

## NV Series

### Features

- ◆ 85°C Non-polarized
- ◆ Reflow soldering is available
- ◆ Available for high density mounting
- ◆ ROHS Compliant



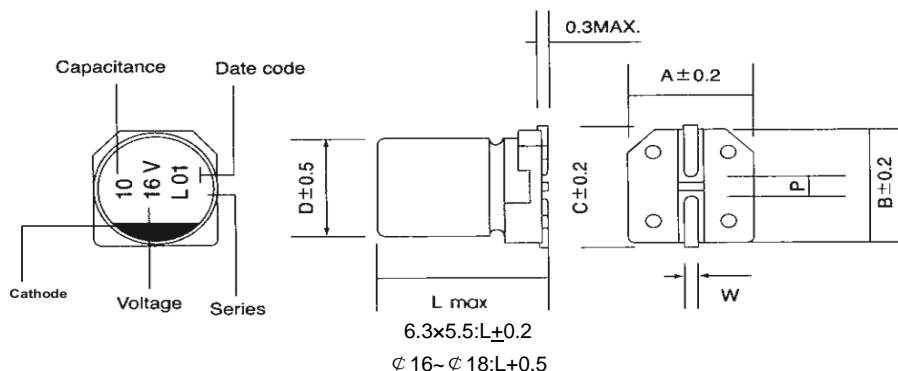
### Specifications

Item	Performance Characteristics
Operating Temperature Range	-40~ +85°C
Rated Voltage Range	6.3~50 VDC
Capacitance Range	0.1 to 560μF
Capacitance Tolerance	±20%(120Hz,+20°C)
Leakage Current (+20°C, max.)	0.05 CV or 10 (μA) After 2 minutes, whichever is greater measured with rated working voltage applied
Dissipation Factor (tanδ, at 20°C, 120Hz)	Working voltage(VDC)
	D.F.(%)max
Low Temperature Characteristics (at 120Hz)	Impedance ratio max
	Rated voltage(VDC)
	Z-25°C / Z+20°C
	Z-40°C / Z+20°C
Endurance	Test conditions
	Duration time : 2000Hrs
	Ambient temperature : +85°C
	Applied voltage : Rated DC working voltage
	After test requirement at +20°C:
	Capacitance change : Within ±25% of the initial value
	Dissipation factor : Less than 200% of specified value
Leakage current : Less than specified value	
Shelf Life	Test conditions
	Duration time : 1000 Hrs
	Ambient temperature : +85°C
	Applied voltage : None
	After test requirement at +20°C : Same limits as Endurance.
	Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.
Resistance to soldering heat	The capacitors shall be kept on the hot plate maintained at 250°C for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the characteristic requirements listed under.
	Leakage
	Capacitance
	tanδ

### Multiplier for Ripple Current vs. Frequency

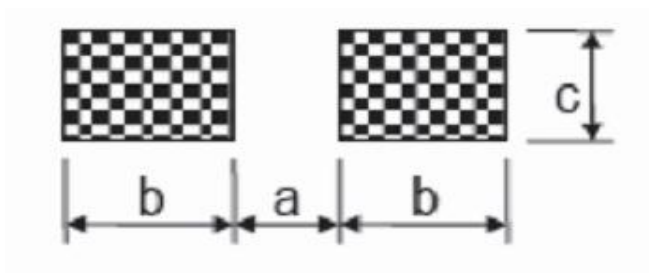
Frequency(Hz)	60(50)	120	500	1K	≥10K
Multiplier	0.80	1.00	1.20	1.30	1.50

