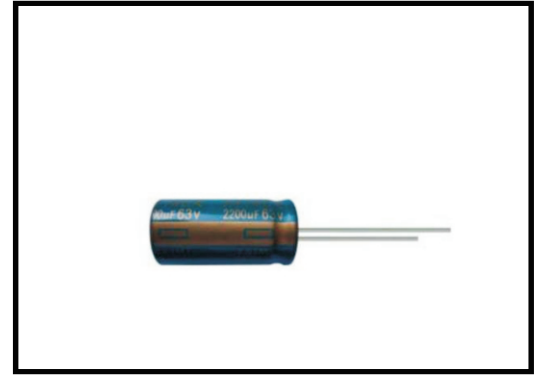


FA 系列  
SERIES

适用于开关电源转换用高频低阻品  
For switch-power supply systems

◆ 特长 FEATURES

- 具有非常优越的耐纹波能力和低阻抗特性(Low-ESR)  
Very excellent ripple current ability and low impedance
- 保证时间: 105°C 2000~3000小时  
Load life: 105°C 2000~3000Hrs



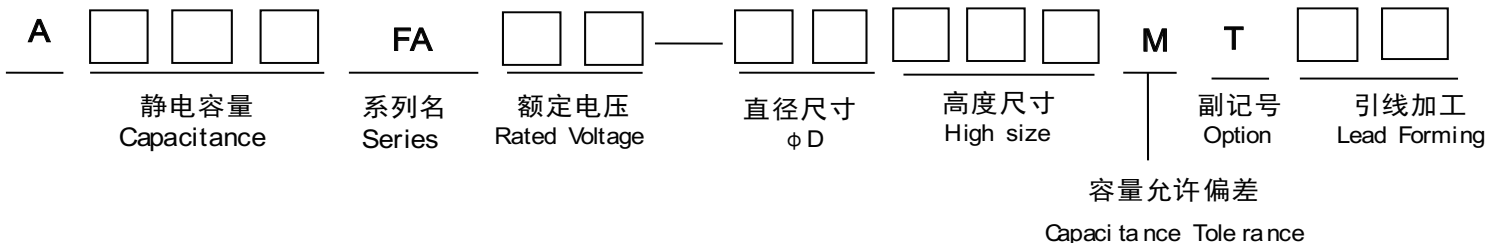
◆ 特性表 SPECIFICATIONS

项 目 Item	特 性 Characteristics														
使用温度范围 Operating Temperature Range	-40 ~ +105°C														
额定电压范围 Rated Voltage Range(W.V)	6.3VDC ~ 100VDC														
静电容量允许偏差 Capacitance Tolerance	± 20% (M) (at 20°C , 120Hz)														
漏电流 (I) DC Leakage Current	$I \leq 0.01CV (\mu A)$ or $3 \mu A$ 取大值 (at 20°C) (施加额定电压2分钟后测试 After 2 minutes application of rated voltage)														
损耗角正切值 (TANδ) Dissipation Factor	<table border="1"> <tr> <td>WV</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>TANδ</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.1</td> </tr> </table>	WV	6.3	10	16	25	35	50	TANδ	0.22	0.19	0.16	0.14	0.12	0.1
	WV	6.3	10	16	25	35	50								
	TANδ	0.22	0.19	0.16	0.14	0.12	0.1								
<table border="1"> <tr> <td>WV</td> <td>63</td> <td>100</td> </tr> <tr> <td>TANδ</td> <td>0.09</td> <td>0.08</td> </tr> </table>	WV	63	100	TANδ	0.09	0.08									
WV	63	100													
TANδ	0.09	0.08													
容量超过1000μF, 每增加1000μF, TANδ加0.02 When rated capacitance is over 1000μF, TANδ shall be added 0.02 (at 20°C , 120Hz)															
温度特性 Temperature Characteristics	阻抗比 (120Hz) Impedance ratio at 120Hz 6.3VDC, Z-40°C/Z20°C=8MAX. 10VDC, Z-40°C/Z20°C=6MAX. 16VDC, Z-40°C/Z20°C=4MAX. 25VDC~100VDC, Z-40°C/Z20°C=3MAX.														
高温负荷特性 Load Life	105°C加额定电压2000~3000小时后满足如下要求: (φ5~φ8, 2000HRS. φ10~φ18, 3000HRS) After 2000~3000 hours application of rated voltage at 105°C <table border="1"> <tr> <td>静电容量变化率 Capacitance Change</td> <td>初期值的±20%以内 With in ±20% of the initial value</td> </tr> <tr> <td>损耗角正切值 (TANδ) Dissipation Factor</td> <td>规格值的200%以内 Not more than 200% of the specified value</td> </tr> <tr> <td>漏电流 (I) Leakage Current</td> <td>规格值以下 Not more than the specified value</td> </tr> </table>	静电容量变化率 Capacitance Change	初期值的±20%以内 With in ±20% of the initial value	损耗角正切值 (TANδ) Dissipation Factor	规格值的200%以内 Not more than 200% of the specified value	漏电流 (I) Leakage Current	规格值以下 Not more than the specified value								
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损耗角正切值 (TANδ) Dissipation Factor	规格值的200%以内 Not more than 200% of the specified value														
漏电流 (I) Leakage Current	规格值以下 Not more than the specified value														
高温无负荷特性 Shelf Life	+105°C 1000小时无负荷放置后, 特性应满足高温负荷特性 After storage for 1000 Hrs at +105°C with no voltage applied, the capacitor shall meet the specified limits for "Load Life"														
其他 Others	执行 JIS C 5141 JIS C 5141														

