

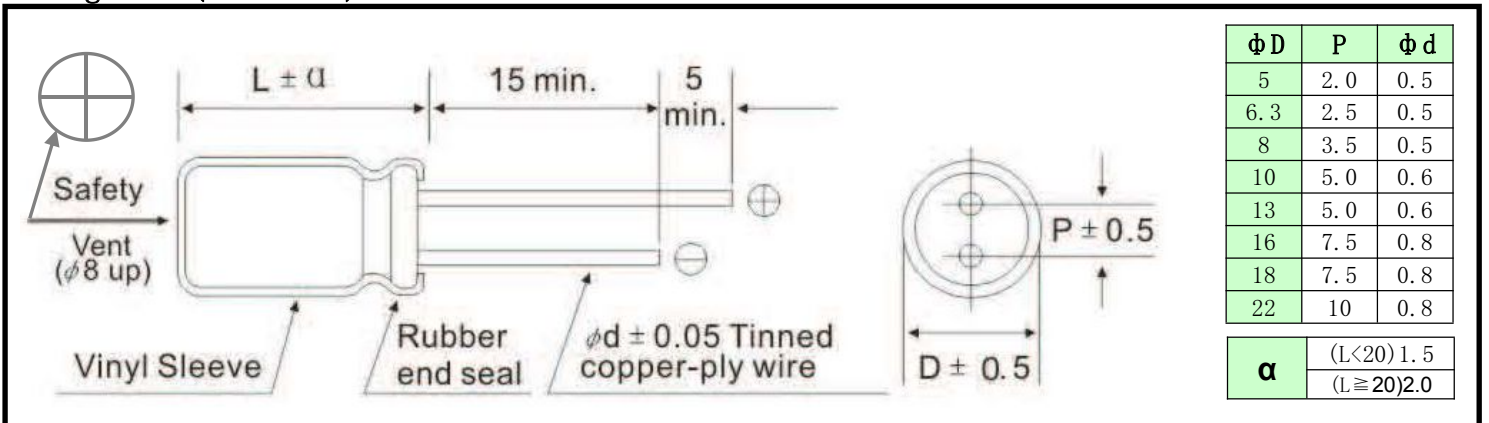
# TR Series

- 105°C, 1000 -2000hours standard series
- ROHS Compliant
- ◆ SPECIFICATIONS

适用于性能稳定可靠性电路

项目 Items	特性参数 Characteristics										
使用温度范围 Category Temperature range	-40 to +105°C										
额定电压范围 Rated Voltage Range	6.3V to 100 Vdc										
标称容量允许误差 Capacitance Tolerance	±20% (M) (at 20°C ,120Hz)										
漏电流 Leakage Current	I ≤ 0.01CV or 3 μA , which is greater after application of rated Voltage for 2minutes 施加额定工作电压 2 分钟后读数, 二者取大值 I: 漏电流 (μA) C: 静电容量 (μF)、额定电压 (V)										
损耗角正切值 (tan δ) Dissipation Factor	Rated voltage	6.3V	10V	16V	25V	35V	50V	63V	100V	(at 20°C , 120Hz)	
	tan δ (Max.)	0.22	0.19	0.16	0.14	0.12	0.10	0.08	0.08		
低温特性 Low Temperature Characteristics	r capacitance > 1000uF. and 2% per another 1000uF 标准容量超过 1000UF, 则每增加 1000UF, 损耗角正切值增加 0.02										
	Impedance ration max at 120Hz										
	Working voltage	6.3v	10v	16v	25v	35v	50v	63V	100V		
Z-25°C / Z+20°C	4	3	2	2	2	2	2	2	2		
Z-40°C / Z+20°C	8	6	4	4	3	3	3	3	3		
耐久性 Load. Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after the voltage is applied for 1000 hours at 105°C										
	Capacitance change	≅ ±20% of the initial value								φD	Load life
	DF (tan δ)	≅ 200 % of the initial specified value								≤ 8	1000H
	Leakage current	≅ The initial specified value								≅ 10	2000H
高温储存 Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 500 hours at 105°C without voltage applied.										
	Capacitance change	≅ ±20% of the initial value									
	DF (tan δ)	≅ 200 % of the initial specified value									
	Leakage current	≅ The initial specified value									
纹波电流修正系数 Ripple Current Multiplier	Temperature coefficient										
	Temperature (°C)	~55	60	70	85	105					
	Factor	2.20	2.10	2.00	1.75	1.00					
	Frequency coefficient										
	Cap freq	60	120	1k	10k	100k					
	~100	0.70	1.00	1.40	1.50	1.50					
100~1000	0.75	1.00	1.30	1.35	1.35						
1000 up	0.80	1.00	1.12	1.15	1.15						

