ZP2100- RECTIFIER DIODE

Jiangsu Yangjie Runau Semiconductor Co.,Ltd **4600-5200V_{RRM}**

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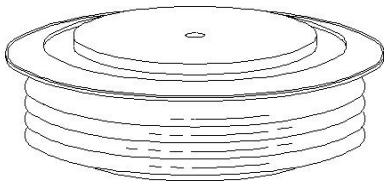
GENERAL PURPOSE HIGH POWER STANDARD RECTIFIER

Features:

- **. All Diffused Structure**
- **. High Surge rating**
- **. Blocking capability up to 5200 volts**
- **. Ceramic Housing Hermetic Package**
- **. Pressure Assembled Device**

ZT80cT



ELECTRICAL CHARACTERISTICS AND RATINGS

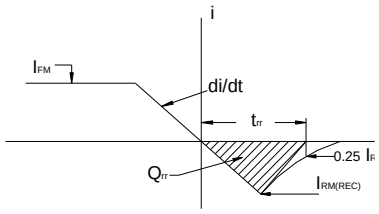
Reverse Blocking

Device Type	V_{RRM} (1)	V_{RSM} (1)
ZP2100-46	4600	4800
ZP2100-48	4800	5000
ZP2100-50	5000	5200
ZP2100-52	5200	5400

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

Repetitive peak reverse leakage	I_{RRM}	5 mA 100 mA (3)

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



REVERSE RECOVERY CHARACTERIST

Conducting - on state

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Average forward current	$I_{F(AV)}$		2100		A	Sinewave, 180º , Tc =100℃
RMS forward current	I_{FRMS}		3297		A	Nominal value
Peak one cycle surge (non repetitive) current	I_{FSM}		31500		A	10 msec (50Hz), sinusoidal wave-shape, 180º conduction, Tj = 150 ℃
I square t	I^2t		5×10^6		A^2s	10 msec
Peak forward voltage	V_{FM}		1.60		V	I_{FM}= 3000A;Tj =25ºC
Threshold voltage	V_{FO}		0.90		V	Tj=150ºC,I=0.5 π $I_{F(AV)}$ to 1.5 π $I_{F(AV)}$
Slope resistance	r_F		0.15		mΩ	Tj=150ºC,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}			6000	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 ZP2100-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	$R_{\Theta (j-c)}$		0.010		°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