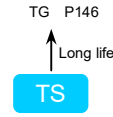


TS 系列 SERIES



- 全焊结构，确保可靠的电气接触性
All-welded construction ensures reliable electrical contact
- 高可靠性及高耐纹波电流能力
High reliability and high ripple current capability.
- 保证 85℃、5000 小时寿命（叠加纹波电流）
Endurance with ripple current: 5000 hours at 85℃.
- 应用：变频器、不间断电源、太阳能和风力发电设备
Applications: Frequency converters, Uninterruptible power supplies, Solar and Wind power generator



规格表 SPECIFICATIONS

项目 Items	特性 Characteristics					
工作温度范围 Operating Temperature Range	U _R		350~550V	600V		
	Operating Temperature Range		-40~+85℃	-25~+85℃		
额定工作电压范围 Rated Working Voltage Range	350~600V					
静电容量范围 Capacitance Range	1000~18000 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	U _R (V)	400	450	500	550	600
	tanδ	0.15		0.20		
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	10000h	>100000h	5000h	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 _R I _R 85℃ ≤1% Failure rate	U _R 1.2×I _R 40℃ ≤1% Failure rate	U _R I _R 85℃ 0%	U _R 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

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

Ring Clip: T (Φ35 Standard)

Ring Clip: S (Φ51~Φ89 Standard)

Ring Clip Dimensions:

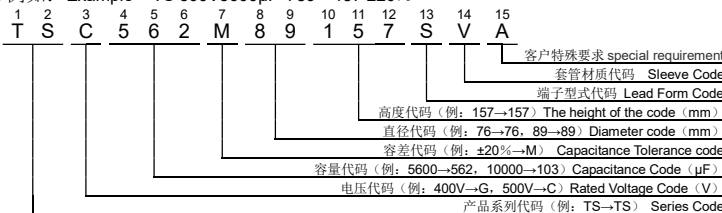
ΦD	A	B	a	b
51	73.0	63.5	4.5	7
64	85.1	76.2	4.5	7
76	98.4	88.9	4.5	7
89	111.1	101.6	4.5	7
100	127.0	115.0	6.2	8

产品详细尺寸和公差请参照 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

- 例如：Example TS 500V5600μF Φ89 × 157 ±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	1.30	1.40
● 温度修正系数 Temperature coefficient					
温度 Temperature (℃)	+40	+60	+85		
系数 Coefficient	1.89	1.67	1.00		

◆产品一览表 Standard Ratings

WV _{dc} (Surge Voltage) (V)	Cap (μF)	Size D×L (mm)	tanδ 20°C 120Hz	ESR _{typ} 20°C 120Hz mΩ	Ripple Current 85°C 120Hz (Arms)	Catalog Part Number
350 (400)	1200	51×80	0.15	66.3	5.5	TSH122M51080□VA
	1500	51×80	0.15	54.8	6.1	TSH152M51080□VA
	1800	51×95	0.15	42.8	7.4	TSH182M51095□VA
	2200	51×95	0.15	35.0	8.2	TSH222M51095□VA
	2700	51×130	0.15	28.0	10.2	TSH272M51130□VA
	3300	51×130	0.15	22.9	11.3	TSH332M51130□VA
	3900	64×115	0.15	19.4	12.8	TSH392M64115□VA
	4700	64×130	0.15	16.1	14.8	TSH472M64130□VA
	5600	76×115	0.15	14.0	16.3	TSH562M76115□VA
	6800	76×145	0.15	12.9	19.7	TSH682M76145□VA
	8200	76×155	0.15	11.0	22.2	TSH822M76155□VA
	10000	89×157	0.15	10.0	25.9	TSH103M89157□VA
	12000	89×157	0.15	8.0	29.1	TSH123M89157□VA
	15000	89×195	0.15	6.6	35.7	TSH153M89195□VA
18000	89×235	0.15	5.5	41.4	TSH183M89235□VA	
400 (450)	1000	51×80	0.15	82.3	5.0	TSG102M51080□VA
	1200	51×80	0.15	69.7	5.8	TSG122M51080□VA
	1500	51×95	0.15	50.4	6.7	TSG152M51095□VA
	1800	51×95	0.15	42.0	7.5	TSG182M51095□VA
	2200	51×115	0.15	34.4	9.0	TSG222M51115□VA
	2200	51×130	0.15	34.4	9.2	TSG222M51130□VA
	2700	51×130	0.15	28.0	10.2	TSG272M51130□VA
	2700	64×95	0.15	28.0	10.0	TSG272M64095□VA
	3300	64×95	0.15	22.9	11.0	TSG332M64095□VA
	3300	64×105	0.15	22.9	11.4	TSG332M64105□VA
	3900	64×115	0.15	19.4	13.2	TSG392M64115□VA
	3900	64×130	0.15	19.4	13.5	TSG392M64130□VA
	4700	64×130	0.15	16.1	14.8	TSG472M64130□VA
	4700	76×115	0.15	16.1	14.9	TSG472M76115□VA
	5600	76×115	0.15	14.0	16.3	TSG562M76115□VA
	5600	76×130	0.15	14.0	17.0	TSG562M76130□VA
	6800	76×130	0.15	12.9	18.7	TSG682M76130□VA
	6800	76×155	0.15	12.9	20.2	TSG682M76155□VA
	8200	76×155	0.15	12.0	22.0	TSG822M76155□VA
	8200	89×157	0.15	12.0	23.5	TSG822M89157□VA
	10000	76×195	0.15	10.0	26.8	TSG103M76195□VA
	10000	89×130	0.15	10.0	24.5	TSG103M89130□VA
10000	89×157	0.15	10.0	26.6	TSG103M89157□VA	
12000	89×157	0.15	8.0	28.5	TSG123M89157□VA	
12000	89×195	0.15	8.0	31.0	TSG123M89195□VA	
15000	89×195	0.15	7.1	34.8	TSG153M89195□VA	
15000	89×235	0.15	7.1	37.5	TSG153M89235□VA	
18000	89×235	0.15	6.0	41.2	TSG183M89235□VA	
22000	100×237	0.15	5.0	47.2	TSG223M00237□VA	
450 (500)	1000	51×80	0.15	79.6	5.1	TSE102M51080□VA
	1200	51×95	0.15	66.3	6.0	TSE122M51095□VA
	1500	51×115	0.15	53.1	7.2	TSE152M51115□VA
	1800	51×115	0.15	45.0	7.9	TSE182M51115□VA
	1800	51×130	0.15	45.0	8.3	TSE182M51130□VA
	2200	51×130	0.15	35.0	9.1	TSE222M51130□VA
	2200	64×95	0.15	35.0	9.0	TSE222M64095□VA
	2700	64×95	0.15	30.0	9.8	TSE272M64095□VA
	2700	64×115	0.15	30.0	10.7	TSE272M64115□VA

