YA801 - RECTIFIER DIODE

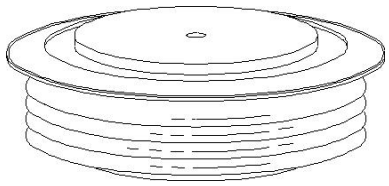
Jiangsu Yangjie Runau Semiconductor Co.,Ltd **2800-3200 V_{RRM}**

STANDARD DIODE WITH HIGH JUNCTION TEMPERATURE

Features:

- **. All diffused structure, High surge rating**
- **. Blocking capability up to 3200 volts**
- **. Soft reverse recovery**
- **. Rugged ceramic hermetic package**
- **. Pressure assembled device**

ZT80cT



ELECTRICAL CHARACTERISTICS AND RATINGS

Reverse Blocking

Device Type	V_{RRM} (1)	V_{RSM} (1)
YA801LN	2800	3000
YA801LT	2900	3100
YA801CP	3000	3200
YA801CA	3100	3300
YA801CB	3200	3400

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

Repetitive peak reverse leakage current	I_{RRM}	10 mA 50 mA (3)

Notes:
All ratings are specified for Tj=25 ºC, unless otherwise stated
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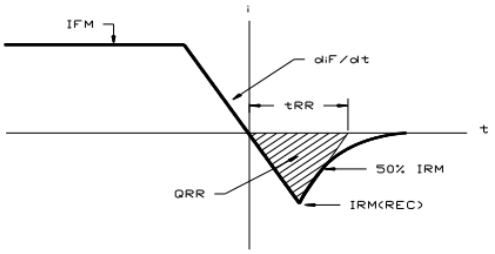
(1) All voltage ratings are specified for an applied 50Hz/60zHz sinusoidal waveform over the temperature range -40 to +175ºC.
(2) 10 msec. max. pulse width
(3) Maximum value for Tj = 175ºC.
(4) See parameter definition below :



REVERSE RECOVERY CHARACTERISTIC

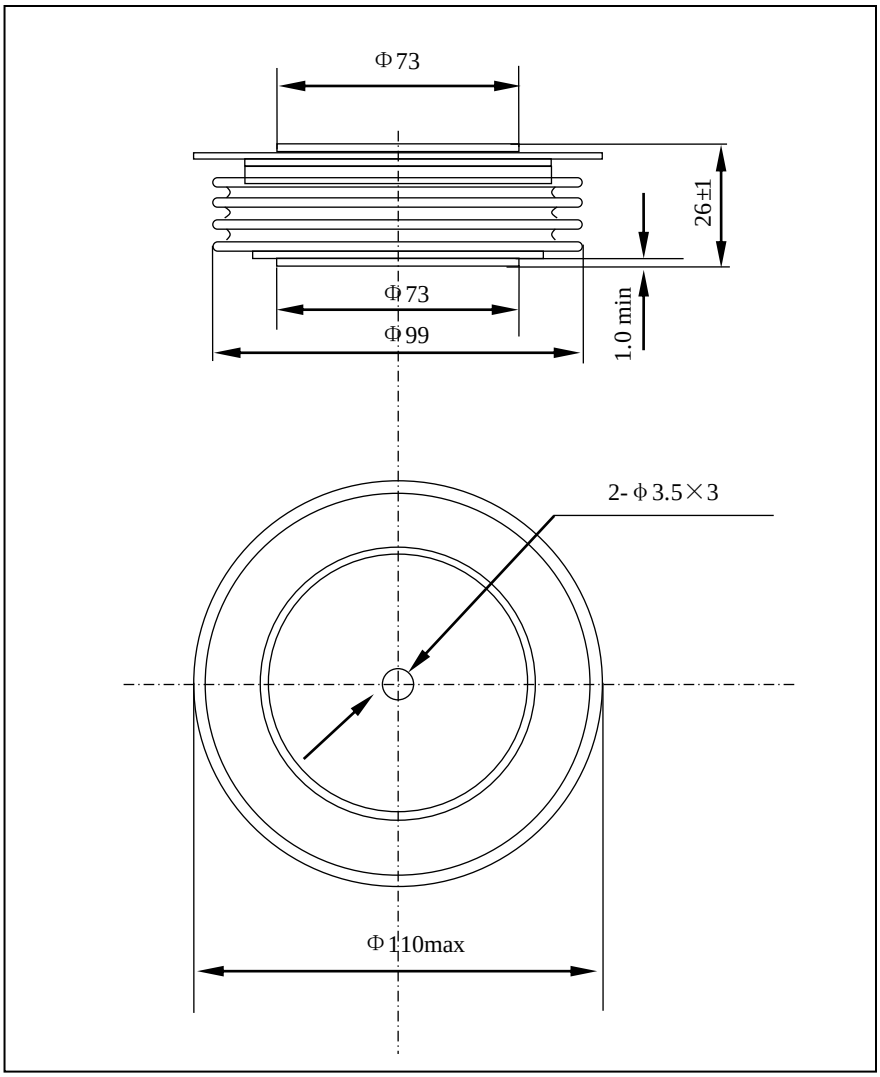
Conducting - on state

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Average forward current	$I_{F(AV)}$		3900		A	Sinewave180º,Tc =90℃
RMS forward current	I_{FRMS}		6123		A	Nominal value
Peak one cycle surge (non repetitive) current	I_{FSM}		60000 57000		A	8.3 msec (60Hz), sinusoidal wave-shape, 180º conduction, Tj = 160ºC 10 msec (50Hz), sinusoidal wave-shape, 180º conduction, Tj = 160℃
I square t	I^2t		$1.6x10^7$		A^2s	8.3 msec and 10.0 msec
Peak forward voltage	V_{FM}		1.05		V	I_{FM}= 2000A; Duty cycle ≤0.01%;Tj =150℃
Reverse Recovery Current (4)	$I_{RM(REC)}$		310		A	dI_F/dt = 10 A/μs; Tj=175℃
Reverse Recovery Charge (4)	Q_{rr}		*		μC	
Reverse Recovery Time (4)	t_{rr}		*		μs	

* For guaranteed maximum values, contact factory

THERMAL AND MECHANICAL CHARACTERISTICS — YA801 - RECTIFIER DIODE

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	T_j	-40	+175		°C	
Storage temperature	T_{stg}	-40	+175		°C	
Thermal resistance - junction to case	$R_{\Theta(j-c)}$		0.010 0.020		°C/W	Double sided cooled Single sided cooled
Thermal resistance - case to heatsink	$R_{\Theta(c-s)}$		0.003 0.006		°C/W	Double sided cooled * Single sided cooled*
Mounting force	P			35	kN	
Weight	W			1.1	kg.	

* Mounting surfaces smooth, flat and greaseless

CASE OUTLINE AND DIMENSIONS