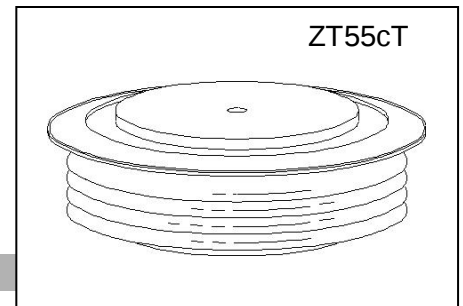




STANDARD DIODE WITH HIGH JUNCTION TEMPERATURE

Features:

- . All diffused structure, High surge rating
- . Blocking capability up to 4600 volts
- . Soft reverse recovery
- . Rugged ceramic hermetic package
- . Pressure assembled device



ELECTRICAL CHARACTERISTICS AND RATINGS

Reverse Blocking

Device Type	V _{RRM} (1)	V _{RSM} (1)
YA780CE	3500	3500
YA780CM	3600	3600
YA780CN	3800	3800
YA780CT	3900	3900
YA780DP	4000	4000
YA780DB	4200	4200
YA780DM	4600	4600

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

Repetitive peak reverse leakage current	I _{RRM}	10 mA 50 mA (3)
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Notes:

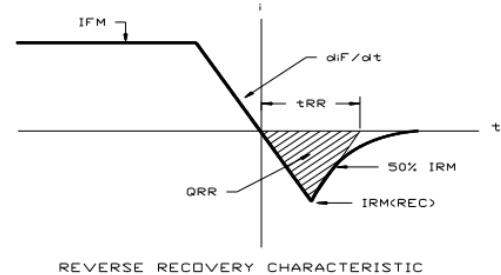
All ratings are specified for T_j=25 °C, unless otherwise stated

(1) All voltage ratings are specified for an applied 50Hz/60Hz sinusoidal waveform over the temperature range -40 to +170°C.

(2) 10 msec. max. pulse width

(3) Maximum value for T_j = 170°C.

(4) See parameter definition below :



Conducting - on state

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Average forward current	I _{F(AV)}		1500		A	Sinewave 180°, T _c = 100°C
RMS forward current	I _{FRMS}		2300		A	Nominal value
Peak one cycle surge (non repetitive) current	I _{FSM}		20000 18000		A	8.3 msec (60Hz), sinusoidal wave-shape, 180° conduction, T _j = 170°C 10 msec (50Hz), sinusoidal wave-shape, 180° conduction, T _j = 170°C
I square t	I ² t		1.6x10 ⁶		A ² s	8.3 msec and 10.0 msec
Peak forward voltage	V _{FM}		1.15		V	I _{FM} = 1000A; Duty cycle ≤ 0.01%; T _j = 160°C
Reverse Recovery Current (4)	I _{RM(REC)}		250		A	I _{FM} = 1000 A; dI _F /dt = 10 A/μs; T _j = 160°C
Reverse Recovery Charge (4)	Q _{rr}		*		μC	
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	+170		°C	
Storage temperature	T_{stg}	-40	+170		°C	
Thermal resistance - junction to case	$R_{\theta(j-c)}$		0.022 0.044		°C/W	Double sided cooled Single sided cooled
Thermal resistance - case to heatsink	$R_{\theta(c-s)}$		0.005 0.010		°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