WV _{dc} (Surge Voltage) (V)	Cap (μF)	Size D×L (mm)	tanδ 20°C 120Hz	ESR _{typ} 20°C 120Hz mΩ	Ripple Current 85°C 120Hz (Arms)	Catalog Part Number	
450 (500)	3300	64×115	0.15	24.0	11.7	TSE332M64115□VA	
	3300	64×130	0.15	24.0	12.4	TSE332M64130□VA	
	3900	64×130	0.15	20.0	13.1	TSE392M64130□VA	
	3900	76×115	0.15	20.0	13.6	TSE392M76115□VA	
	4700	76×115	0.15	16.1	14.8	TSE472M76115□VA	
	4700	76×130	0.15	16.1	15.6	TSE472M76130□VA	
	5600	76×130	0.15	14.0	16.9	TSE562M76130□VA	
	5600	76×155	0.15	14.0	18.3	TSE562M76155□VA	
	6800	76×155	0.15	11.7	19.4	TSE682M76155□VA	
	6800	89×157	0.15	11.7	21.4	TSE682M89157□VA	
	8200	76×195	0.15	10.0	23.7	TSE822M76195□VA	
	8200	89×130	0.15	10.0	21.6	TSE822M89130□VA	
	8200	89×157	0.15	10.0	23.5	TSE822M89157□VA	
	10000	89×170	0.15	9.0	26.6	TSE103M89170□VA	
	10000	89×195	0.15	9.0	28.3	TSE103M89195□VA	
	12000	89×195	0.15	8.0	30.9	TSE123M89195□VA	
	12000	89×235	0.15	8.0	33.6	TSE123M89235□VA	
	15000	89×235	0.15	7.0	36.1	TSE153M89235□VA	
18000	100×237	0.15	6.0	41.0	TSE183M00237□VA		
500 (550)	1000	51×115	0.20	106.2	4.2	TSC102M51115□VA	
	1200	64×95	0.20	94.0	4.8	TSC122M64095□VA	
	1500	64×95	0.20	71.7	5.5	TSC152M64095□VA	
	1800	64×115	0.20	51.0	6.5	TSC182M64115□VA	
	2200	64×130	0.20	39.8	7.7	TSC222M64130□VA	
	2700	76×115	0.20	35.0	8.8	TSC272M76115□VA	
	3300	76×130	0.20	32.6	10.4	TSC332M76130□VA	
	3900	76×130	0.20	24.8	11.4	TSC392M76130□VA	
	4700	89×130	0.20	24.0	13.7	TSC472M89130□VA	
	5600	89×157	0.20	20.9	15.9	TSC562M89157□VA	
	6800	89×170	0.20	17.6	18.5	TSC682M89170□VA	
	8200	89×195	0.20	13.9	21.4	TSC822M89195□VA	
	550 (600)	1000	51×130	0.20	110.0	4.3	TSZ102M51130□VA
		1200	64×115	0.20	95.0	5.0	TSZ122M64115□VA
1500		64×130	0.20	74.0	6.0	TSZ152M64130□VA	
1800		76×105	0.20	72.0	6.6	TSZ182M76105□VA	
2200		76×115	0.20	50.0	7.8	TSZ222M76115□VA	
2700		76×130	0.20	40.0	8.9	TSZ272M76130□VA	
3300		76×155	0.20	36.0	10.5	TSZ332M76155□VA	
3900		76×155	0.20	30.0	11.7	TSZ392M76155□VA	
4700		89×157	0.20	24.0	13.8	TSZ472M89157□VA	
5600		89×170	0.20	20.0	16.0	TSZ562M89170□VA	
6800	89×195	0.20	16.0	18.6	TSZ682M89195□VA		
600 (650)	1000	64×130	0.20	144.6	5.5	TSB102M64130□VA	
	1200	76×115	0.20	121.0	6.1	TSB122M76115□VA	
	1500	76×130	0.20	112.0	7.3	TSB152M76130□VA	
	1800	76×155	0.20	97.0	9.0	TSB182M76155□VA	
	2200	89×130	0.20	81.0	9.7	TSB222M89130□VA	
	2700	89×157	0.20	66.0	11.6	TSB272M89157□VA	
	3300	89×170	0.20	49.0	13.5	TSB332M89170□VA	
	3900	89×195	0.20	37.0	16.2	TSB392M89195□VA	
4700	89×195	0.20	31.0	19.5	TSB472M89195□VA		
5600	89×250	0.20	28.0	22.4	TSB562M89250□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.