

TR series

- Low Impedance at 100kHz
- Load life:105°C 2000 hours
- For mother board,high ripplecurrent,low E.S.R
- ROHS Directive

■SPECIFICATIONS

Item	Performance Characteristics										
Operating Temperature Range	-40°C~105°C										
Rated Voltage Range	6.3~25V										
Capacitance Range	100~3300uF										
Capacitance Tolerance	±20%,120Hz,20°C										
Leakage Current (MAX)	≤0.01CV or 3uA whichever is greater.(after 2minutes) I=Leakage Currnt(uA),C=Nominal Capacitance(uF),V=Rated Voltage(V)										
Dissipation Factor (tan δ)	When nominal capacitance is over 1000uF,tan δ shall be added 0.02 to the listed value with increase of every 1000uF. <table border="1"> <thead> <tr> <th>Rated voltage(V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> </tr> </thead> <tbody> <tr> <td>Tan δ</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> </tr> </tbody> </table> <p style="text-align: right;">MAX (20°C120Hz)</p>	Rated voltage(V)	6.3	10	16	25	Tan δ	0.22	0.19	0.16	0.14
Rated voltage(V)	6.3	10	16	25							
Tan δ	0.22	0.19	0.16	0.14							
Low Temperature Stability Impedance Ratio	<table border="1"> <thead> <tr> <th>Rated voltage(V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> </tr> </thead> <tbody> <tr> <td>Z(-40°C) / Z (+20°C)</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> </tr> </tbody> </table> <p style="text-align: right;">MAX (20°C 120Hz)</p>	Rated voltage(V)	6.3	10	16	25	Z(-40°C) / Z (+20°C)	4	3	3	3
Rated voltage(V)	6.3	10	16	25							
Z(-40°C) / Z (+20°C)	4	3	3	3							
Load Life	After life test at conditions stated in the table below, the capacitors shall meet the following requirement. <table border="1"> <tbody> <tr> <td>Leakage Current</td> <td>Not more than the specified</td> </tr> <tr> <td>Capacitance Change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than 200% of the specified</td> </tr> </tbody> </table>	Leakage Current	Not more than the specified	Capacitance Change	Within ±20% of initial value	Dissipation Factor	Not more than 200% of the specified				
Leakage Current	Not more than the specified										
Capacitance Change	Within ±20% of initial value										
Dissipation Factor	Not more than 200% of the specified										
Shelf Life	After leaving capacitors under no load at 105°C for 1000hours and applying voltage according to JIS C-5102 4-3,they meet the specified value for load life characteristics listed above.										
Standard	According to JIS C 5141										

■MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

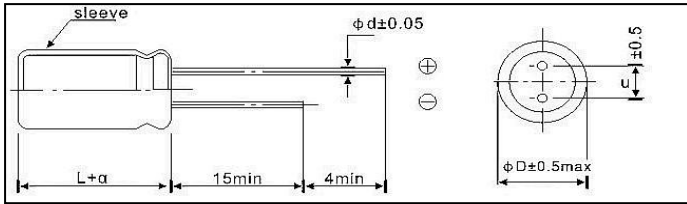
Frequency(Hz)	120	1k	10k	≤100k
470-1000	0.55	0.85	0.98	1.00
1200-3300	0.65	0.90	1.00	1.00

Temperature coefficient

Temperature	65°C	75°C	85°C	105°C
Coefficient	2.10	2.00	1.70	1.00

TR series

■DIMENSIONS(mm)



ΦD	5	6.3	8	10
Φd	0.5		0.6	
F	2.0	2.5	3.5	5.0
α	L≤16 : α=1.5		L≥16 : α=2.0	

■STANDARD SIZE,MAXIUM PERMISSIBLE RIPPLE CURRENT,IMPEDANCE

WV(V.DC) Cap (uF)	SizeΦD×L (mm)			
	6.3	10	16	25
100		5×11		
220			6.3×12	8×12
470		6.3×12 8×12	8×12	
680	8×12	8×12	8×14	
820	8×12	8×12		
1000	8×12 8×14	8×14 8×15 8×16 10×13 10×16	10×15 10×16	10×20
1500	10×13 10×16	10×16 10×20	10×20	
2200	10×20	10×20		
3300	10×20			

WV(V.DC) Cap (uF)	Ripple Current (mAr.m.s 105°C,100kHz),impedance(Ωmax/100kHz20°C)							
	6.3		10		16		25	
	ripple	impedance	ripple	impedance	ripple	impedance	ripple	impedance
100			350	0.33				
220					1050	0.10		
470			640 1015	0.13 0.065	1100	0.045	1150	0.085
680	1025	0.048	1070	0.060	1550	0.028		
820	1180	0.044	1150	0.055				
1000	1200 1400	0.041 0.038	1250 1400 1550 1400 2000	0.040 0.036 0.034 0.036 0.030	2200	0.025	2350	0.024
1500	1550 1600	0.034 0.032	2100	0.025	2850	0.018		
2200	2495	0.018	2900	0.016				
3300	2720	0.015						