ZK400-RECTIFIER DIODE

Jiangsu Yangjie Runau Semiconductor Co.,Ltd

1000-1800 V_{RRM}

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FAST RECOVERY RECTIFIER DIODE

Features:

ZT30aT

- **All diffused structure**
- **High surge rating**
- **Blocking capability up to 1800 volts**
- **Soft recovery**
- **Ceramic housing hermetic package**
- **Pressure assembled device**

ELECTRICAL CHARACTERISTICS AND RATINGS

Reverse Blocking

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

Repetitive peak reverse leakage current	I_{RRM}	15 mA 20 mA (3)

Conducting - on state

Parameter	**Symbol**	**Min.**	**Max.**	**Typ.**	**Units**	**Conditions**
Average forward current	$I_{F(AV)}$		400		A	Sinewave180º,Tc =70
RMS forward current	I_{FRMS}		628		A	
Peak one cycle surge (non repetitive) current	I_{FSM}		6000		A	10 msec (50Hz), sinusoidal wave-shape, 180º conduction, Tj = 125
I square t	I^2t		180000		A^2s	8.3 msec and 10.0 msec
Peak forward voltage	V_{FM}		2.30		V	I_{FM}= 1200A; Duty cycle 0.01%
Reverse Recovery Current (4)	$I_{RM(REC)}$		*		A	I_{FM} = 1000 A; dIF/dt = 10 A/ s;Tjmax
Reverse Recovery Charge (4)	Q_{rr}		*		μC	I_{FM} = 1000 A; dIF/dt = 10 A/ s;Tjmax
Reverse Recovery Time (4)	t_{rr}		4		μs	I_{FM} = 1000 A; dIF/dt = 10 A/ s;Tjmax

* For guaranteed maximum values, contact factory

THERMAL AND MECHANICAL CHARACTERISTICS

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	T_j	-40	+125		ºC	
Storage temperature	T_{stg}	-40	+140		ºC	
Thermal resistance - junction to case	$R_{\Theta(j-c)}$	0.045 (1)	0.055 (2)		ºC/W	Double sided cooled (1) @ 2000 lb.; (2) @800 lb.
Thermal resistance - junction to case	$R_{\Theta(j-c)}$	0.090 (1)	0.110 (2)		ºC/W	