

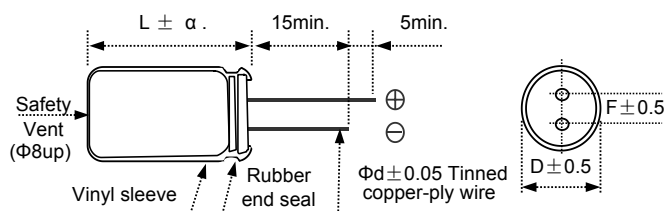
RD Series

- High ripple current, for input filtering, 105°C 6000~8000hours
- RoHS2.0 Compliant

◆ 规格表 Specifications

项目Items	特性参数Characteristics									
使用温度范围 Category Temperture Range	-40~ +105℃(160~400V.DC) -25~+105℃(450~500V.DC)									
额定工作电压范围 Rated Voltage Range	160 ~ 500V.DC									
静电容量允许偏差 Capacitance Tolerance	±20%(M) (at 20℃,120Hz)									
漏电流 Leakage Current	I≤0.02CV +10μA Note: I=Max.leakage current (μA), C=Nominal capacitance(μF), V=Rated voltage(Vdc) (at 20℃ after 2 minute)									
损耗角正切值tanδ Dissipation Factor	Rated voltage(Vdc)	160	200	250	350	400	420	450	500	
	tanδ(Max.)	0.15	0.15	0.2	0.20	0.24	0.24	0.24	0.24	
	标称容量超过1000uF,则每增加1000uF,损耗角正切值增加0.02 When nominal capacitance exceeds 1000μF,add 0.02 to the value above for each 1000μF increase. (at 20℃,120Hz)									
低温特性 LOW Temperature Characteristics (Max.Impedance Ratio)	阻抗比值不得超过下表中的列出的值 The impedance ratio shall not exceed the values listed in the below table (at 120Hz)									
	Rated voltage(Vdc)	160	200	250	350	400	450	500		
	Z(-25℃)/Z(+20℃)	3	3	3	5	5	6	6		
	Z(-40℃)/Z(+20℃)	6	6	6	6	6	-	-		
耐久性 Endurance	在105℃环境中，不超过额定电压的范围内叠加最大允许纹波电流，连续加载右表时间，经恢复到20℃后电容器满足以下各项要求。 The following specifications shall be satisfied when the capacitors are restored to 20℃ after applied within maximum allowable ripple current and not over rated voltage range for the time in the table at 105℃.									
	Capacitance change	≡ ±20% of the initial value							ΦD	时间 (hrs)
	D.F.(tanδ)	≡ 200% of the initial specified value							Φ6.3	6000
	Leakage current	≡ The initial specified value							> Φ8	8,000
高温储存特性 Shelf Life	在105℃环境中，不施加电压条件下储存1000小时，经恢复到20℃后，电容器满足以下各项要求。 The following specifications shall be satisfied when the capacitors are restored at 20℃ after exposing them for 1000 hours at 105℃ without voltage applied.									
	Rated voltage									
	capacitance change	≡ ±20% of the initial value					≡ ±20% of the initial value			
	D.F.(tanδ)	≡ 200% of the initial specified value					≡ 200% of the initial specified value			
	Leakage current	≡ The initial specified value					≡ 200% of the initial specified value			

◆ 尺寸图 (单位: mm) DIMENSIONS (Unit:mm)



ΦD	5	6.3	8	10	13	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
Φd	0.5	0.5	0.5/0.6	0.6	0.6	0.8	0.8

α	(L<20)1.5
	(L≥20)2.0

◆ 纹波电流修正系数 Rated Ripple Current Coefficient

● 频率系数 Frequency Coefficient

Capacitance(μF)	120	1K	10K	100K
Frequency(Hz)				
2.2~4.7	0.20	0.40	0.80	1.00
5.6~15	0.30	0.60	0.90	1.00
22~100	0.50	0.80	0.90	1.00

