

OVK Series

Features

- 105°C, 5,000 hours assured
- Ultra low ESR, solid capacitors of SMD type
- RoHS Compliant



Marking color: Blue

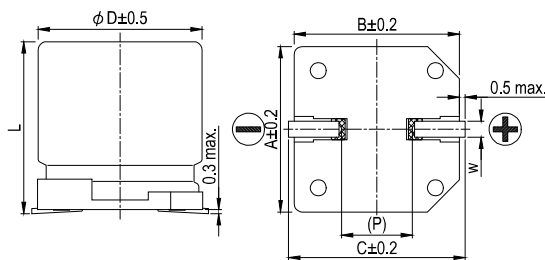
Specifications

Items	Performance				
Category Temperature Range	-55℃ ~ +105℃				
Capacitance Tolerance	± 20% (at 120 Hz, 20℃)				
Leakage Current (at 20℃)*	Rated voltage applied, after 2 minutes at 20℃. See Standard Ratings				
Tanδ (at 120 Hz, 20℃)	See Standard Ratings				
ESR (at 100k ~ 300k Hz, 20℃)	See Standard Ratings				
Endurance	Test Time		5,000 Hrs		
	Capacitance Change		Within ± 20% of initial value		
	Tanδ		Less than 150% of specified value		
	ESR		Less than 150% of specified value		
	Leakage Current		Within specified value		
* The above specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage applied for 5,000 hours at 105℃.					
Moisture Resistance	Test Time		1,000 Hrs		
	Capacitance Change		Within ± 20% of initial value		
	Tanδ		Less than 150% of specified value		
	ESR		Less than 150% of specified value		
	Leakage Current		Within specified value		
* The above specifications shall be satisfied when the capacitors are restored to 20℃ after subjecting them at 60℃, 90 ~ 95% RH for 1,000 hours. Leakage current should be tested after voltage treatment*.					
Resistance to Soldering Heat * (Please refer to page 15 for reflow soldering conditions)	Capacitance Change		Within ± 10% of initial value		
	Tanδ		Within specified value		
	ESR		Within specified value		
	Leakage Current		Within specified value		
Ripple Current and Frequency Multipliers	Frequency (Hz)	120 ≤ f < 1k	1k ≤ f < 10k	10k ≤ f < 100k	100k ≤ f < 500k
	Multiplier	0.05	0.3	0.7	1.0

* For any doubt about measured values, measure the leakage current again after the following voltage treatment.

Voltage treatment: DC rated voltage is applied to the capacitors for 2 hours at 105 °C.

Diagram of Dimensions



Lead Spacing and Diameter

Unit: mm

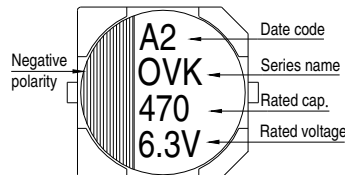
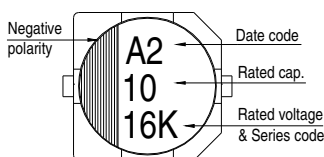
φ D	L	A	B	C	W	P
5	5.7 ± 0.3	5.3	5.3	5.9	0.5 ~ 0.8	1.5
6.3	4.4 ± 0.2	6.6	6.6	7.2	0.5 ~ 0.8	2.0
6.3	5.9 +0.1/-0.3	6.6	6.6	7.2	0.5 ~ 0.8	2.0
6.3	7.7 ± 0.3	6.6	6.6	7.2	0.5 ~ 0.8	2.0
6.3	9.5 ± 0.5	6.6	6.6	7.2	0.5 ~ 0.8	2.0
8	6.7 ± 0.3	8.3	8.3	9.0	0.7 ~ 1.1	3.1
8	12.0 ± 0.5	8.3	8.3	9.0	0.7 ~ 1.1	3.1
10	7.7 ± 0.3	10.3	10.3	11.0	0.7 ~ 1.3	4.7
10	9.9 +0.1/-0.3	10.3	10.3	11.0	0.7 ~ 1.3	4.7
10	12.6 +0.1/-0.4	10.3	10.3	11.0	0.7 ~ 1.3	4.7

The diagram is marking " () " for reference dimension.

Marking

φ D = 5 ~ 6.3

φ D = 8 ~ 10



Dimension: ϕ D×L(mm)

