

FD 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极低阻抗特性 (Extremely Low-ESR)
Very excellent ripple current ability and low impedance
- 保证时间: 105°C 5000小时品
Load life : 105°C 5000Hrs~5000Hrs



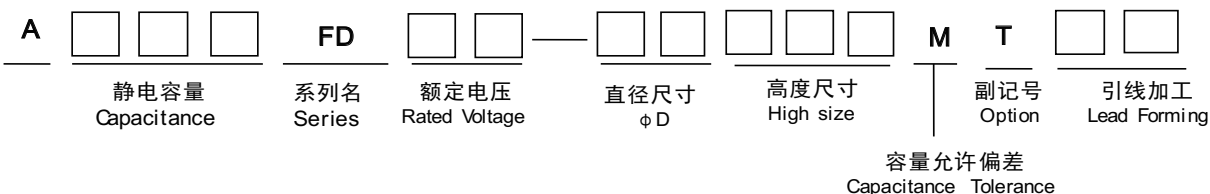
◆ 特性表 SPECIFICATION

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 ≤ 0.01CV (μA) (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	WV	6.3 10 16 25 35 50 63 100
	TANδ	0.22 0.19 0.16 0.14 0.12 0.1 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 ~ 10VDC, Z-40°C / Z20°C = 5MAX. 16VDC ~ 50VDC, Z-40°C / Z20°C = 4 MAX.
	高温负荷特性 Load Life	105°C加额定电压4000~5000小时后满足如下要求: (φ8:4000HRS, φ10~φ8,5000HRS) After 4000~5000 hours application of rated voltage at 105°C
高温无负荷特性 Shelf Life	静电容量变化率 Capacitance Change	初期值的±25%以内 With in ±25% 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
	其他 Others	+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"
执行 JIS C 5141 JIS C 5141		

◆ 纹波电流修正系数/MULTIPLIERFORRIPPLECURRENT

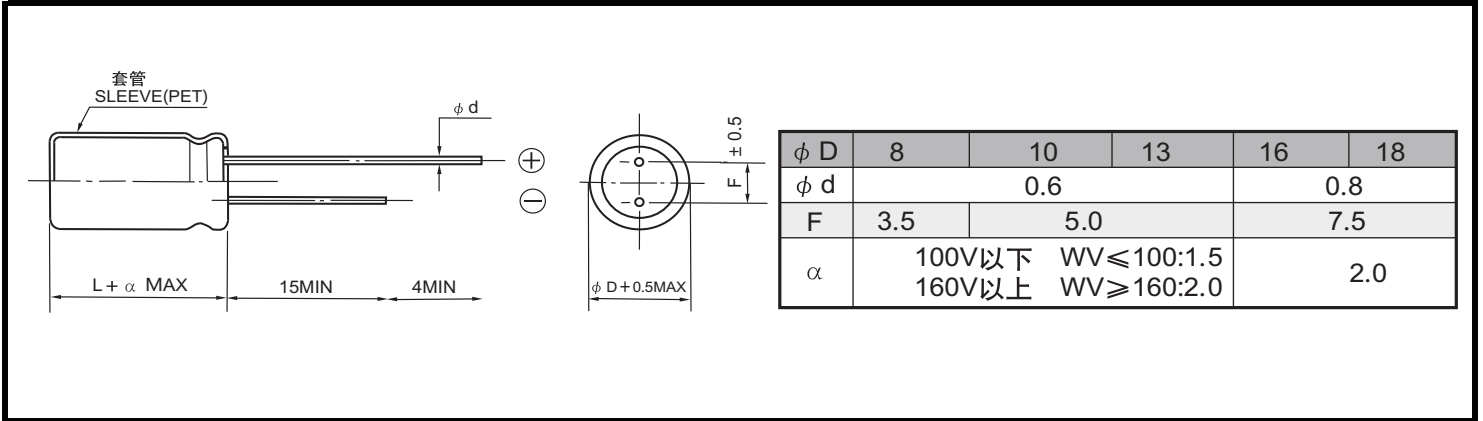
WV. (V. DC)	Capacitance (μF)	60HZ	120HZ	1KHZ	10KHZ	100KHZ
6.3~100WV	1.0~330	0.55	0.65	0.85	0.9	1.0
	390~1000	0.7	0.75	0.9	0.95	1.0
	1200~2200	0.75	0.8	0.9	0.95	1.0
	2700~15000	0.8	0.85	0.95	1	1.0

◆ 产品型号体系/PARTNUMBER



◆ 尺寸图/DIMENSIONS

(mm)



◆ 标准品一览表/STANDARDS

(mA) r. m s (100KHz/+105°C)

