

# TDHP2R7B3000



## APPLICATIONS

- Wind Turbine Pitch
- Industrial Backup Power
- Rail Transit
- Renewable Energy Systems
- UPS and Telecommunication Systems

## FEATURES AND ADVANTAGES

- One Million Cycles Lifetime
- Good Low Temperature Performance
- Ultra High Power Density
- Ultra Low Internal Resistance

### Electrical Performance

Capacity	Nominal capacity	3000F	
	Minimum	3000F	
Voltage	Nominal voltage	2.7V DC	
	Surge voltage	2.85V DC	
Internal resistance	ESR ( typical value )	0.22mΩ	
	Maximum DC resistance	0.28mΩ	
Electric current	Maximum leakage current	18mA	
	Maximum continuous current	ΔT=15°C	131A
		ΔT=40°C	211A
Maximum peak current	2000A		
Energy	Stored energy E <sub>stored</sub>	3.04Wh	
	Energy density E <sub>max</sub>	6.0Wh/kg	
Power density	Power density P <sub>d</sub>	5900W/kg	

### Temperature

Temperature	Operating Temperature Range	-40 ~ +65°C	
Characteristics	Storage Temperature Range	-40 ~ +70°C	

### Safety

Short circuit current	9300A		
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### Service Lifetime

Under Normal Temperature	Operated over 10 years under 25°C at rated voltage		
	Change in capacity	≤20%	
	Change in inter resistance	≤100%	
Under High temperature	After operated for 1500h under 65°C at rated voltage		
	Change in capacity	≤20%	
	Change in inter resistance	≤100%	
Storage life	4 years ( 25°C , uncharged )		
Cycling test	1 million cycles between rated voltage and half rated voltage at 25°C with constant current		
	Change in capacity	≤20%	
	Change in inter resistance	≤100%	

### Physical Characteristics

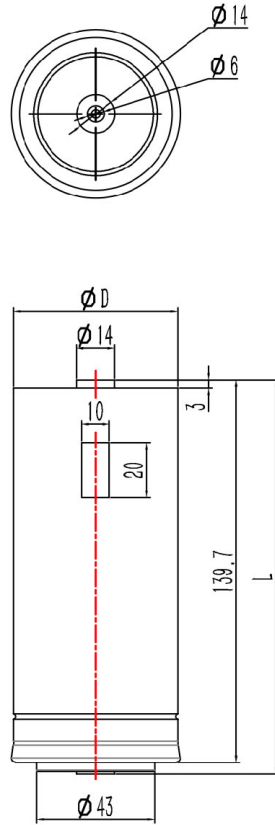
Mechanical vibration	Operation Vibration	IEC60068-2-6、SAE J380	
	Impact	IEC60068-2-27、SAE J2464	

### Thermal performance

Thermal	3.2°C/W		
Thermal	600J/°C		

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Outline Drawing (For Reference)



## Dimensions

Weight	520g	
Size	L ( Max. )	142.2mm
	D ( Max. )	61.0mm

## NOTE

1. Measure capacitance and DC internal resistance at 25 °C under specified test current;
2. Surge voltage is non-repeatable and duration cannot exceed 1s ;
3. After rated voltage for 72 hours, the initial leakage current can be higher ;

4. According to IEC62391-2,  $P_d = \frac{0.12V^2}{ESR_{DC} \times mass}$

5.  $P_{max} = \frac{0.25V^2}{ESR_{DC} \times mass}$

6.  $E_{max} = \frac{0.5CV^2}{3600 \times mass}$

7.  $E_{stored} = \frac{0.5CV^2}{3600}$

8.  $\Delta T = I_{RMS}^2 \times EST \times R_{ca}$