



ZP600- RECTIFIER DIODE

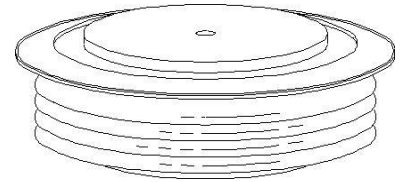
600-1600V_{RRM}

GENERAL PURPOSE HIGH POWER STANDARD RECTIFIER

Features:

- . All diffused structure
- . High surge rating
- . Blocking capability up to 1600 volts
- . Ceramic housing hermetic package
- . Pressure assembled device

D1A



ELECTRICAL CHARACTERISTICS AND RATINGS

Reverse Blocking

Device Type	V _{RRM} (1)	V _{RSM} (1)
ZP600-06	600	700
ZP600-08	800	900
ZP600-10	1000	1100
ZP600-12	1200	1300
ZP600-14	1400	1500
ZP600-16	1600	1700

V_{RRM} = Repetitive peak reverse voltage

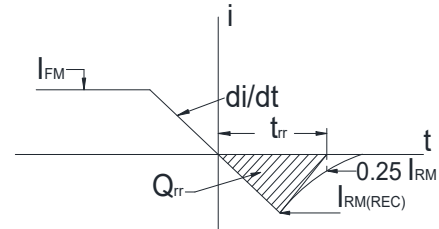
V_{RSM} = Non repetitive peak reverse voltage (2)

Repetitive peak reverse leakage current	I _{RRM}	2 mA 30 mA (3)
---	------------------	-------------------

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 0 to +175 °C.
- (2) 10 msec. max. pulse width
- (3) Maximum value for T_j = 175 °C.
- (4) See parameter definition below :