◆ 纹波电流修正系数/MULTIPLIERFORRIPPLECURRENT

WV. (V. DC)	Capacitance (μF)	60HZ	120HZ	1KHZ	10KHZ	100KHZ
6.3~100WV	1.0~330	0.55	0.65	0.85	0.9	1.0
	390~1000	0.7	0.75	0.9	0.95	1.0
	1200~2200	0.75	0.8	0.9	0.95	1.0
	2700~15000	0.8	0.85	0.95	1	1.0

◆ 产品型号体系/PARTNUMBER



◆ 尺寸图/DIMENSIONS

(mm)

$\phi D$	4	5	6.3	8	10	12.5	16	18
$\phi d$	0.5			0.6			0.8	
F	1.5	2.0	2.5	3.5	5.0		7.5	
$\alpha$	100V以下 160V以上			WV $\leq$ 100:1.5 WV $\geq$ 160:2.0				2.0

◆ 标准品一览表/STANDARDS

(mA) r. m s (100KHz/+105°C)

WV.(VDC) CAP. ( $\mu F$ )	6.3 (0J)			10 (1A)			16 (1C)			25 (1E)		
	$\phi D \times L$ (mm)	Impedance ( $\Omega$ ) max. 20°C 100KHz	Ripple current	$\phi D \times L$ (mm)	Impedance ( $\Omega$ ) max. 20°C 100KHz	Ripple current	$\phi D \times L$ (mm)	Impedance ( $\Omega$ ) max. 20°C 100KHz	Ripple current	$\phi D \times L$ (mm)	Impedance ( $\Omega$ ) max. 20°C 100KHz	Ripple current
47 (470)				5 × 11	0.80	175	5 × 11	0.80	175	5 × 11	0.80	175
100 (101)	5 × 11	0.80	175	5 × 11	0.80	175	6.3 × 11	0.22	340	6.3 × 11	0.22	340
150 (101)	6.3 × 11	0.22	340	6.3 × 11	0.22	340	6.3 × 11	0.22	340	6.3 × 11	0.22	340
220 (221)	6.3 × 11	0.22	340	6.3 × 11	0.22	340	6.3 × 11	0.22	340	8 × 12	0.12	640
							8 × 12	0.12	640			
330 (331)	6.3 × 11	0.22	340	6.3 × 11	0.22	340	8 × 12	0.12	640	8 × 12	0.12	640
				8 × 12	0.12	640				10 × 12.5	0.063	900
470 (471)	8 × 12	0.12	640	8 × 12	0.12	640	8 × 12	0.12	640	8 × 16	0.062	860
560 (561)	8 × 12	0.12	640	8 × 12	0.09	640	10 × 12.5	0.063	900	10 × 16	0.049	1240
680 (681)	8 × 12	0.09	640	8 × 12	0.09	640	8 × 16	0.062	860	10 × 16	0.049	1240
				8 × 16	0.062	860	10 × 12.5	0.063	900			
820 (821)	8 × 12	0.09	640	8 × 16	0.062	860	8 × 20	0.044	1220	10 × 20	0.046	1400
	10 × 12.5	0.08	900	10 × 12.5	0.063	900	10 × 16	0.049	1240			
1000 (102)	8 × 12	0.09	640	8 × 16	0.062	860	10 × 16	0.049	1240	10 × 20	0.046	1400
	8 × 16	0.062	860	10 × 16	0.049	1240						
	10 × 12.5	0.063	900									
1200 (122)	8 × 16	0.062	860	8 × 20	0.044	1220	10 × 20	0.046	1400	10 × 20	0.046	1400
	10 × 12.5	0.063	900	10 × 16	0.049	1240						
1500 (152)	8 × 20	0.044	1220	10 × 20	0.046	1400	10 × 20	0.046	1400	10 × 25	0.042	1650
	10 × 16	0.049	1240							13 × 20	0.035	1900
1800 (182)	10 × 20	0.046	1400	10 × 20	0.046	1400	13 × 20	0.035	1900	13 × 25	0.03	2124
2200 (222)	10 × 20	0.046	1400	10 × 20	0.046	1400	13 × 20	0.035	1900	13 × 25	0.03	2124
3300 (332)	10 × 25	0.042	1650	13 × 25	0.03	2124						
	13 × 20	0.035	1900									
4700 (472)	13 × 25	0.03	2124									
6800 (682)	16 × 25	0.026	2330									
10000 (103)	16 × 31.5	0.025	2640									

◆ 标准品一览表/STANDARDS

(mA) r. m s (100KHz/+105°C)

