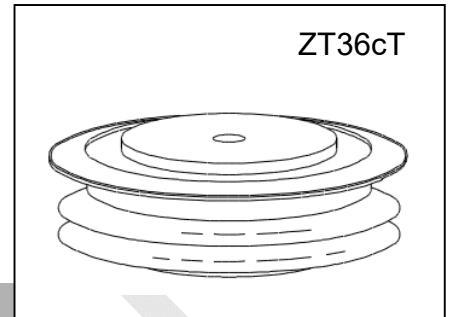




FAST RECOVERY RECTIFIER

Features:

- . All diffused structure
- . High surge rating
- . Blocking capability up to 3000 volts
- . Soft recovery
- . Ceramic housing hermetic package
- . Pressure assembled device



ELECTRICAL CHARACTERISTICS AND RATINGS

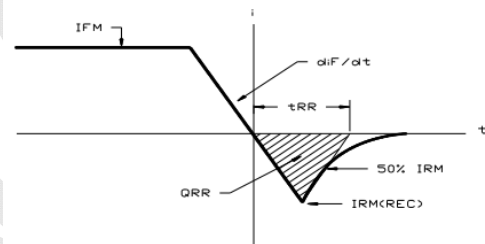
Reverse Blocking

Device Type	V_{RRM} (1)	V_{RSM} (1)
ZK400-20	2000	2200
ZK400-22	2200	2400
ZK400-24	2400	2600
ZK400-26	2600	2800
ZK400-28	2800	3000
ZK400-30	3000	3200

Notes:

All ratings are specified for $T_j=25^\circ\text{C}$, unless otherwise stated

- (1) All voltage ratings are specified for an applied 50Hz/60Hz sinusoidal waveform over the temperature range -40 to $+125^\circ\text{C}$.
- (2) 10 msec. max. pulse width
- (3) Maximum value for $T_j = 125^\circ\text{C}$.
- (4) See parameter definition below :



REVERSE RECOVERY CHARACTERISTIC

V_{RRM} = Repetitive peak reverse voltage

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

Repetitive peak reverse current	I_{RRM}	10 mA 15 mA (3)
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Conducting - on state

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Average forward current	$I_{F(AV)}$		400		A	Sinewave 180° , $T_c = 70^\circ\text{C}$
RMS forward current	I_{FRMS}		628		A	
Peak one cycle surge (non repetitive) current	I_{FSM}		6400		A	10 msec (50Hz), sinusoidal wave-shape, 180° conduction, $T_j = 125^\circ\text{C}$
I square t	I^2t		2.0×10^5		A^2s	8.3 msec and 10.0 msec
Peak forward voltage	V_{FM}		2.40		V	$I_{FM} = 1200\text{A}$; Duty cycle $\leq 0.01\%$
Reverse Recovery Current (4)	$I_{RM(REC)}$		*		A	$I_{FM} = 1000\text{A}$; $dI_F/dt = 10\text{ A}/\mu\text{s}$; $T_j \text{max}$
Reverse Recovery Charge (4)	Q_{rr}		*		μC	$I_{FM} = 1000\text{A}$; $dI_F/dt = 10\text{ A}/\mu\text{s}$; $T_j \text{max}$
Reverse Recovery Time (4)	t_{rr}		8		μs	$I_{FM} = 1000\text{A}$; $dI_F/dt = 10\text{ A}/\mu\text{s}$; $T_j \text{max}$

* For guaranteed maximum values, contact factory

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	T_j	-40	+125		°C	
Storage temperature	T_{stg}	-40	+140		°C	
Thermal resistance - junction to case	$R_{\Theta(j-c)}$	0.045 (1)	0.055 (2)		°C/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)		°C/W	Single sided cooled (1) @ 2000 lb.; (2) @ 800 lb.
Thermal resistance - case to heatsink	$R_{\Theta(c-s)}$		0.010 0.020		°C/W	Double sided cooled * Single sided cooled *
Mounting force	P			13	kN	
Weight	W			200	g	

* Mounting surfaces smooth, flat and greaseless

CASE OUTLINE AND DIMENSIONS