### Diagram of Dimensions:(unit:mm)



φD	L	A	B	C	W	P
4	5.5	4.3	4.3	4.9	0.5~0.8	1.0
5	5.5	5.3	5.3	5.9	0.5~0.8	1.4
6.3	5.5	6.6	6.6	7.2	0.5~0.8	2.2
6.3	7.7	6.6	6.6	7.2	0.5~0.8	2.2
8	6.5	8.3	8.3	9.0	0.5~0.8	2.3
8	10.5	8.3	8.3	9.0	0.7~1.1	3.1
10	10.5	10.3	10.3	11.0	0.7~1.1	4.5
12.5	14	13.0	13.0	13.9	1.0~1.4	4.5
16	17	17.1	17.1	18.0	1.0~1.4	7.0
16	21.5	17.1	17.1	18.0	1.0~1.4	7.0
18	16.5	19.1	19.1	20.0	1.0~1.4	7.5
18	21.5	19.1	19.1	20.0	1.0~1.4	7.5

**Recommended land pattern:(unit:mm)**



$\Phi D \times L$	a	b	c
4 x all	1	2.6	1.6
5 x all	1.4	3	1.6
6.3 x all	2.1	3.5	1.6
8 x 6.5 (height $\leq 6.5$ )	2.1	4.5	1.6
8 x 6.5 (height $> 6.5$ )	2.8	4.2	1.9
10 x all	4.3	4.4	1.9
12.5 x all	4.3	5.8	2.5
16 x all	6	6.5	3.5
18 x all	6	7.5	3.5

## Case Size

WV (Vdc)	Cap (uF)	Size mm	Rated Ripple current (mA <sub>rms</sub> /85°C /120Hz)	WV (Vdc)	Cap (uF)	Size mm	Rated Ripple current (mA <sub>rms</sub> /85°C /120Hz)
6.3	10	4x5.5	15	50	0.22	4x5.5	2
6.3	22	4x5.5	28	50	0.33	4x5.5	2.8
6.3	22	5x5.5	32	50	0.47	4x5.5	4
6.3	33	5x5.5	37	50	1	4x5.5	8.4
6.3	47	6.3x5.5	45	50	2.2	4x5.5	13
6.3	100	6.3x7.7	65	50	2.2	5x5.5	13
6.3	100	8x6.5	70	50	3.3	4x5.5	17
6.3	220	8x10.5	120	50	3.3	5x5.5	17
6.3	330	8x10.5	160	50	4.7	5x5.5	20
6.3	470	10x10.5	190	50	4.7	6.3x5.5	20
6.3	560	10x10.5	220	50	10	6.3x5.5	32
10	10	4x5.5	17	50	22	8x10.5	60
10	22	5x5.5	33	50	33	10x10.5	75
10	22	6.3x5.5	37	50	47	10x10.5	100
10	33	6.3x5.5	41				
10	47	6.3x5.5	50				
10	100	6.3x7.7	75				
10	100	8x6.5	80				
10	220	8x10.5	150				
10	330	10x10.5	180				
16	3.3	4x5.5	12				
16	4.7	4x5.5	12				
16	10	4x5.5	23				
16	10	5x5.5	23				
16	22	5x5.5	37				
16	22	6.3x5.5	37				
16	33	6.3x5.5	49				
16	47	6.3x7.7	51				
16	47	8x6.5	55				
16	100	8x10.5	100				
16	220	10x10.5	170				
25	3.3	4x5.5	12				
25	3.3	5x5.5	12				
25	4.7	4x5.5	16				
25	4.7	5x5.5	16				
25	10	5x5.5	27				
25	10	6.3x5.5	27				
25	22	6.3x5.5	40				
25	33	6.3x7.7	51				
25	33	8x6.5	55				
25	47	6.3x7.7	56				
25	47	8x6.5	60				
25	100	8x10.5	130				
35	2.2	4x5.5	8.4				
35	3.3	4x5.5	16				
35	3.3	5x5.5	16				
35	4.7	4x5.5	18				
35	4.7	5x5.5	18				
35	10	6.3x5.5	29				
35	22	6.3x5.5	45				
35	33	8x10.5	58				
35	47	8x10.5	64				
50	0.1	4x5.5	1				