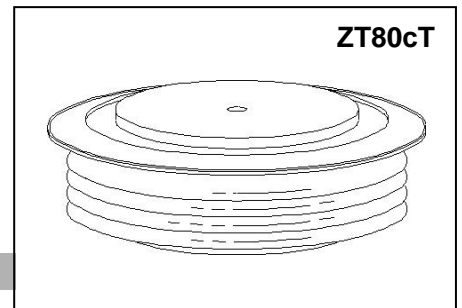




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**GENERAL PURPOSE HIGH POWER STANDARD RECTIFIER**  
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**Features:**

- . 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 <sub>RRM</sub> (1)	V <sub>RSM</sub> (1)
ZP2100-46	4600	4800
ZP2100-48	4800	5000
ZP2100-50	5000	5200
ZP2100-52	5200	5400
ZP2100-60	6000	6200
ZP2100-65	6500	6700

V<sub>RRM</sub> = Repetitive peak reverse voltage

V<sub>RSM</sub> = Non repetitive peak reverse voltage (2)

Repetitive peak reverse leakage	I <sub>RRM</sub>	5 mA 100 mA (3)
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Notes:

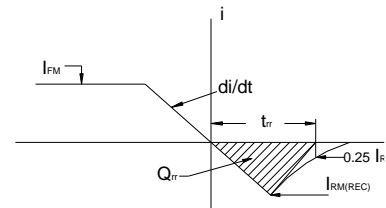
All ratings are specified for T<sub>j</sub>=25 °C unless otherwise stated.

(1) All voltage ratings are specified for an applied 50Hz/60zHz sinusoidal waveform over the temperature range 0 to +150 °C.

(2) 10 msec. max. pulse width

(3) Maximum value for T<sub>j</sub> = 150 °C.

(4) See parameter definition below:



REVERSE RECOVERY CHARACTERIST

**Conducting - on state**

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Average forward current	I <sub>F(AV)</sub>		2100		A	Sinewave, 180°, T <sub>c</sub> =100 °C
RMS forward current	I <sub>FRMS</sub>		3297		A	Nominal value
Peak one cycle surge (non repetitive) current	I <sub>FSM</sub>		31500		A	10 msec (50Hz), sinusoidal wave-shape, 180° conduction, T <sub>j</sub> = 150 °C
I square t	I <sup>2</sup> t		5 × 10 <sup>6</sup>		A <sup>2</sup> s	10 msec
Peak forward voltage	V <sub>FM</sub>		1.70		V	I <sub>FM</sub> = 3000A;T <sub>j</sub> =25°C
Threshold voltage	V <sub>FO</sub>		1		V	T <sub>j</sub> =150°C,I=0.5 π I <sub>F(AV)</sub> to 1.5 π I <sub>F(AV)</sub>
Slope resistance	r <sub>F</sub>		0.2		mΩ	T <sub>j</sub> =150°C,I=0.5 π I <sub>F(AV)</sub> to 1.5 π I <sub>F(AV)</sub>
Reverse Recovery Current (4)	I <sub>RM(REC)</sub>				A	I <sub>FM</sub> = 500 A; di/dt = -10 A/s;T <sub>j</sub> max
Reverse Recovery Charge (4)	Q <sub>rr</sub>			6000	μC	I <sub>FM</sub> = 500 A; di/dt = -10 A/s;T <sub>j</sub> max
Reverse Recovery Time (4)	t <sub>rr</sub>				μs	I <sub>FM</sub> = 500 A; di/dt = -10 A/s;T <sub>j</sub> max

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	$R_{\Theta(j-c)}$		0.011		°C/W	Double sided cooled
Thermal resistance - case to heatsink	$R_{\Theta(c-s)}$		0.003		°C/W	Double sided cooled
Mounting force	P	32	39	35	kN	
Weight	W			1.1	kg.	

\* Mounting surfaces smooth, flat and greaseless

**CASE OUTLINE AND DIMENSIONS**

