



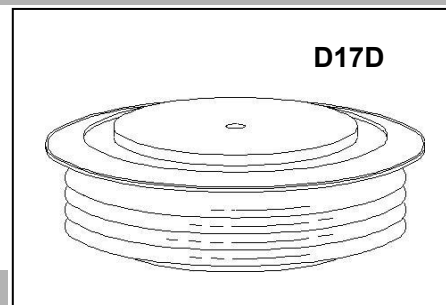
ZP3900- RECTIFIER DIODE

5800-6500V_{RRM}

HIGH POWER FREE FLOATING TYPE RECTIFIER DIODE

Features:

- . All diffused structure
- . High surge rating
- . Blocking capability up to 6500 volts
- . Ceramic housing hermetic package
- . Pressure assembled device



ELECTRICAL CHARACTERISTICS AND RATINGS

Reverse Blocking

Device Type	V _{RRM} (1)	V _{RSM} (1)
ZP3900-58	5300	5800
ZP3900-60	5500	6000
ZP3900-62	5700	6200
ZP3900-64	5900	6400
ZP3900-65	6000	6500

V_{RRM} = Repetitive peak reverse voltage

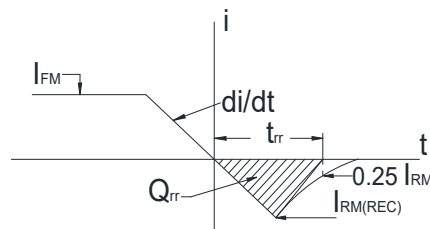
V_{RSM} = Non repetitive peak reverse voltage (2)

Repetitive peak reverse leakage current	I _{RRM}	5 mA 400 mA (3)
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Notes:

All ratings are specified for T_j=25 °C, unless otherwise stated

- (1) All voltage ratings are specified for an applied 50Hz/60Hz sinusoidal waveform over the temperature range -40°C to +150 °C.
- (2) 10 msec. max. pulse width
- (3) Maximum value for T_j = 150 °C.
- (4) See parameter definition below :



reverse recovery characteristic

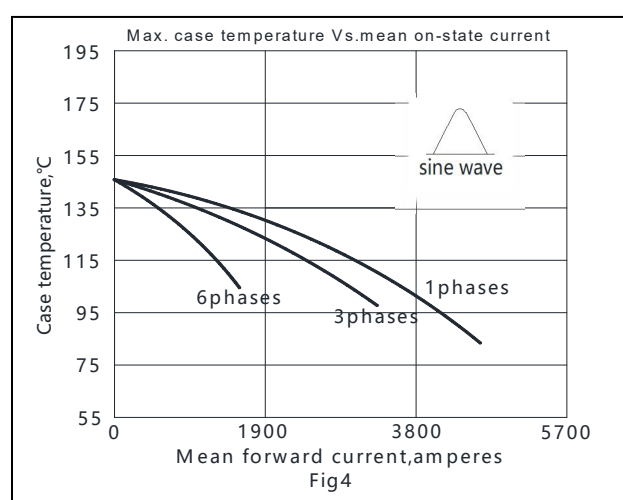
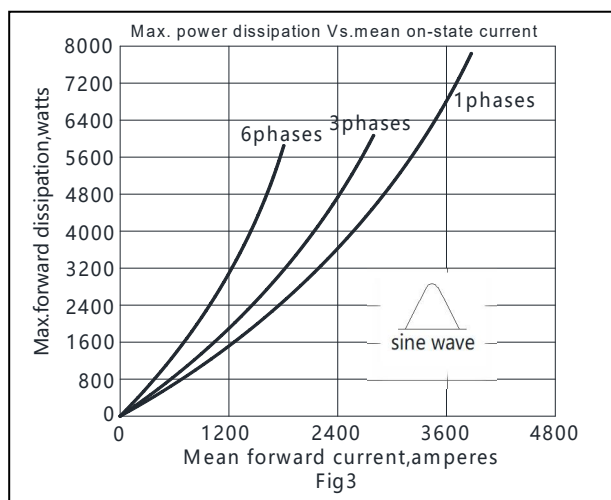
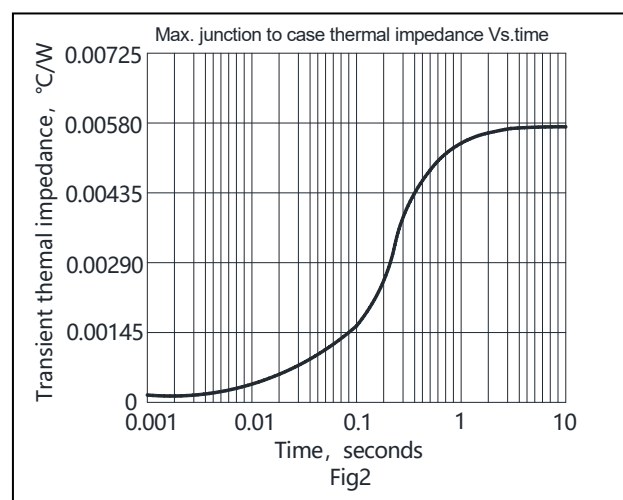
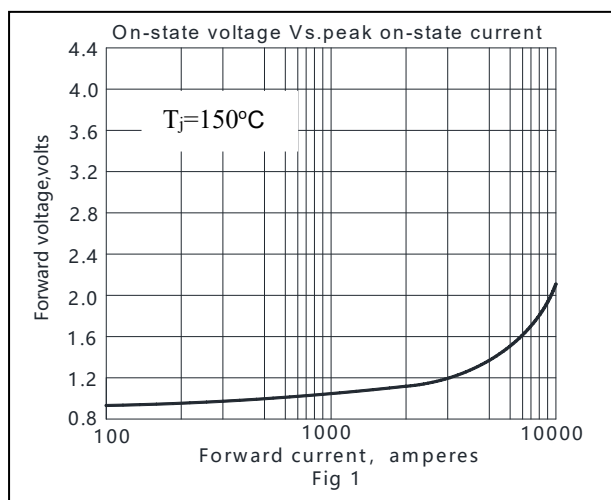
Conducting - on state

