

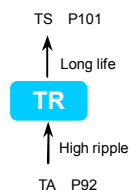
TR 系列 SERIES

- 与 TA 系列相比纹波电流提高 20~30%。
Compared with the TA series, ripple current is increased by 20~30%.
- 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

High Ripple

Ripple Load

RoHS



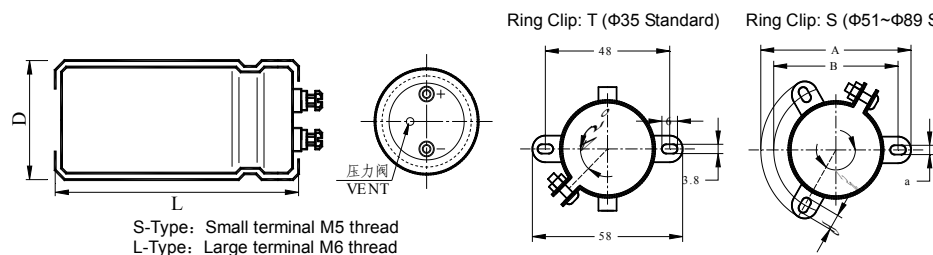
◆规格表 SPECIFICATIONS

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	400~450V								
静电容量范围 Capacitance Range	1000~15000 μ F								
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><tr><td>U_R(V)</td><td>400</td><td>450</td></tr><tr><td>tanδ</td><td colspan="2">0.15</td></tr></table>			U _R (V)	400	450	tanδ	0.15	
U _R (V)	400	450							
tanδ	0.15								
漏电流 Leakage Current (MAX)	I=0.01C _R U _R 或 5mA 取小者 (20℃, 施加额定电压 5 分钟后) I=0.01C _R U _R or 5mA whichever is minimum. (at 20℃, After 5 minutes application of rated voltage) I=漏电流 (μA) U _R =额定电压 (V) C _R =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 $\tan\delta$ 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_R I_R 85℃ ≤1% Failure rate	U_R $1.4 \times I_R$ 40℃ ≤1% Failure rate	U_R $I_R=0$ 85℃ 0%	$U_R=0$ $I_R=0$ 85℃ 0% Back up to 20℃ and placed more than 24 hours. U_R to be applied for 60 min before measurement..

◆尺寸图 Dimensions

- 常用端子型式代码: Terminal Code



S-Type: Small terminal M5 thread
L-Type: Large terminal M6 thread

Ring Clip: T (Φ35 Standard)

Ring Clip: S (Φ51~Φ89 Standard)

Ring Clip Dimensions:

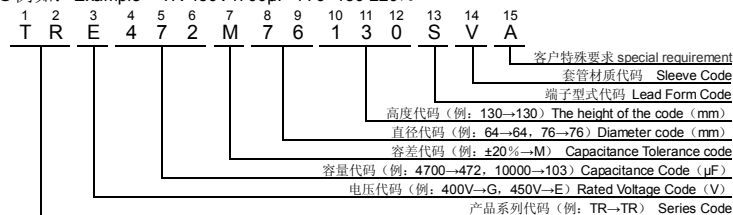
ΦD	A	B	a	b
51	73.0	63.5	4.5	7
64	85.1	76.2	4.5	7
76	98.4	88.9	4.5	7
89	111.1	101.6	4.5	7

产品详细尺寸和公差请参照 P90
For detailed dimension & tolerance, please refer to P90

- 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

- 例如: Example TR 450V4700μF Φ76×130 ±20%



◆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	1.25	1.50

●温度修正系数 Temperature coefficient

温度 Temperature (℃)	+40	+55	+70	+85
系数 Coefficient	2.70	2.00	1.70	1.00

TR SERIES

◆ 产品一览表 Standard Ratings

WV _{DC} (Surge Voltage) (V)	Cap (μ F)	Size D×L (mm)	$\tan\delta$ 20℃ 120Hz	Ripple Current 85℃ 120Hz (Arms)	Catalog Part Number
400 (450)	1000	51×80	0.15	4.8	TRG102M51080□VA
	1200	51×80	0.15	5.1	TRG122M51080□VA
	1500	51×95	0.15	6.3	TRG152M51095□VA
	1800	51×95	0.15	7.0	TRG182M51095□VA
	2200	51×115	0.15	8.0	TRG222M51115□VA
	2700	64×95	0.15	9.7	TRG272M64095□VA
	3300	64×115	0.15	11.4	TRG332M64115□VA
	3900	64×130	0.15	12.7	TRG392M64130□VA
	4700	76×115	0.15	14.6	TRG472M76115□VA
	5600	76×130	0.15	16.8	TRG562M76130□VA
	6800	76×155	0.15	20.2	TRG682M76155□VA
	8200	89×155	0.15	22.5	TRG822M89155□VA
	10000	89×155	0.15	24.9	TRG103M89155□VA
	12000	89×195	0.15	28.5	TRG123M89195□VA
	15000	89×235	0.15	33.1	TRG153M89235□VA

WV _{DC} (Surge Voltage) (V)	Cap (μ F)	Size D×L (mm)	$\tan\delta$ 20℃ 120Hz	Ripple Current 85℃ 120Hz (Arms)	Catalog Part Number
450 (500)	1000	51×80	0.15	4.9	TRE102M51080□VA
	1200	51×95	0.15	5.4	TRE122M51095□VA
	1500	51×115	0.15	7.2	TRE152M51115□VA
	1800	51×130	0.15	8.3	TRE182M51130□VA
	2200	64×95	0.15	9.0	TRE222M64095□VA
	2700	64×115	0.15	10.4	TRE272M64115□VA
	3300	64×130	0.15	12.1	TRE332M64130□VA
	3900	76×115	0.15	13.4	TRE392M76115□VA
	4700	76×130	0.15	15.5	TRE472M76130□VA
	5600	76×155	0.15	18.3	TRE562M76155□VA
	6800	89×155	0.15	20.9	TRE682M89155□VA
	8200	89×155	0.15	23.0	TRE822M89155□VA
	10000	89×195	0.15	27.2	TRE103M89195□VA
	12000	89×235	0.15	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 consult to us for the terminal type not displayed in content.

*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，每升高 5℃ 寿命减少一半。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. the useful life will be half of original life when temp rises every 5℃. Please reduce the ripple current when using capacitor.