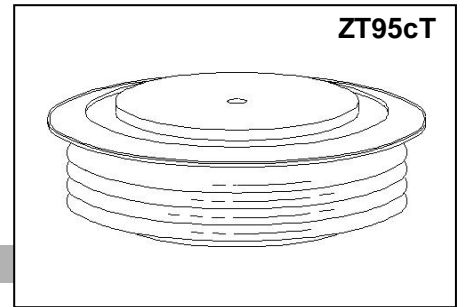




GENERAL PURPOSE HIGH POWER STANDARD RECTIFIER

Features:

- . All Diffused Structure
- . High Surge rating
- . Blocking capability up to 4500 volts
- . Ceramic Housing Hermetic Package
- . Pressure Assembled Device



ELECTRICAL CHARACTERISTICS AND RATINGS

Reverse Blocking

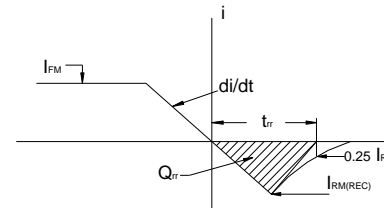
Device Type	V _{RRM} (1)	V _{RSM} (1)
ZP4000-36	3600	3800
ZP4000-38	3800	4000
ZP4000-40	4000	4200
ZP4000-42	4200	4400
ZP4000-45	4500	4700

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

Repetitive peak reverse leakage	I _{RRM}	5 mA 200 mA (3)
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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 +160°C.
 - (2) 10 msec. max. pulse width
 - (3) Maximum value for T_j = 160°C.
 - (4) See parameter definition below:



REVERSE RECOVERY CHARACTERIST

Conducting - on state

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Average value of on-state current	I _{F(AV)}		4000		A	Sinewave, 180°, T _c = 100°C
RMS value of on-state current	I _{FRMS}		6280		A	Nominal value
Peak one cycle surge (non repetitive) current	I _{FSM}		60000		A	10 msec (50Hz), sinusoidal wave-shape, 180° conduction, T _j = 160 °C
I square t	I ² t		1.8 × 10 ⁷		A ² s	10 msec
Peak on-state voltage	V _{FM}		1.45		V	I _{FM} = 5000A; T _j = 25°C
Threshold voltage	V _{FO}		0.85		V	T _j = 160°C, I = 0.5 π I _{F(AV)} to 1.5 π I _{F(AV)}
Slope resistance	r _F		0.09		mΩ	T _j = 160°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	+160		°C	
Storage temperature	T_{stg}	-40	+160		°C	
Thermal resistance - junction to case	$R_{\Theta(j-c)}$		0.008		°C/W	Double sided cooled
Thermal resistance - case to heatsink	$R_{\Theta(c-s)}$		0.002		°C/W	Double sided cooled
Mounting force	P	55	65	60	kN	
Weight	W			1.40	kg.	

* Mounting surfaces smooth, flat and greaseless

CASE OUTLINE AND DIMENSIONS