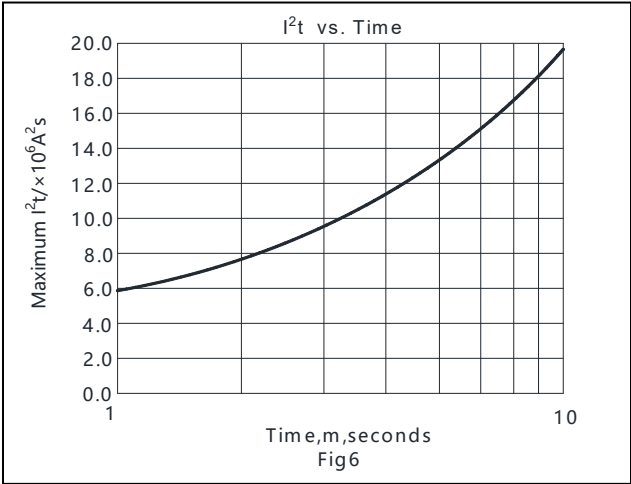
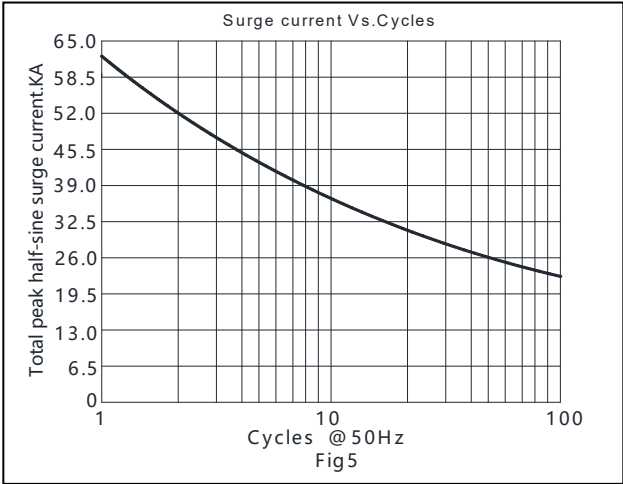
Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Average forward current	I _{F(AV)}		3900		A	Sinewave 180°, T _c =100°C
RMS forward current	I _{FRMS}		6123		A	
Peak one cycle surge (non repetitive) current	I _{FSM}		62400		A	10 msec (50Hz), sinusoidal wave-shape, 180° conduction, T _j =150°C
I square t	I ² t		19.4 × 10 ⁶		A ² s	10 msec
Peak forward voltage	V _{FM}		1.56		V	I _{FM} = 6000A; T _j =150°C
Threshold voltage	V _{FO}		0.84		V	T _j =150°C, I=0.5 π I _{F(AV)} to 1.5 π I _{F(AV)}
Slope resistance	r _F		0.12		mΩ	T _j =150°C, I=0.5 π I _{F(AV)} to 1.5 π I _{F(AV)}
Reverse Recovery Current (4)	I _{RM(REC)}				A	T _j =150°C
Reverse Recovery Charge (4)	Q _{rr}		8000		μC	T _j =150°C
Reverse Recovery Time (4)	t _{rr}				μs	T _j =150°C