Diagram: (Unit: mm)



# TR Series

## STANDARD RATING

Vdc μ F	6.3v		10v		16v		25v		35v		50v		63v		100v	
	Case size D*L (mm)	Ripple Current (mA/ms)	Case size D*L (mm)	Ripple Current (mA/ms)	Case size D*L (mm)	Ripple Current (mA/ms)	Case size D*L (mm)	Ripple Current (mA/ms)	Case size D*L (mm)	Ripple Current (mA/ms)	Case size D*L (mm)	Ripple Current (mA/ms)	Case size D*L (mm)	Ripple Current (mA/ms)	Case size D*L (mm)	Ripple Current (mA/ms)
0.1											5*11	10	5*11	10	5*11	10
0.22											5*11	10	5*11	10	5*11	10
0.33											5*11	10	5*11	10	5*11	10
0.47											5*11	10	5*11	10	5*11	10
1											5*11	10	5*11	10	5*11	18
2.2											5*11	20	5*11	25	5*11	30
3.3											5*11	30	5*11	35	5*11	40
4.7											5*11	42	5*11	45	5*11	48
6.8											5*11	50	5*11	58	5*11	62
10							5*11	30	5*11	35	5*11	55	5*11	60	6.3*11	65
22							5*11	40	5*11	60	5*11	68	6.3*11	82	8*12	96
33							5*11	55	5*11	75	6.3*11	90	6.3*12	100	8*14 10*13	115 120
47			5*11	70	5*11	99	5*11	105	5*11	110	6.3*11	125	6.3*12 8*12	120 135	8*16 10*15	150 160
68	5*11	80	5*11	90	5*11	110	5*11	115	6.3*11	125	6.3*12	140	8*12	180	10*17	200
100	5*11	95	5*11	105	5*11	125	5*11 6.3*11	128 135	6.3*11	170	8*12	180	8*16 10*13	215 225	10*17 10*20	230 245
220	5*11	160	5*11 6.3*11	150 175	6.3*11	215	6.3*12 8*12	210 230	8*12 8*14	265 300	8*16 10*13	300 345	10*15 10*17	362 400	13*21	450
330	6.3*11	195	6.3*12	245	6.3*12	260	8*12	335	8*16 10*13	360 400	10*17	460	10*25 13*21	515 540	13*30	700
470	6.3*12	270	6.3*12	290	8*12	370	8*14 10*13	405 440	10*13 10*17 10*20	420 480 520	10*20	610	13*21	700	16*32	880
680	8*12	330	8*12	360	8*14	440	10*15 10*17	476 500	10*20 13*21	635 680	13*21	840	16*25	960	18*36	1100
1,000	8*12	460	8*12 8*14	488 550	8*16 10*16	520 640	10*17 10*20	620 770	13*21	920	13*25	1080	16*32	1210	18*40	1460
2,200	10*17	810	10*17 10*20	780 860	10*201 3*21	850 1000	10*25 13*21	910 1170	16*25	1340	16*30 18*27	1420 1530	18*40	1650		
3,300	10*20	960	10*25 13*21	980 1100	10*301 3*21	1150 1300	13*25 16*25	1350 1460	16*36	1650	18*36	1750				
4,700	13*21	1330	10*30 13*25	1360 1400	10*40 16*25	1500 1600	16*25 16*32	1650 1780	18*36	1900	22*36					
6,800	13*25	1500	10*40 16*25	1580 1690	13*40 16*32	1840 1900	18*36	1950	22*40							
10,000	16*25	1765	16*32	1950	18*36	2060	18*40 22*35	2200 2400								
15,000	18*32	2075	18*36	2380	22*40	2400										

Ripple Current : mA/rms at 120Hz 105°C