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◆ 标准品一览表 Standard Ratings

WV (V _{dc})	Cap. (μF)	Case Size ΦD×L (mm)	Rated ripple current (mA _{rms}) 105°C/100KHz	WV (V _{dc})	Cap. (μF)	Case Size ΦD×L (mm)	Rated ripple current (mA _{rms}) 105°C/100KHz	WV (V _{dc})	Cap. (μF)	Case Size ΦD×L (mm)	Rated ripple current (mA _{rms}) 105°C/100KHz
160	1	6.3X7	34	160	15	8X16	225	200	3.3	6.3X7	65
	1	6.3X9	36		15	10X9	200		3.3	6.3X9	72
	1	6.3X12	40		22	8X16	330		3.3	6.3X12	78
	1.5	6.3X7	38		22	8X20	360		4.7	6.3X9	76
	1.5	6.3X12	50		22	10X16	360		4.7	6.3X12	85
	1.8	6.3X7	49		33	10X12	400		4.7	8X9	88
	1.8	6.3X9	50		33	10X20	450		5.6	6.3X12	90
	1.8	6.3X12	56		47	10X16	435		5.6	8X9	92
	2.2	6.3X7	53		47	10X20	500		5.6	8X12	98
	2.2	6.3X9	56		56	10X20	530		6.8	6.3X12	94
	2.2	6.3X12	60		68	12.5X16	565		6.8	8X9	98
	2.8	6.3X7	57		68	12.5X20	600		6.8	8X16	103
	2.8	6.3X9	60		100	12.5X20	700		8.2	8X9	145
	2.8	6.3X12	65		100	12.5X25	722		10	8X12	180
	3.3	6.3X7	61		100	16X20	722		10	8X16	216
	3.3	6.3X9	65		150	16X20	740		10	10X9	190
	3.3	6.3X12	68		150	16X25	798		15	8X12	200
	3.9	6.3X7	65		220	16X25	900		15	8X16	225
	3.9	6.3X9	68		330	18X30	1,100		15	8X20	250
	4.7	6.3X7	66	200	1	6.3X7	35		22	8X20	380
	4.7	6.3X9	70		1	6.3X9	38		22	10X12	320
	4.7	6.3X12	72		1	6.3X12	42		22	10X16	380
	5.6	6.3X9	72		1.2	6.3X7	38		33	10X20	450
	5.6	8X9	74		1.2	6.3X9	42		33	12.5X13	430
	5.6	8X12	76		1.5	6.3X7	49		33	12.5X16	450
	6.8	6.3X12	84		1.5	6.3X9	50		47	10X20	520
	6.8	8X9	86		1.5	6.3X12	54		47	12.5X16	520
	6.8	8X12	96		1.8	6.3X7	50		47	12.5X20	580
	8.2	6.3X12	120		1.8	6.3X9	54		68	12.5X20	600
	8.2	8X9	135		1.8	6.3X12	60		68	12.5X25	665
	10	6.3X12	145		2.2	6.3X7	55		100	12.5X25	700
	10	8X9	165		2.2	6.3X9	60		100	16X25	760
	10	8X12	206		2.2	6.3X12	68		150	16X25	800
	10	8X16	216		2.8	6.3X7	61		150	16X30	895
	12	8X9	180		2.8	6.3X9	68				
	15	8X12	213		2.8	6.3X12	71				