WV.(VDC)	6.3 (0J)			10 (1A)			16 (1C)		
	$\phi D \times L$ (mm)	Impedance (m Ω) max . 20°C 100KHz	Ripple current	$\phi D \times L$ (mm)	Impedance (m Ω) max . 20°C 100KHz	Ripple current	$\phi D \times L$ (mm)	Impedance (m Ω) max . 20°C 100KHz	Ripple current
CAP. (μF)									
220 (221)							8 × 12	90	630
330 (331)				8 × 12	90	630	8 × 12	90	630
470 (471)	8 × 12	90	630	8 × 12	90	630	8 × 15	62	860
							10 × 12.5	63	900
680 (681)	8 × 12	90	630	8 × 15	62	860	10 × 16	49	1240
1000 (102)	8 × 15	62	860	8 × 20	44	1220	10 × 16	49	1240
	10 × 12.5	63	900	10 × 16	49	1240	10 × 20	35	1490
1200 (122)				8 × 20	44	1220	10 × 20	35	1490
				10 × 16	49	1240			
1500 (152)	8 × 20	44	1220	10 × 20	35	1490	13 × 20	29	1890
	10 × 16	49	1240						
1800 (182)	10 × 20	35	1490	10 × 20	35	1490	13 × 20	29	1890
2200 (222)	10 × 20	35	1490	13 × 20	29	1890	13 × 20	29	1890
3300 (332)	13 × 20	29	1890	13 × 25	22	2280	13 × 30	18	2720
4700 (472)	13 × 25	22	2280	13 × 30	18	2720	18 × 20	25	2640
				16 × 20	26	2330			
5600 (562)	13 × 30	18	2720	16 × 25	19	2760	16 × 25	19	2760
	16 × 20	26	2330						
6800 (682)	16 × 25	19	2760	16 × 25	19	2760	18 × 25	18	2850
10000 (103)	16 × 31.5	18	2850	18 × 25	18	2850			
12000 (123)	18 × 25	18	2850						

◆ 标准品一览表/STANDARDS

(mA) r. m s (100KHz/+105°C)

WV. (VDC) CAP. (μF)	25 (1E)			35 (1V)			50 (1H)		
	φ D×L (mm)	Impedance (mΩ) max . 20°C 100KHz	Ripple current	φ D×L (mm)	Impedance (mΩ) max . 20°C 100KHz	Ripple current	φ D×L (mm)	Impedance (mΩ) max . 20°C 100KHz	Ripple current
100 (101)				8×12	90	630	10×12.5	162	615
220 (221)	8×12	90	630	8×15	62	860	10×20	90	1030
				10×12.5	63	900			
330 (331)	8×12	90	630	8×20	44	1220	13×20	63	1480
	10×12.5	63	900	10×16	49	1240			
470 (471)	8×15	62	860	10×20	35	1490	13×25	50	1832
	10×12.5	63	900						
560 (561)	8×20	44	1220	10×20	35	1490	13×25	50	1832
	10×16	49	1240						
680 (681)	10×16	49	1240	13×20	29	1890	13×30	40	2215
	10×20	35	1490				16×20	48	1835
820 (821)	10×20	35	1490	13×20	29	1890	16×25	34	2235
1000 (102)	13×20	29	1890	13×25	22	2280	16×25	34	2235
1200 (122)	13×20	29	1890	13×25	22	2280	18×25	29	2610
1500 (152)	13×25	22	2280	13×30	18	2720	18×30	25	3000
1800 (182)	13×25	22	2280	16×25	19	2760	18×30	25	3000
2200 (222)	13×30	18	2720	16×25	19	2760	18×35.5	23	3100
	16×20	26	2330	18×20	25	2640			
3300 (332)	16×25	19	2760	18×25	18	2850			
4700 (472)	18×25	18	2850						

WV. (VDC) CAP. (μF)	63 (1J)			100 (2A)		
	φ D×L (mm)	Impedance (mΩ) max . 20°C 100KHz	Ripple current	φ D×L (mm)	Impedance (mΩ) max . 20°C 100KHz	Ripple current
22 (220)				8×12	680	260
33 (330)				10×12.5	530	306
47 (470)	8×12	342	405	10×16	360	400
100 (101)	8×15	230	535	13×20	180	671
	10×12.5	256	535			
220 (221)	10×20	147	885	16×25	89	1170
330 (331)	13×20	85	1285	16×31.5	62	1520
470 (471)	16×20	59	1765	18×35.5	41	1770
680 (681)	16×25	50	2160			
1000 (102)	16×31.5	43	2670			