ZP4800- RECTIFIER DIODE

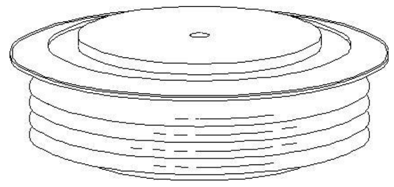
2600-3600V$_{RRM}$

GENERAL PURPOSE HIGH POWER STANDARD RECTIFIER

Features:

- . All diffused structure
- . High surge rating
- . Blocking capability up to 3600 volts
- . Ceramic housing hermetic package
- . Pressure assembled device

D16C



ELECTRICAL CHARACTERISTICS AND RATINGS

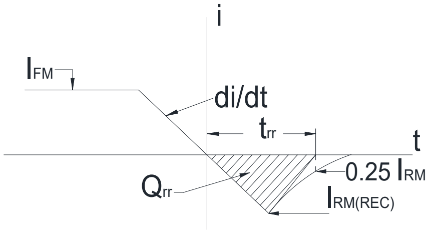
Reverse Blocking

Device Type	V_{RRM} (1)	V_{RSM} (1)
ZP4800-26	2600	2700
ZP4800-28	2800	2900
ZP4800-30	3000	3100
ZP4800-32	3200	3300
ZP4800-34	3400	3500
ZP4800-36	3600	3700

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

Repetitive peak reverse leakage current	I_{RRM}	5 mA 200 mA (3)

Notes:
All ratings are specified for Tj=25 °C, unless otherwise stated
.
(1) All voltage ratings are specified for an applied 50Hz/60Hz sinusoidal waveform over the temperature range 0 to +150 °C.
(2) 10 msec. max. pulse width
(3) Maximum value for Tj = 150 °C.
(4) See parameter definition below :



reverse recovery characteristic

Conducting - on state

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Average forward current	$I_{F(AV)}$		4800		A	Sinewave 180°, Tc =100℃
RMS forward current	I_{FRMS}		7536		A	Nominal value
Peak one cycle surge (non repetitive) current	I_{FSM}		67200		A	10 msec (50Hz), sinusoidal wave-shape, 180° conduction, Tj =150℃
I square t	I^2t		22.5×10^{6}		A^2s	10 msec
Peak forward voltage	V_{FM}		1.20		V	I_{FM}= 5000A;Tj =25°C
Threshold voltage	V_{FO}		0.78		V	Tj=150°C,I=0.5 π $I_{F(AV)}$ to 1.5 π $I_{F(AV)}$
Slope resistance	r_F		0.08		mΩ	Tj=150°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;Tj_{max}
Reverse Recovery Charge (4)	Q_{rr}			7000	μC	I_{FM} = 500 A; di/dt = -10 A/s;Tj_{max}
Reverse Recovery Time (4)	t_{rr}				μs	I_{FM} = 500 A; di/dt = -10 A/s;Tj_{max}

THERMAL AND MECHANICAL CHARACTERISTICS ZP4800-RECTIFIER DIODE

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	$R_{\Theta\ (j\text{-}c)}$		0.006		°C/W	Double sided cooled
Thermal resistance - case to heatsink	$R_{\Theta\ (c\text{-}s)}$		0.0015		°C/W	Double sided cooled
Mounting force	F	65	85	80	kN	
Weight	m			1.9	kg.	

