



SOFT FAST RECOVERY RECTIFIER DIODE

Features:

- . All diffused structure
- . Fast Switching Performance
- . Blocking capability up to 2000 volts
- . Soft reverse recovery
- . Rugged ceramic hermetic package
- . Pressure assembled device

ZT40cT



ELECTRICAL CHARACTERISTICS AND RATINGS

Reverse Blocking

Device Type	V _{RRM} (1)	V _{RSM} (1)
YA696PE	1500	1600
YA696PM	1600	1700
YA696PS	1700	1800
YA696PN	1800	1900
YA696PT	1900	2000
YA696L	2000	2100

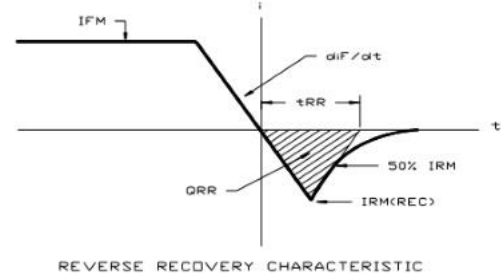
V_{RRM} = Repetitive peak reverse voltageV_{RSM} = Non repetitive peak reverse voltage (2)

Repetitive peak reverse leakage current	I _{RRM}	20 mA 50 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 -40 to +125°C.
- (2) 10 msec. max. pulse width
- (3) Maximum value for T_j = 125 °C.
- (4) See parameter definition below :



Conducting - on state

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Average forward current	I _{F(AV)}		1000		A	Sinewave 180°, T _c = 78°C
RMS forward current	I _{FRMS}		1600		A	Nominal value
Peak one cycle surge (non repetitive) current	I _{FSM}		14000		A	10 msec (50Hz), sinusoidal wave-shape, 180° conduction, T _j = 125 °C
I square t	I ² t		9.8x10 ⁵		A ² s	8.3 msec and 10.0 msec
Peak forward voltage	V _{FM}		1.9		V	I _{FM} = 1000A; Duty cycle ≤ 0.01%; T _j = 25°C
Reverse Recovery Current (4)	I _{RM(REC)}		80		A	I _{FM} = 1000 A; dI _F /dt = 25 A/μs; T _{jmax}
Reverse Recovery Charge (4)	Q _{rr}		*	200	μC	I _{FM} = 1000 A; dI _F /dt = 25 A/s; T _{jmax}
Reverse Recovery Time (4)	t _{rr}		*		μs	

* 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	+125		°C	
Thermal resistance - junction to case	$R_{\theta(j-c)}$		0.043 0.086		°C/W	Double sided cooled Single sided cooled
Thermal resistance - case to heatsink	$R_{\theta(c-s)}$		0.015 0.030		°C/W	Double sided cooled * Single sided cooled*
Mounting force	P			15	kN	
Weight	W			0.26	kg.	

* Mounting surfaces smooth, flat and greaseless

CASE OUTLINE AND DIMENSIONS

