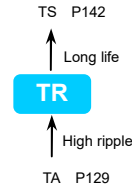


# TR 系列 SERIES



- 与 TA 系列相比纹波电流提高 5~15%。  
Compared with the TA series, ripple current is increased by 5~15%.
- 保证 85℃、3000 小时寿命。(叠加纹波电流)  
Endurance with ripple current: 3000 hours at 85℃.
- 应用: 变频器和不间断电源  
Applications: Frequency converters and Uninterruptible power supplies



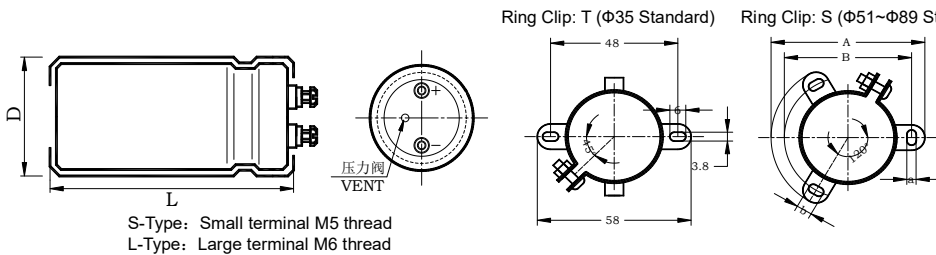
## 规格表 SPECIFICATIONS

项目 Items	特性 Characteristics								
工作温度范围 Operating Temperature Range	-40~+85℃								
额定工作电压范围 Rated Working Voltage Range	350~450V								
静电容量范围 Capacitance Range	1000~15000 µF								
静电容量允许偏差 Capacitance Tolerance	±20% (20℃, 120Hz)								
损耗角正切值 Dissipation Factor (MAX) 20℃, 120Hz	<table border="1"> <tr> <td>U<sub>R</sub>(V)</td> <td>350</td> <td>400</td> <td>450</td> </tr> <tr> <td>tanδ</td> <td colspan="3">0.15</td> </tr> </table>	U <sub>R</sub> (V)	350	400	450	tanδ	0.15		
U <sub>R</sub> (V)	350	400	450						
tanδ	0.15								
漏电流 Leakage Current (MAX)	I=0.01C <sub>R</sub> U <sub>R</sub> 或 5mA 取小者 (20℃, 施加额定电压 5 分钟后) I=0.01C <sub>R</sub> U <sub>R</sub> or 5mA whichever is minimum. (at 20℃, After 5 minutes application of rated voltage) I=漏电流 (µA)                      U <sub>R</sub> =额定电压 (V)                      C <sub>R</sub> =静电容量 (µF) Leakage Current                      Rated Voltage                      Rated Capacitance								

	使用寿命 Useful Life	负荷寿命 Load Life	耐久性特性 Endurance Test	高温无负荷特性 Shelf Life
产品寿命 Life Time	6000h	>65000h	3000h	1000h
漏电流 Leakage Current	≤规定值 ≤Specified value	≤规定值 ≤Specified value	≤规定值 ≤Specified value	≤规定值 ≤Specified value
损耗角正切值变化率 tanδ Change	≤规定值的 300% ≤300% of specified value	≤规定值的 200% ≤200% of specified value	≤规定值的 130% ≤130% of specified value	≤规定值的 150% ≤150% of specified value
静电容量变化率 Capacitance Change	初始值±30%以内 Within±30% of initial value	初始值±20%以内 Within±20% of initial value	初始值±10%以内 Within±10% of initial value	初始值±15%以内 Within±15% of initial value
施加条件 Condition 施加电压 Applied Voltage 施加纹波电流 Applied Ripple Current 环境温度 Applied Temperature 失效等级 Failure Rate Level	U <sub>R</sub> I <sub>R</sub> 85℃ ≤1% Failure rate	U <sub>R</sub> 1.2×I <sub>R</sub> 40℃ ≤1% Failure rate	U <sub>R</sub> I <sub>R</sub> 85℃ 0%	U <sub>R</sub> =0 I <sub>R</sub> =0 85℃ 0% Back up to 20℃ and placed more than 24 hours. U <sub>R</sub> to be applied for 60 min before measurement..

## 尺寸图 Dimensions

- 常用端子型式代码: Terminal Code



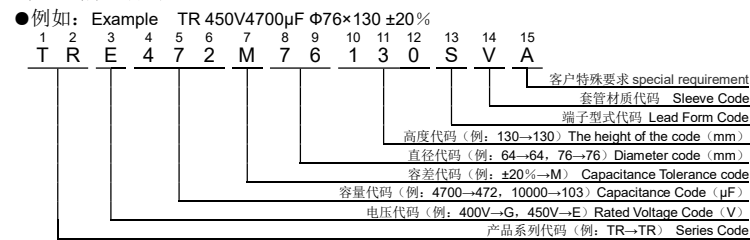
Ring Clip Dimensions:

ΦD	A	B	a	b
51	73.0	63.5	4.5	7
64	85.1	76.2	4.5	7
76	98.4	88.9	4.5	7
89	111.1	101.6	4.5	7

产品详细尺寸和公差请参考 P130  
For detailed dimension & tolerance, please refer to P130

- 记载以外的端子形状, 请另行咨询。Please consult to us for the terminal type not displayed in content.

