

### RN Non-polar Standard Series

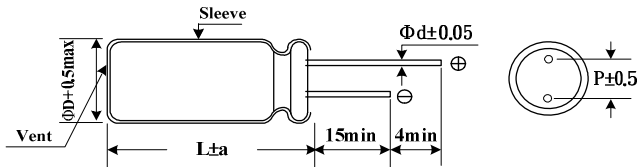


- Endurance: 85°C, 1000hours, Non-polarized/Polarity reversing
- Recommended Applications :Small crossover network, Reversed polarity circuit, Coupling
- Corresponding product to RoHS

### ■ SPECIFICATIONS

Item	Characteristics	
Category Temperature Range	-40 ~ +85°C	-25~+85°C
Rated Voltage Range	6.3~ 100VDC	160~250VDC
Rated Capacitance Range	1 ~ 6800 µF	1~100 µF
Capacitance Tolerance	± 20 % (120Hz , 20°C)	
Leakage Current (20°C)	I ≤ 0.03CV + 4 µ A ; L=7mm, I ≤ 0.05CV or 10 µ A whichever is greater. (After rated voltage applied for 2 minutes) I : Max. leakage current (µ A), C : Nominal capacitance (µ F), V : Rated voltage (V)	
Dissipation Factor(MAX) (tan δ) (120Hz ,20°C)	WV	6.3 10 16 25 35 50 63~100 160~250
	tan δ	0.24 0.2 0.17 0.15 0.15 0.15 0.12 0.20
When nominal capacitance is over 1000 µ F, tan δ shall be added 0.02 to the listed value with increase of every 1000 µ F.		
Low Temperature Stability Impedance Ratio (MAX)	WV	6.3 10 16 25 35 50 63~100 160~250
	Z(120Hz)	
	Z(-25°C) / Z(+20°C)	4 3 2 2 2 2 2 6
Z(-40°C) / Z(+20°C)	8 6 4 4 3 3 3 -	
Endurance	After applying rated voltage for 1000 hours at 85°C, the capacitors shall meet the following requirements. (The polarity shall be reversed every 250 hours)	
	Capacitance change	Within ± 20% of initial value
	D.F. (tan δ)	Not more than 200% of specified value
Leakage current	Not more than the specified value	
Shelf Life	After placed at 85°C without voltage applied for 500 hours, the capacitors shall meet the same requirements as load life.	

### ■ Dimensions [mm]



ΦD	4	5	6.3	8	10	13	16	18
P	1.5	2.0	2.5	3.5	5.0	5.0	7.5	7.5
Φd	0.45	0.5(0.45)	0.5(0.45)	0.6	0.6	0.6	0.8	0.8
a	1.0	1.5(1.0)	1.5(1.0)	1.5	1.5	2.0	2.0	2.0

( ) : L = 7

### ■ Multiplier for Ripple Current

WV(VDC)	Freq. (Hz)			
	50	120	1K	10K
6.3 ~ 16V	0.8	1.0	1.1	1.2
25 ~ 35V	0.8	1.0	1.5	1.7
50 ~ 100V	0.8	1.0	1.6	1.9
160 ~ 250V	0.8	1.0	1.5	1.6

