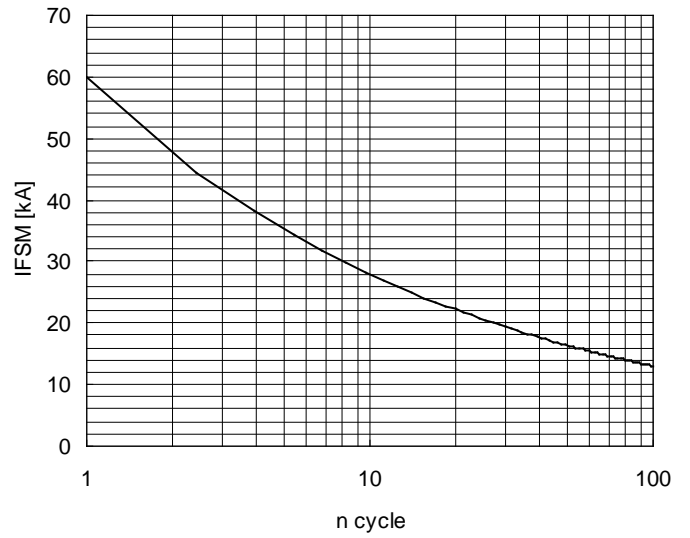
Characteristics

ZP10500-400

ON-STATE CHARACTERISTIC $T_j = 180\text{ }^\circ\text{C}$



SURGE CHARACTERISTIC $T_j = 180\text{ }^\circ\text{C}$



TRANSIENT THERMAL IMPEDANCE

