



SOFT FAST RECOVERY RECTIFIER DIODE

Features:

- . All diffused structure
- . High surge rating
- . Blocking capability up to 2500 volts
- . Soft reverse recovery
- . Rugged ceramic hermetic package
- . Pressure assembled device

ZT55cT



ELECTRICAL CHARACTERISTICS AND RATINGS

Reverse Blocking

Device Type	V _{RRM} (1)	V _{RSM} (1)
YA796PE	1500	1700
YA796PN	1800	2000
YA796L	2000	2000
YA796LB	2200	2400
YA796LE	2500	2700

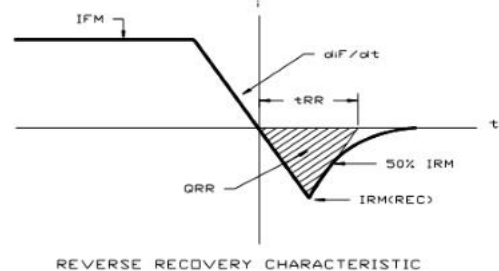
V_{RRM} = Repetitive peak reverse voltageV_{RSM} = Non repetitive peak reverse voltage (2)

Repetitive peak reverse leakage current	I _{RRM}	10 mA 75 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)}		925		A	Sinewave 180°, T _c = 70°C
RMS forward current	I _{FRMS}		1450		A	Nominal value
Peak one cycle surge (non repetitive) current	I _{FSM}		13800		A	10 msec (50Hz), sinusoidal wave-shape, 180° conduction, T _j = 125 °C
I square t	I ² t		9.5x10 ⁵		A ² s	8.3 msec and 10.0 msec
Peak forward voltage	V _{FM}		1.75		V	I _{FM} = 1000A; Duty cycle ≤0.01%; T _j = 25°C
Reverse Recovery Current (4)	I _{RM(REC)}		45		A	I _{FM} = 1000 A; dI _F /dt = 10 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	+140		°C	
Thermal resistance - junction to case	$R_{\theta(j-c)}$		0.023 0.046		°C/W	Double sided cooled Single sided cooled
Thermal resistance - case to heatsink	$R_{\theta(c-s)}$		0.010 0.020		°C/W	Double sided cooled * Single sided cooled*
Mounting force	P			25	kN	
Weight	W			0.46	kg.	

* Mounting surfaces smooth, flat and greaseless

CASE OUTLINE AND DIMENSIONS