reverse recovery characteristic

Conducting - on state

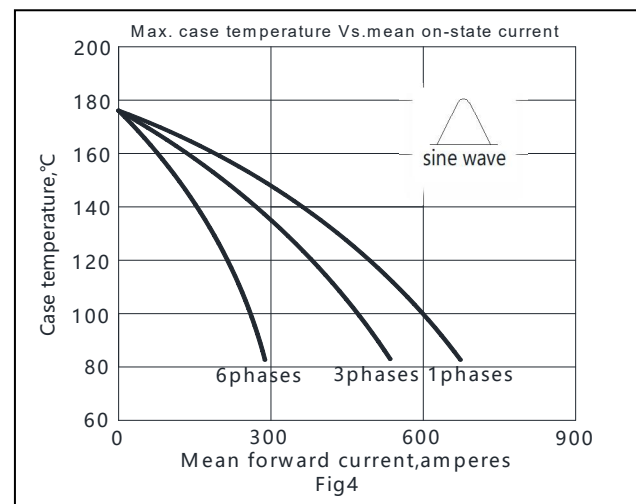
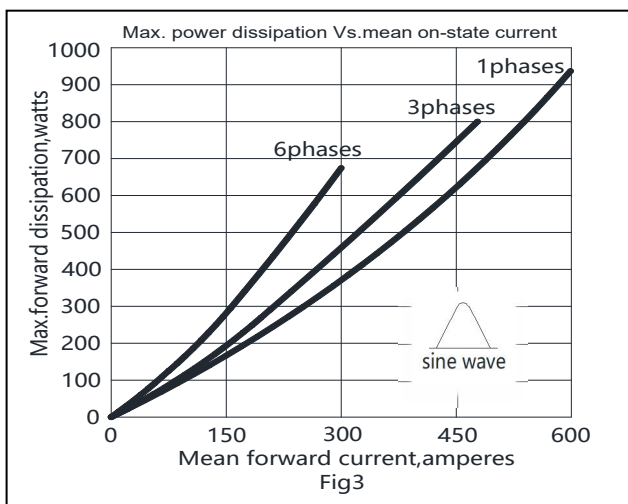
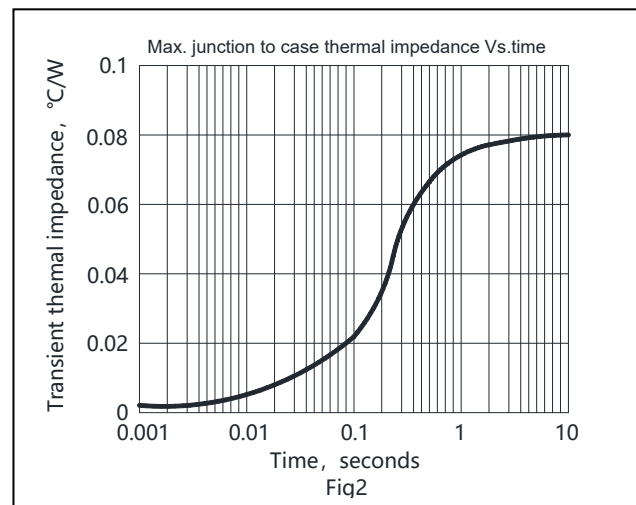
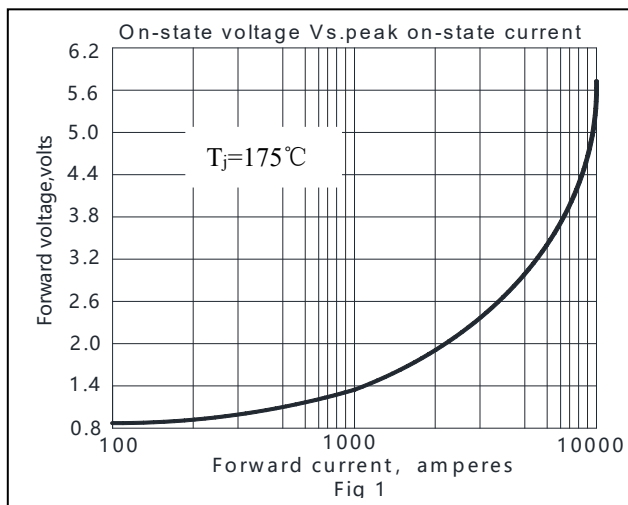
Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Average forward current	I _{F(AV)}		600		A	Sinewave 180°, T _c =100°C
RMS forward current	I _{FRMS}		942		A	Nominal value
Peak one cycle surge (non repetitive) current	I _{FSM}		6000		A	10 msec (50Hz), sinusoidal wave-shape, 180° conduction, T _j =175°C
I square t	I ² t		18.0 × 10 ⁴		A ² s	10 msec
Peak forward voltage	V _{FM}		1.35		V	I _{FM} = 900A; T _j =25°C
Threshold voltage	V _{FO}		0.82		V	T _j =175°C, I=0.5 π I _{F(AV)} to 1.5 π I _{F(AV)}
Slope resistance	r _F		0.5		mΩ	T _j =175°C, I=0.5 π I _{F(AV)} to 1.5 π I _{F(AV)}
Reverse Recovery Current (4)	I _{RM(REC)}				A	I _{FM} = 500 A; di/dt = -10 A/s; T _{jmax}
Reverse Recovery Charge (4)	Q _{rr}			1500	μC	I _{FM} = 500 A; di/dt = -10 A/s; T _{jmax}
Reverse Recovery Time (4)	t _{rr}				μs	I _{FM} = 500 A; di/dt = -10 A/s; T _{jmax}

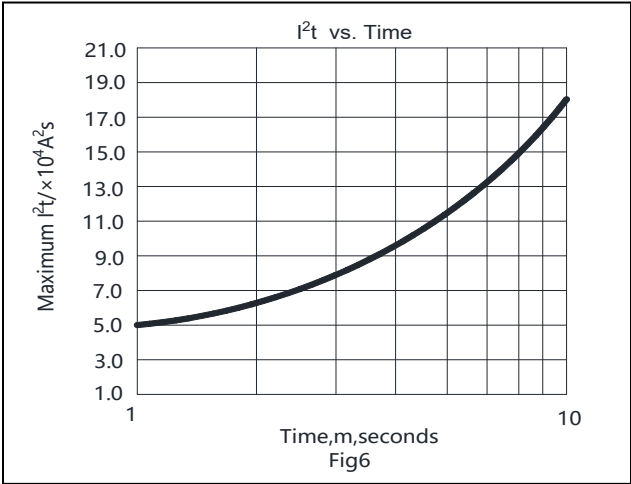
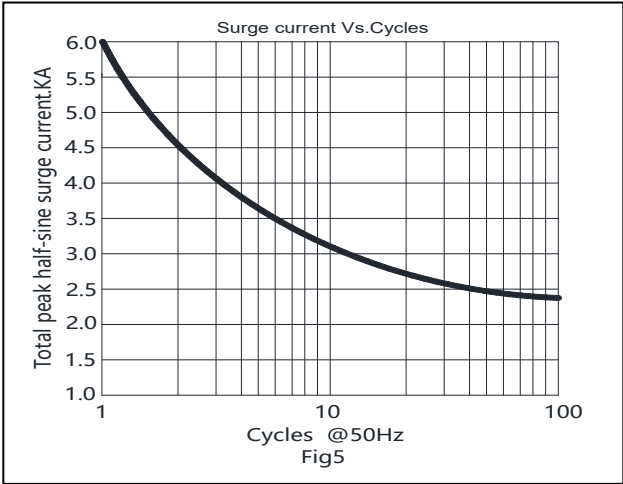
Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	T_j	-40	+175		°C	
Storage temperature	T_{stg}	-40	+175		°C	
Thermal resistance - junction to case	$R_{\theta(j-c)}$		0.08		°C/W	Double sided cooled
Thermal resistance - case to heatsink	$R_{\theta(c-s)}$		0.02		°C/W	Double sided cooled
Mounting force	F	3.5	4.5	4	kN	
Weight	m			0.06	kg.	

