ZP600-POWER THYRISTOR

Jiangsu Yangjie Runau Semiconductor Co.,Ltd **6800-8500V$_{DRM}$**

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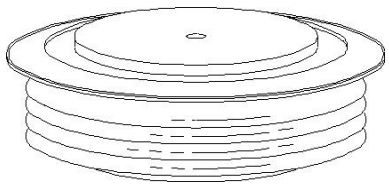
GENERAL PURPOSE HIGH POWER STANDARD RECTIFIER

Features:

. **All diffused structure**
. **High surge rating**
. **Blocking capability up to 8500 volts**
. **Ceramic housing hermetic package**
. **Pressure assembled device**

ZT55dT



ELECTRICAL CHARACTERISTICS AND RATINGS

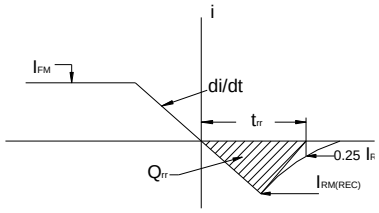
Reverse Blocking

Device Type	V_{RRM} (1)	V_{RSM} (1)
ZP600-68	6800	7000
ZP600-70	7000	7200
ZP600-76	7600	7800
ZP600-80	8000	8200
ZP600-85	8500	8700

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

Repetitive peak reverse leakage current	I_{RRM}	2 mA 30 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 +125 ºC.
(2) 10 msec. max. pulse width
(3) Maximum value for Tj = 125 ºC.
(4) See parameter definition below :



REVERSE RECOVERY CHARACTERIST

Conducting - on state

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Average forward current	$I_{F(AV)}$		600		A	Sinewave 180º, Tc =70℃
RMS forward current	I_{FRMS}		942		A	Nominal value
Peak one cycle surge (non repetitive) current	I_{FSM}		8400		A	10 msec (50Hz), sinusoidal wave-shape, 180º conduction, Tj = 125 ℃
I square t	I^2t		3.6×10^5		A^2s	10 msec
Peak forward voltage	V_{FM}		1.65		V	I_{FM}= 1000A;Tj =25ºC
Threshold voltage	V_{FO}		1.12		V	Tj=125ºC,I=0.5 π $I_{F(AV)}$ to 1.5 π $I_{F(AV)}$
Slope resistance	r_F		0.42		mΩ	Tj=125ºC,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}				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 — ZP600-Rectifier Diode

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	T_j	-40	+125		°C	
Storage temperature	T_{stg}	-40	+125		°C	
Thermal resistance - junction to case	$R_{\Theta (j-c)}$		0.022		°C/W	Double sided cooled
Thermal resistance - case to heatsink	$R_{\Theta (c-s)}$		0.005		°C/W	Double sided cooled
Mounting force	P			20	kN	
Weight	W			0.65	kg.	

* Mounting surfaces smooth, flat and greaseless

CASE OUTLINE AND DIMENSIONS