

ZP2100- RECTIFIER DIODE

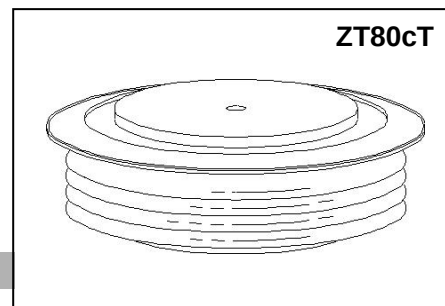
Shanghai Sunco Electronics Co., Ltd.

4600-5200V_{RRM}

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



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:

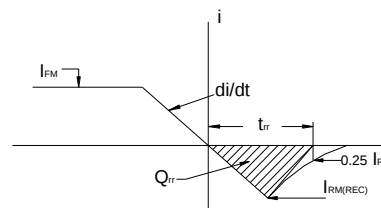
All ratings are specified for T_j=25 °C unless otherwise stated.

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

(2) 10 msec. max. pulse width

(3) Maximum value for T_j = 150 °C.

(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, 180°, T _c =100 °C
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, 180° conduction, T _j = 150 °C
I square t	I ² t		5 × 10 ⁶		A ² s	10 msec
Peak forward voltage	V _{FM}		1.60		V	I _{FM} = 3000A;T _j =25°C
Threshold voltage	V _{FO}		0.90		V	T _j =150°C,I=0.5 π I _{F(AV)} to 1.5 π I _{F(AV)}
Slope resistance	r _F		0.15		mΩ	T _j =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;T _{jmax}
Reverse Recovery Charge (4)	Q _{rr}			6000	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	+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