## 产品编码体系 PART NUMBER SYSTEM



## 纹波电流修正系数 Rated Ripple Current Multiplies

●频率修正系数 Frequency coefficient					
频率 Frequency (Hz)	50(60)	100(120)	300	1k	≥10k
系数 Coefficient	0.80	1.00	1.10	1.20	1.30
●温度修正系数 Temperature coefficient					
温度 Temperature (℃)	+40	+60	+70	+85	
系数 Coefficient	2.40	1.87	1.45	1.00	

◆ 产品一览表 Standard Ratings

WV <sub>dc</sub> (Surge Voltage) (V)	Cap ( $\mu$ F)	Size D×L (mm)	tan $\delta$ 20°C 120Hz	ESR <sub>typ</sub> 20°C 120Hz m $\Omega$	Ripple Current 85°C 120Hz (Arms)	Catalog Part Number
350 (400)	1500	51×95	0.15	70.8	5.7	TRH152M51095□VA
	1800	51×95	0.15	59.0	6.4	TRH182M51095□VA
	2200	51×115	0.15	48.3	7.6	TRH222M51115□VA
	2700	51×130	0.15	39.3	8.9	TRH272M51130□VA
	3300	51×130	0.15	32.2	9.3	TRH332M51130□VA
	3900	64×115	0.15	27.2	11.6	TRH392M64115□VA
	4700	64×130	0.15	22.6	13.4	TRH472M64130□VA
	5600	76×115	0.15	19.0	14.5	TRH562M76115□VA
	6800	76×130	0.15	15.6	16.9	TRH682M76130□VA
	8200	76×155	0.15	12.9	21.2	TRH822M76155□VA
	10000	89×157	0.15	10.6	24.1	TRH103M89157□VA
	12000	89×157	0.15	8.8	26.4	TRH123M89157□VA
	15000	89×195	0.15	7.1	29.9	TRH153M89195□VA
	18000	89×235	0.15	5.9	37.4	TRH183M89235□VA
400 (450)	1000	51×80	0.15	82.3	4.8	TRG102M51080□VA
	1200	51×80	0.15	67.5	5.1	TRG122M51080□VA
	1500	51×95	0.15	57.5	6.3	TRG152M51095□VA
	1800	51×95	0.15	47.2	7.0	TRG182M51095□VA
	2200	51×115	0.15	34.8	8.0	TRG222M51115□VA
	2700	64×95	0.15	32.9	9.7	TRG272M64095□VA
	3300	64×115	0.15	31.0	11.4	TRG332M64115□VA
	3900	64×130	0.15	24.8	12.7	TRG392M64130□VA

WV <sub>dc</sub> (Surge Voltage) (V)	Cap ( $\mu$ F)	Size D×L (mm)	tan $\delta$ 20°C 120Hz	ESR <sub>typ</sub> 20°C 120Hz m $\Omega$	Ripple Current 85°C 120Hz (Arms)	Catalog Part Number
400 (450)	4700	76×115	0.15	22.6	14.6	TRG472M76115□VA
	5600	76×130	0.15	19.0	16.8	TRG562M76130□VA
	6800	76×155	0.15	15.4	20.2	TRG682M76155□VA
	8200	89×157	0.15	12.9	22.5	TRG822M89157□VA
	10000	89×157	0.15	10.6	24.9	TRG103M89157□VA
	12000	89×195	0.15	9.4	28.5	TRG123M89195□VA
	15000	89×235	0.15	8.0	33.1	TRG153M89235□VA
450 (500)	1000	51×80	0.15	82.3	4.9	TRE102M51080□VA
	1200	51×95	0.15	71.9	5.4	TRE122M51095□VA
	1500	51×115	0.15	58.4	7.2	TRE152M51115□VA
	1800	51×130	0.15	50.1	8.3	TRE182M51130□VA
	2200	64×95	0.15	42.8	9.0	TRE222M64095□VA
	2700	64×115	0.15	34.9	10.4	TRE272M64115□VA
	3300	64×130	0.15	29.8	12.1	TRE332M64130□VA
	3900	76×115	0.15	27.2	13.4	TRE392M76115□VA
	4700	76×130	0.15	22.6	15.5	TRE472M76130□VA
	5600	76×155	0.15	19.0	18.3	TRE562M76155□VA
	6800	89×157	0.15	15.6	20.9	TRE682M89157□VA
	8200	89×157	0.15	12.9	23.0	TRE822M89157□VA
	10000	89×195	0.15	11.3	27.2	TRE103M89195□VA
12000	89×235	0.15	9.4	32.5	TRE123M89235□VA	

\*产品编码中□内为产品端子引出型式代码  
\*Enter the appropriate terminal code

\*记载之外的体积，请另行咨询。  
\*Please ask for advice for other sizes.

\*铝电解电容器由于承受纹波电流而发热，随着温升而发生性能劣化。请在使用中降低产品承受的纹波电流。  
\*Aluminum electrolytic capacitor will emit heat when ripple current is applied, the performance will deteriorate when temp. rises. Please reduce the ripple current when using capacitor.