* Mounting surfaces smooth, flat and greaseless

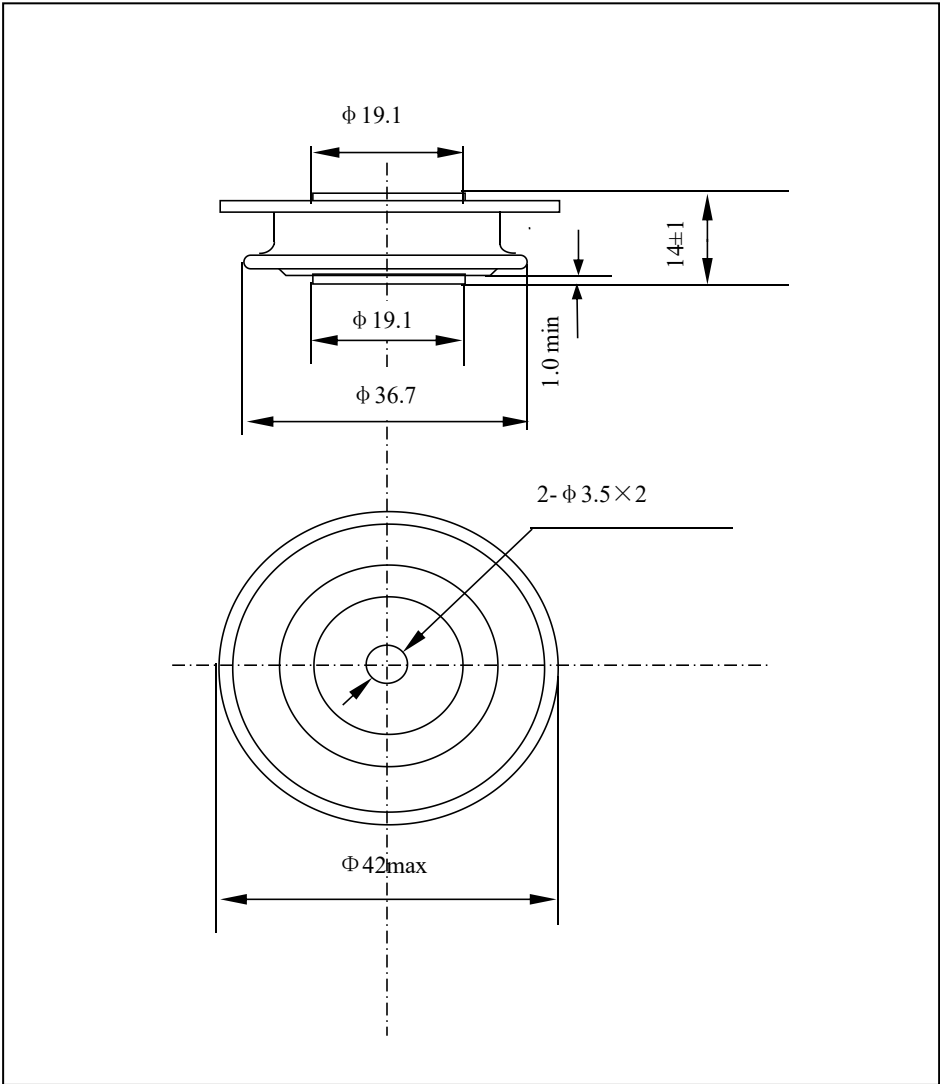
Graph

ZP600-RECTIFIER DIODE





CASE OUTLINE AND DIMENSIONS



The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function, or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website <http://www.21yangjie.com> , or consult your nearest Yangjie's sales office for further assistance.