WV.(VDC) CAP. (μF)	35 (1V)			50 (1H)			63 (1J)			100 (2A)		
	φ D×L (mm)	Impedance (Ω)max. 20°C 100KHz	Ripple current	φ D×L (mm)	Impedance (Ω)max. 20°C 100KHz	Ripple current	φ D×L (mm)	Impedance (Ω)max. 20°C 100KHz	Ripple current	φ D×L (mm)	Impedance (Ω)max. 20°C 100KHz	Ripple current
1 (010)				5×11	2.40	20						
2.2 (2R2)				5×11	1.80	45						
3.3 (3R3)				5×11	1.30	65						
4.7 (4R7)				5×11	1.30	95						
10 (100)	5×11	0.80	175	5×11	1.30	125				6.3×11	0.96	115
15 (150)	5×11	0.80	175	5×11	1.30	145				6.3×11	0.96	115
22 (220)	5×11	0.80	175	5×11	1.30	155	6.3×11	0.96	115	8×12	0.68	260
33 (330)	5×11	0.80	175	6.3×11	0.6	260	6.3×11	0.96	115	8×16	0.45	340
47 (470)	6.3×11	0.22	340	6.3×11	0.6	260	8×12	0.34	405	10×16	0.36	400
56 (560)	6.3×11	0.22	340	8×12	0.234	360	8×12	0.34	405	10×20	0.24	463
68 (680)	6.3×11	0.22	340	8×12	0.234	485	8×12	0.34	405	10×20	0.24	463
100 (101)	8×12	0.09	640	10×12.5	0.12	760	8×16	0.23	535	13×20	0.18	671
							10×12.5	0.256	535			
150 (151)	8×12	0.09	640	10×16	0.084	1050	8×20	0.178	690	13×25	0.11	807
220 (221)	8×12	0.09	640	8×20	0.084	1050	10×20	0.147	885	16×25	0.089	1170
	8×16	0.062	860									
	10×12.5	0.063	900									
330 (331)	8×20	0.044	1220	10×16	0.084	1050	13×20	0.085	1285	16×31.5	0.062	1520
	10×12.5	0.063	900							10×20	0.056	1400
	10×16	0.049	1240									
470 (471)	10×16	0.049	1240	13×20	0.056	1400	16×20	0.059	1765	18×35	0.041	1770
	10×20	0.046	1400	13×25	0.034	1950						
680 (681)	10×20	0.046	1400	16×25	0.034	2215	16×25	0.05	2160			
1000 (102)	13×20	0.035	1900	16×25	0.034	2215	16×31.5	0.043	2670			
	13×25	0.03	2124									
2200 (222)	16×25	0.026	2330									

## ◆ 标准品一览表/STANDARDS

(mA) r. m s (100KHz/+105°C)

WV.(VDC) CAP. (μF)	6.3(0J)			10(1A)			16(1C)			25(1E)		
	φ D×L (mm)	Impedance (Ω)max. 20°C100KHz	Ripple current	φ D×L (mm)	Impedance (Ω)max. 20°C100KHz	Ripple current	φ D×L (mm)	Impedance (Ω)max. 20°C100KHz	Ripple current	φ D×L (mm)	Impedance (Ω)max. 20°C100KHz	Ripple current
10(100)										4×7	2.80	75
22(220)							4×7	2.80	75	4×7	2.80	75
33(330)							4×7	2.80	78	4×7	2.80	78
47(470)	4×7	2.80	75	4×7	2.80	75	4×7	2.80	80	5×7	1.4	120
100(101)	5×7	1.4	120	5×7	1.4	120	5×7	1.4	120	6.3×7	0.7	180
150(151)	5×7	1.4	140	6.3×7	0.7	180	6.3×7	0.7	180	6.3×7	0.7	180
220(221)	6.3×7	0.7	180	6.3×7	0.7	190	6.3×7	0.7	190	8×9	0.25	420
330(331)	6.3×7	0.7	190	6.3×7	0.7	195	8×7	0.4	225	8×9	0.25	420
470(471)	8×7	0.4	225	8×7	0.4	225	8×9	0.25	420	10×11	0.16	580
1000(102)	8×9	0.25	400	10×11	0.16	580						

WV.(VDC) CAP. (μF)	35(1V)			50(1H)		
	φ D×L (mm)	Impedance (Ω)max. 20°C100KHz	Ripple current	φ D×L (mm)	Impedance (Ω)max. 20°C100KHz	Ripple current
1(010)				4×7	2.80	75
2.2(2R2)				4×7	2.80	75
3.3(3R3)				4×7	2.80	75
4.7(4R7)				4×7	2.80	75
10(100)	5×7	1.4	140	5×7	1.4	120
22(220)	5×7	1.4	140	6.3×7	0.7	180
33(330)	6.3×7	0.7	180	6.3×7	0.7	180
47(470)	6.3×7	0.7	185	8×7	0.4	225
100(101)	6.3×7	0.7	190	8×9	0.25	420
150(151)	8×9	0.25	420			
220(221)	10×11	0.16	580			
330(331)	10×11	0.16	580			