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	T_j	-40	+150		°C	
Storage temperature	T_{stg}	-40	+150		°C	
Thermal resistance - junction to case	$R_{\theta(j-c)}$		0.0057		°C/W	Double sided cooled
Thermal resistance - case to heatsink	$R_{\theta(c-s)}$		0.0015		°C/W	Double sided cooled
Mounting force	F			90	kN	
Weight	m			2.90	kg.	

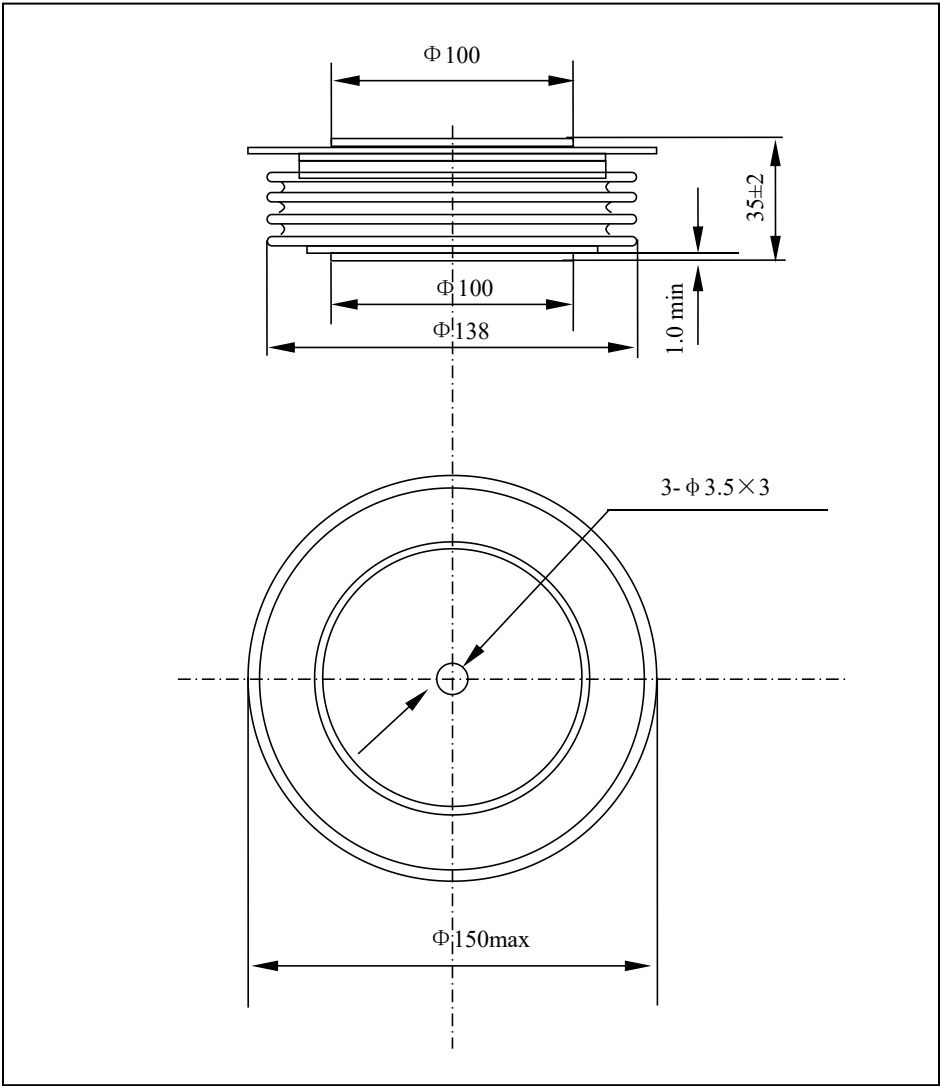
* Mounting surfaces smooth, flat and greaseless

Graph





CASE OUTLINE AND DIMENSIONS



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