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WV (V _{dc})	Cap. (μF)	Case Size ΦD×L (mm)	Rated ripple current (mA _{rms}) 105℃/100KHz	WV (V _{dc})	Cap. (μF)	Case Size ΦD×L (mm)	Rated ripple current (mA _{rms}) 105℃/100KHz	WV (V _{dc})	Cap. (μF)	Case Size ΦD×L (mm)	Rated ripple current (mA _{rms}) 105℃/100KHz
250	1	6.3X7	36	250	33	12.5X16	450	350	8.2	8X16	130
	1	6.3X9	40		33	12.5X20	470		8.2	8X20	144
	1	6.3X12	46		47	12.5X16	520		10	8X20	226
	1.2	6.3X7	41		47	12.5X20	580		10	10X12	205
	1.2	6.3X9	46		68	12.5X25	660		15	10X16	260
	1.5	6.3X7	51		68	16X25	720		15	10X20	285
	1.5	6.3X9	54		100	16X20	730		22	12.5X20	410
	1.5	6.3X12	58		100	16X30	836		33	12.5X20	425
	1.8	6.3X7	54		150	16X35	978		33	12.5X25	480
	1.8	6.3X9	58		150	18X25	885		47	16X20	600
	1.8	6.3X12	62	350	1	6.3X7	40	400	68	18X20	720
	2.2	6.3X7	55		1	6.3X9	45		100	18X25	850
	2.2	6.3X9	62		1	6.3X12	50		100	18X30	900
	2.2	6.3X12	70		1.2	6.3X7	55		1	6.3X7	50
	2.8	6.3X7	63		1.2	6.3X9	50		1	6.3X9	55
	2.8	6.3X9	70		1.5	6.3X9	55		1	6.3X12	59
	2.8	6.3X12	78		1.5	6.3X12	60		1.2	6.3X9	59
	3.3	6.3X9	75		1.8	6.3X9	60		1.2	6.3X12	63
	3.3	6.3X12	80		1.8	6.3X12	64		1.5	6.3X9	65
	4.7	6.3X12	92		2.2	6.3X9	66		1.5	8X12	72
	4.7	8X9	92		2.2	6.3X12	70		1.8	8X7	68
	4.7	8X12	102		2.2	8X9	72		1.8	8X9	70
	5.6	8X9	95		2.8	8X9	76		1.8	8X12	75
	5.6	8X12	105		2.8	8X12	80		2.2	6.3X9	68
	6.8	8X9	105		3.3	6.3X12	77		2.2	6.3X12	72
	6.8	8X16	115		3.3	8X9	78		2.2	8X9	75
	8.2	8X10	108		3.3	8X12	82		2.2	8X12	78
	8.2	8X16	120		4.7	8X9	90		2.8	6.3X12	74
	8.2	10X9	110		4.7	8X12	102		2.8	8X9	78
	10	8X10	187		4.7	10X9	104		2.8	8X16	85
	10	8X16	216		5.6	8X12	105		3.3	8X7	78
	10	10X9	175		5.6	8X16	110		3.3	8X9	85
	15	8X16	225		5.6	10X9	106		3.3	8X12	91
	15	8X20	250		6.8	8X12	112		3.3	8X16	95
	22	8X16	350		6.8	8X20	128		4.7	8X9	90
	22	10X16	380		6.8	10X9	120		4.7	8X12	104

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400	4.7	8X16	110	450	2.8	8X9	75
	4.7	10X9	106		2.8	8X16	79
	5.6	8X12	114		3.3	8X12	80
	5.6	8X20	138		3.3	8X16	86
	5.6	10X16	138		3.3	10X9	80
	6.8	8X16	132		4.7	8X12	84
	6.8	8X20	148		4.7	8X20	99
	6.8	10X16	148		5.6	10X12	102
	8.2	10X16	218		5.6	10X16	115
	8.2	10X20	230		6.8	10X12	130
	10	10X16	226		6.8	10X20	158
	10	10X20	238		8.2	10X16	185
	15	10X20	255		8.2	10X20	209
	15	12.5X16	270		10	10X16	218
	15	12.5X20	300		10	10X20	225
	22	12.5X20	400		10	12.5X16	225
	22	12.5X25	420		15	12.5X20	332
	22	16X20	420		22	12.5X25	427
	33	16X25	550		33	10X45	510
	33	16X30	579		33	16X25	522
	47	16X25	590		47	12.5X45	660
	47	12.5X40	630		47	16X25	630
	47	16X30	637		47	16X35	700
	68	18X25	700		68	18X30	769
	68	18X30	760		100	18X35	890
	100	18X30	900		100	18X40	950
	100	18X40	1,100	500	10	12.5X20	259
450	1	6.3X9	55		10	12.2X25	272
	1	8X12	60		15	12.5X25	356
	1.2	6.3X9	60		15	16X20	356
	1.5	8X9	65		22	12.5X35	453
	1.5	8X12	70		22	16X25	453
	1.8	8X9	68		33	18X25	567
	1.8	8X12	72		47	18X30	713
	2.2	8X9	72		68	22X35	1,000
	2.2	8X16	75		100	22X35	1,400

※铝电解电容器由于在纹波电流叠加时自我发热、温度上升而老化，中心温度每升温5°C寿命减少一半。要想保持长寿命请在使用过程中降低纹波电流

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.