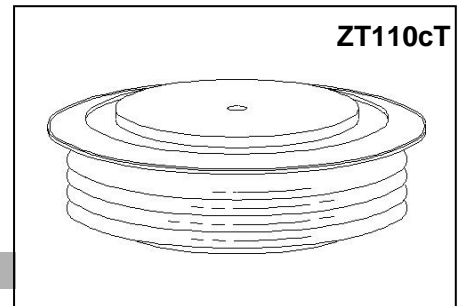




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GENERAL PURPOSE HIGH POWER STANDARD RECTIFIER

Features:

- . All Diffused Structure
- . High Surge rating
- . Blocking capability up to 3500 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)
ZP5800-25	2500	2700
ZP5800-26	2600	2800
ZP5800-28	2800	3000
ZP5800-30	3000	3200
ZP5800-32	3200	3400
ZP5800-35	3500	3700

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 200 mA (3)
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Notes:

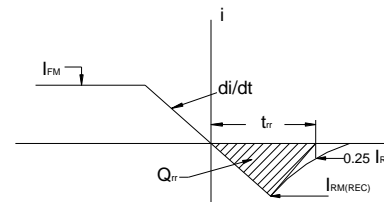
All ratings are specified for T<sub>j</sub>=25 °C unless otherwise stated.

(1) All voltage ratings are specified for an applied 50Hz/60Hz sinusoidal waveform over the temperature range 0 to +160°C.

(2) 10 msec. max. pulse width

(3) Maximum value for T<sub>j</sub> = 160°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>		5800		A	Sinewave, 180°, T <sub>c</sub> = 90°C
RMS forward current	I <sub>FRMS</sub>		9106		A	Nominal value
Peak one cycle surge (non repetitive) current	I <sub>FSM</sub>		81200		A	10 msec (50Hz), sinusoidal wave-shape, 180° conduction, T <sub>j</sub> = 160 °C
I square t	I <sup>2</sup> t		3.3 × 10 <sup>7</sup>		A <sup>2</sup> s	10 msec
Peak forward voltage	V <sub>FM</sub>		1.20		V	I <sub>FM</sub> = 5000A; T <sub>j</sub> = 25°C
Threshold voltage	V <sub>FO</sub>		0.78		V	T <sub>j</sub> = 160°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>		0.08		mΩ	T <sub>j</sub> = 160°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>jmax</sub>
Reverse Recovery Charge (4)	Q <sub>rr</sub>			7000	μC	I <sub>FM</sub> = 500 A; di/dt = -10 A/s; T <sub>jmax</sub>
Reverse Recovery Time (4)	t <sub>rr</sub>				μs	I <sub>FM</sub> = 500 A; di/dt = -10 A/s; T <sub>jmax</sub>

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	$T_j$	-40	+160		°C	
Storage temperature	$T_{stg}$	-40	+160		°C	
Thermal resistance - junction to case	$R_{\Theta(j-c)}$		0.006		°C/W	Double sided cooled
Thermal resistance - case to heatsink	$R_{\Theta(c-s)}$		0.0015		°C/W	Double sided cooled
Mounting force	P	65	85	80	kN	
Weight	W			1.9	kg.	

\* Mounting surfaces smooth, flat and greaseless

**CASE OUTLINE AND DIMENSIONS**