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Rated Voltage (SurageVoltage) (V)	Cap (μF)	Case size ΦDxL(mm)	tan δ	Ripple current (mA/rms85°C) (120Hz)	Rated Voltage (SurageVoltage) (V)	Cap (μF)	Case size ΦDxL(mm)	tan δ	Ripple current (mA/rms85°C) (120Hz)
6.3(8)	22	5x7	0.24	35	35 (44)	4.7	5x7	0.15	25
	33	5x7	0.24	40			5x11	0.15	30
		5x11	0.24	60		10	5x11	0.15	40
	47	5x11	0.24	70			6.3x7	0.15	40
		6.3x7	0.24	50		22	6.3x11	0.15	70
	100	6.3x11	0.24	115			33	8x11	0.15
	220	8x11	0.24	205		47	8x11	0.15	120
	330	8x11	0.24	265		100	10x16	0.15	230
	470	10x12.5	0.24	370		220	13x20	0.15	410
	1000	10x20	0.24	650		330	13x20	0.15	505
	2200	13x25	0.26	1160		470	13x25	0.15	655
	3300	16x25	0.28	1570		1000	16x32	0.15	1140
	4700	16x32	0.30	2020		50 (63)	1	4x7	0.15
6800	18x36	0.34	2600	2.2	5x11			0.15	10
10(13)	10	4x7	0.20		25		3.3	4x7	0.15
	22	5x7	0.20	40	5x11			0.15	20
		33	5x11	0.20	50		4.7	5x7	0.15
	5x11		0.20	65	5x11			0.15	30
	47	6.3x7	0.20	50	10		6.3x7	0.15	30
		5x11	0.20	75			5x11	0.15	30
	6.3x7	5x11	0.20	60	10		6.3x11	0.15	45
		6.3x11	0.20	125	22		8x11	0.15	80
	100	6.3x11	0.20	215	33		8x11	0.15	105
	220	8x11	0.20	345	47		8x15	0.15	140
	330	10x16	0.20	410	100		10x20	0.15	265
	470	10x16	0.20	720	220		13x25	0.15	480
	1000	13x20	0.20	1280	330		16x25	0.15	650
2200	16x25	0.22	1690	470	16x32		0.15	835	
3300	16x32	0.24	2160	63 (79)	10		6.3x11	0.12	55
4700	18x36	0.26	2160		22	8x11	0.12	90	
16 (20)	4.7	4x7	0.17		20	33	10x12.5	0.12	135
	10	5x7	0.17		30	47	10x16	0.12	180
		5x11	0.17		40	100	13x20	0.12	320
	22	5x11	0.17		55	220	16x25	0.12	575
		6.3x7	0.17		45	330	16x32	0.12	750
	33	5x11	0.17		70	470	18x36	0.12	965
		6.3x7	0.17	60	80 (100)	10	8x11	0.12	65
	6.3x7	6.3x7	0.17	70		22	10x16	0.12	105
		6.3x11	0.17	95		33	10x16	0.12	160
	100	8x11	0.17	160		47	10x20	0.12	215
	220	10x12.5	0.17	275		100	13x25	0.12	385
	330	10x16	0.17	375		220	16x32	0.12	690
	470	10x20	0.17	485		330	18x36	0.12	860
1000	13x25	0.17	855	100 (125)	10	8x11	0.12	70	
2200	16x32	0.19	1510		22	10x16	0.12	135	
3300	18x36	0.21	1980		33	13x20	0.12	220	
25 (32)	3.3	4x7	0.15		15	47	13x20	0.12	240
	4.7	5x7	0.15		20	100	16x25	0.12	425
		5x11	0.15	40	220	18x36	0.12	720	
	10	6.3x7	0.15	35	160 (200)	1	6.3x11	0.20	15
		6.3x7	0.15	50		2.2	8x11	0.20	20
	22	6.3x11	0.15	65		3.3	10x12.5	0.20	30
		6.3x7	0.15	65		4.7	10x12.5	0.20	35
	33	6.3x11	0.15	80		10	10x16	0.20	55
		6.3x11	0.15	95		22	13x25	0.20	105
	100	8x11	0.15	160		33	16x25	0.20	165
	220	10x16	0.15	305		47	16x26	0.20	200
	330	13x20	0.15	450		100	18x36	0.20	360
	470	13x20	0.15	540		200 (250)	1	6.3x11	0.20
1000	16x25	0.15	950	2.2	8x11		0.20	20	
2200	18x36	0.17	1620	3.3	10x12.5		0.20	30	
35 (44)	2.2	4x7	0.15	15	4.7		10x16	0.20	40
	3.3	5x7	0.15	20					

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Rated Voltage (SurageVoltage) (V)	Cap ( $\mu$ F)	Case size $\Phi$ DxL(mm)	$\tan \delta$	Ripple current (mA/rms85°C) (120Hz)
200 (250)	10	13x20	0.20	70
	22	13x25	0.20	120
	33	16x25	0.20	165
	47	16x32	0.20	220
250 (300)	1	8x11	0.20	15
	2.2	10x12.5	0.20	25

Rated Voltage (SurageVoltage) (V)	Cap ( $\mu$ F)	Case size $\Phi$ DxL(mm)	$\tan \delta$	Ripple current (mA/rms85°C) (120Hz)
250 (300)	3.3	10x12.5	0.20	30
	4.7	10x16	0.20	40
	10	13x20	0.20	70
	22	16x25	0.20	135
	33	16x32	0.20	180
	47	16x36	0.20	230