Ripple Current: mA/rms at 100k Hz, 105°C

Standard Ratings

Rated Volt. (V)	Surge Voltage (V)	Capacitance (μ F)	Size ϕ D×L(mm)	Tan δ (120 Hz, 20°C)	L C (μ A)	E S R (m Ω /at 100k ~ 300k Hz, 20°C max.)	Rated R. C. (mA/rms at 100k Hz, 105°C)
2.5V (0E)	2.9	120	6.3 × 4.4	0.12	120	40	1,670
		220	6.3 × 5.9		110	25	2,500
		560	8 × 6.7		280	23	3,100
		680	8 × 12	0.18	340	12	4,770
		1,000	10 × 7.7	0.12	500	19	4,240
		1,200	10 × 9.9	0.18	750	13	5,200
		1,500	10 × 12.6	0.18	750	10	5,500
4V (0G)	4.6	68	5 × 5.7	0.12	300	30	1,970
		100	6.3 × 4.4		160	40	1,670
		150	5 × 5.7		120	25	2,200
			6.3 × 5.9		120	22	2,570
		220	8 × 6.7		176	25	3,020
		270	8 × 6.7		216	22	3,220
		330	6.3 × 5.9		264	20	2,800
			8 × 6.7		264	22	3,220
		390	6.3 × 7.7		312	14	3,470
		470	10 × 7.7		375	20	4,130
		560	8 × 6.7		448	18	3,600
			8 × 12	0.18	448	12	4,770
		680	10 × 7.7	0.12	544	20	4,130
		820	10 × 9.9	0.18	656	13	5,200
		1,200	10 × 12.6	0.18	960	10	5,500
6.3V (0J)	7.2	47	5 × 5.7	0.12	300	30	1,970
		82	6.3 × 4.4		207	40	1,670
			6.3 × 5.9		103	27	2,400
		100	5 × 5.7		126	35	1,380
			6.3 × 5.9		126	22	2,800
		120	6.3 × 5.9		151	22	2,800
		150	8 × 6.7		189	25	3,020
		20	6.3 × 5.9		277	20	2,800
			8 × 6.7		277	22	3,220
		270	6.3 × 7.7		340	14	3,470
		330	6.3 × 7.7		416	14	3,470
			10 × 7.7		416	20	4,130
		390	8 × 6.7		491	22	3,220
		470	8 × 12	0.15	592	12	4,770
			10 × 7.7	0.12	592	20	4,130
		560	10 × 9.9	0.15	706	16	4,700
		820	10 × 12.6	0.15	1,033	10	5,500
10V (1A)	12.0	33	5 × 5.7	0.12	100	40	1,300
		56	6.3 × 4.4		224	40	1,670
			6.3 × 5.9		112	27	2,300
		68	5 × 5.7		136	30	2,100
			6.3 × 5.9		136	27	2,300
		120	6.3 × 5.9		240	27	2,300
		150	6.3 × 7.7		300	21	2,880
			8 × 6.7			30	2,760
			10 × 7.7			30	3,020

Dimension: ϕ D×L(mm)

Ripple Current: mA/rms at 100k Hz, 105°C

Standard Ratings

Rated Volt. (V)	Surge Voltage (V)	Capacitance (μF)	Size φ D×L(mm)	Tanδ (120 Hz, 20℃)	L C (μA)	E S R (mΩ/at 100k ~ 300k Hz, 20℃ max.)	Rated R. C. (mA/rms at 100k Hz, 105℃)	
10V (1A)	12.0	270	8 × 6.7	0.12	540	22	3,200	
		330	8 × 12	0.15	660	14	4,420	
			10 × 7.7	0.12	660	24	3,770	
		470	10 × 9.9		940	18	4,400	
		560	10 × 12.6		1,120	12	5,300	
16V (1C)	18.0	22	5 × 5.7	0.12	100	45	1,100	
		33	6.3 × 4.4		211	40	1,670	
		39	5 × 5.7		125	35	2,000	
			6.3 × 5.9		125	30	2,200	
		68			218			
		82	6.3 × 7.7		262	24	2,700	
			8 × 6.7			28	2,800	
			100			6.3 × 5.9	320	30
		6.3 × 7.7			24	2,700		
		10 × 7.7			35	2,670		
		120	8 × 6.7		384	28	2,800	
		180	10 × 7.7		576	29	3,430	
		270	6.3 × 9.5		864	11	5,000	
		330	10 x 12.6		1,056	12	5,300	
		470			1,504		5,300	
		820			2,624		5,400	
		1,000			3,200		5,400	
20V (1D)	23.0	15	6.3 × 4.4	0.12	120	45	2,000	
		22	6.3 × 4.4		88	35	2,000	
		22	6.3 × 5.9		88	48	1,300	
		47	8 × 6.7		188	45	1,890	
		56	6.3 × 5.9		224	48	1,300	
		68			272			
		82			328			
		100			400			
		120	480		21	4,000		
		270	1,080					
		390	1,560				14	4,950
		470	10 × 12.6				1,880	20
25V (1E)	29.0	10	8 × 6.7	0.10	125	60	1,500	
		47	6.3 × 5.9	0.12	235	49	1,300	
		150	8 × 12		750	28	2,200	
		270	10 × 12.6		1,350	27	2,700	
35V (1V)	40.0	18	6.3 × 5.9	0.12	126	64	900	
		82	8 × 12		574	29	2,200	
		150	10 × 12.6		1,050	28	2,600	

Note: The surface temperature of aluminum case top must not exceed 105°C. A rise in temperature due to self-heating by ripple current should be factored in.

Part Numbering System

OVK Series	470μF	± 20%	6.3V	Carrier Tape		10 ϕ × 7.7L	General Purpose
<u>OVK</u>	<u>471</u>	<u>M</u>	<u>0J</u>	<u>TR</u>	-	<u>1008</u>	
Series Name	Capacitance	Capacitance Tolerance	Rated Voltage	Package Type	Terminal Type	Case Size	Application

Note: For more details, please refer to "Part Numbering System" on page 20.