* Mounting surfaces smooth, flat and greaseless

Graph ZP4800-RECTIFIER DIODE

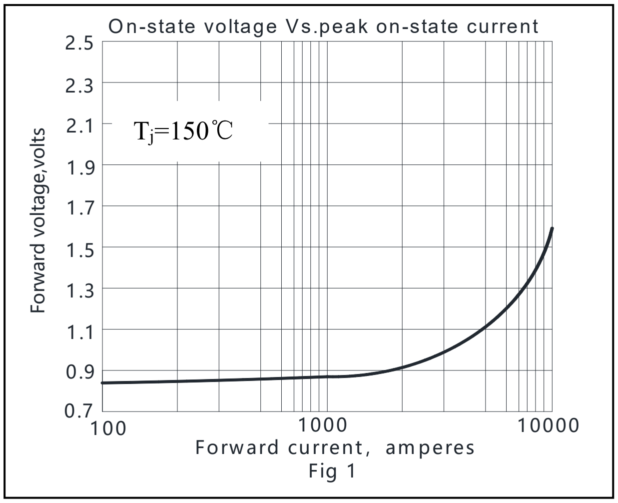


Fig 1

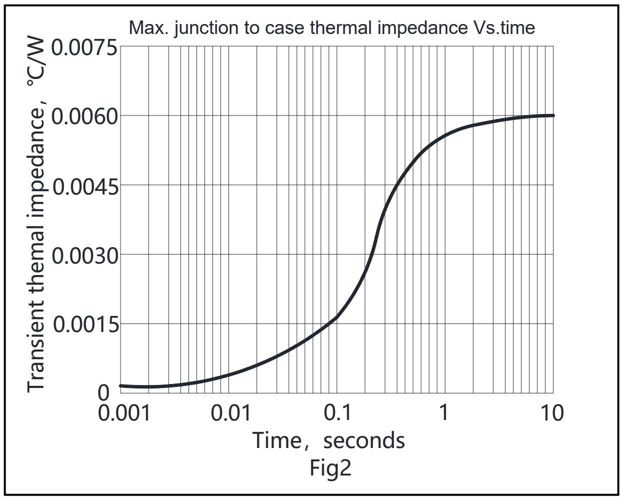


Fig2

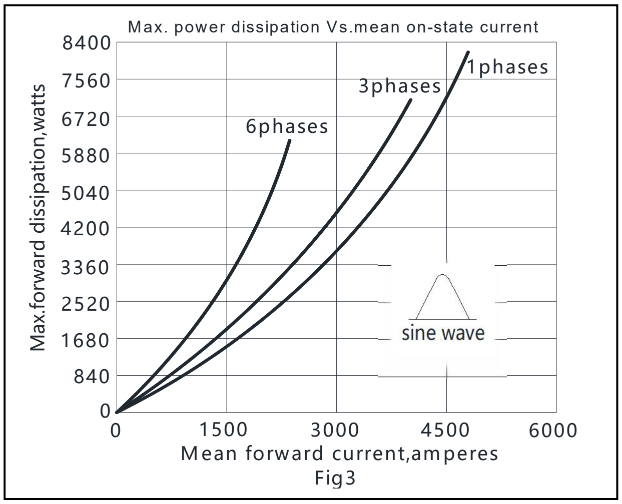


Fig3

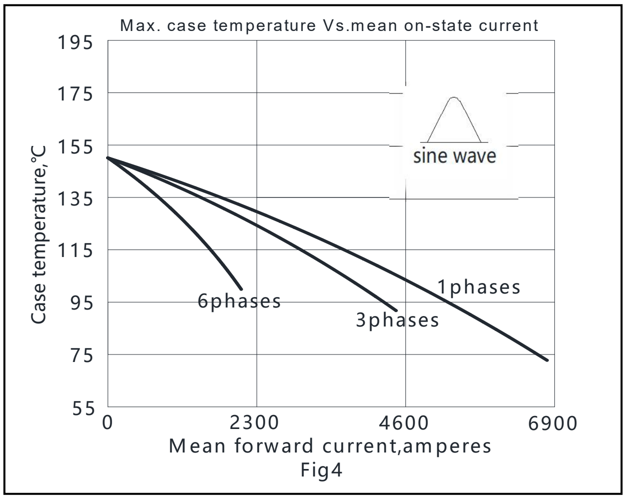


Fig4

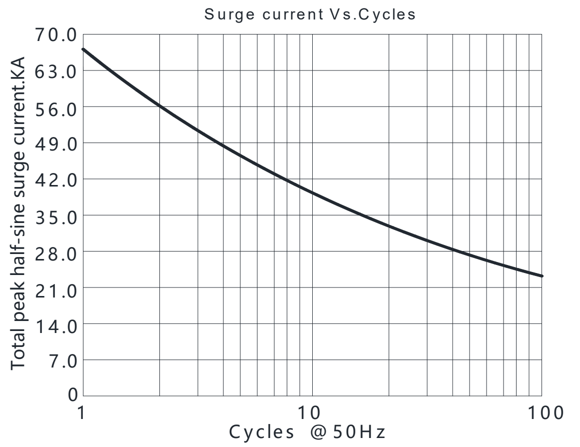


Fig5

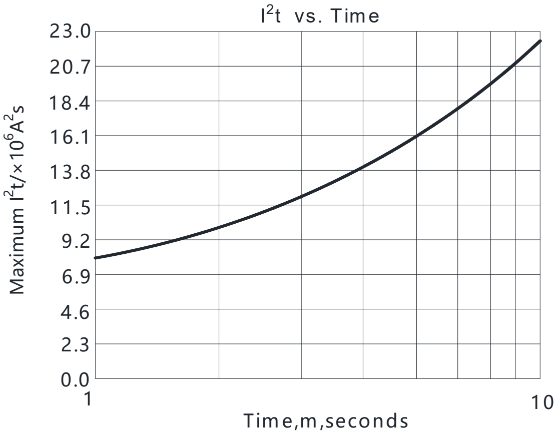


Fig6

CASE OUTLINE AND DIMENSIONS