



**R A E**

Runau Electronics(Yangzhou)Manufacturing Co.,Ltd

**YA696-Fast Recovery Rectifier**

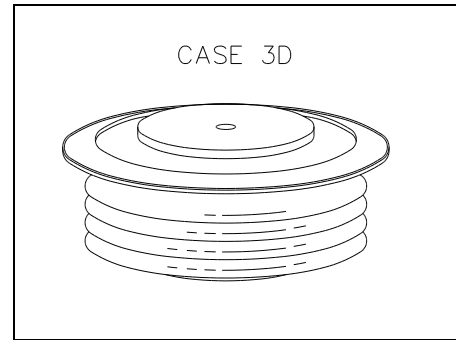
1500 - 2000  $V_{RRM}$ ; 1000 A avg

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**HIGH POWER FAST RECOVERY RECTIFIER**

**Features:**

- . All Diffused Structure
- . Fast Switching Performance
- . Blocking capability up to 2000 volts
- . Soft Reverse Recovery
- . Rugged Ceramic Hermetic Package
- . Pressure Assembled Device



**ELECTRICAL CHARACTERISTICS AND RATINGS**

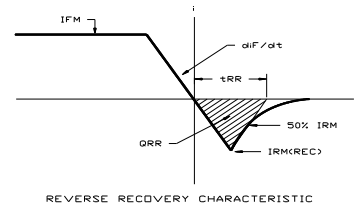
**Reverse Blocking**

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

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

Repetitive peak reverse leakage	$I_{RRM}$	20 mA 50 mA (3)
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Notes:  
 All ratings are specified for  $T_j=25^\circ\text{C}$  unless otherwise stated.  
 (1) All voltage ratings are specified for an applied 50Hz/60Hz sinusoidal waveform over the temperature range  $-40$  to  $+125^\circ\text{C}$ .  
 (2) 10 msec. max. pulse width  
 (3) Maximum value for  $T_j = 125^\circ\text{C}$ .  
 (4) See parameter definition below :



REVERSE RECOVERY CHARACTERISTIC

**Conducting - on state**

Parameter	Symbol	Min.	Max.	Typ	Units	Conditions
Average value of on-state current	$I_{F(AV)}$		1000		A	Sinewave, 180° conduction, $T_c = 78^\circ\text{C}$
RMS value of on-state current	$I_{FRMS}$		1600		A	Nominal value
Peak one cycle surge (non repetitive) current	$I_{FSM}$		14000 13000		A A	8.3 msec (60Hz), sinusoidal wave-shape, 180° conduction, $T_j = 125^\circ\text{C}$ 10.0 msec (50Hz), sinusoidal wave-shape, 180° conduction, $T_j = 125^\circ\text{C}$
I square t	$I^2t$		815000		$\text{A}^2\text{s}$	8.3 msec and 10.0 msec
Peak on-state voltage	$V_{FM}$		3.00		V	$I_{FM} = 3200$ A; Duty cycle $\leq 0.01\%$ ; $T_j$ max
Reverse Recovery Current (4)	$I_{RM(REC)}$		80		A	$I_{FM} = 1000$ A; $dI_F/dt = 25$ A/ $\mu\text{s}$ ; $T_j$ max
Reverse Recovery Charge (4)	$Q_{rr}$		*	200	$\mu\text{C}$	$I_{FM} = 1000$ A; $dI_F/dt = 25$ A/ $\mu\text{s}$ ; $T_j$ max
Reverse Recovery Time (4)	$t_{RR}$		*		$\mu\text{s}$	

\* 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 sink	$R_{\Theta(c-s)}$		.015 .030		°C/W	Double sided cooled * Single sided cooled *
Mounting force	P	3500 15.5	4500 19.9		lb. kN	
Weight	W			9 225	oz. g	

\* Mounting surfaces smooth, flat and greased

**CASE OUTLINE AND DIMENSIONS**

