

OVK Series

Features

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



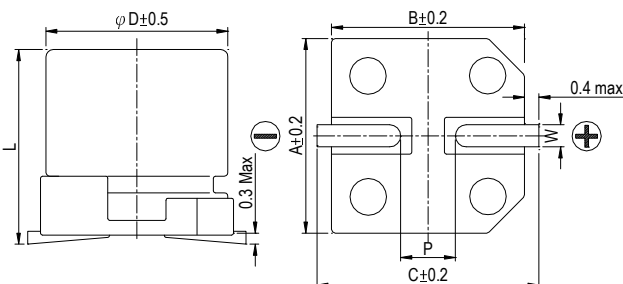
Marking color: Blue

Specifications

Items	Performance										
Category Temperature Range	-55°C ~ +105°C										
Capacitance Tolerance	±20% (at 120Hz, 20°C)										
Leakage Current (at 20°C)*	Rated voltage applied, after 2 minutes at 20°C. See Standard Ratings										
Tanδ (at 120Hz, 20°C)	See Standard Ratings										
ESR (at 100k ~ 300k Hz, 20°C)	See Standard Ratings										
Endurance	<table border="1"> <tr><td>Test Time</td><td>5,000 Hrs</td></tr> <tr><td>Capacitance Change</td><td>Within ±20% of initial value</td></tr> <tr><td>Tanδ</td><td>Less than 150% of specified value</td></tr> <tr><td>ESR</td><td>Less than 150% of specified value</td></tr> <tr><td>Leakage Current</td><td>Within specified value</td></tr> </table>	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
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	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°C after the rated voltage applied for 5,000 hours at 105°C.											
Moisture Resistance	<table border="1"> <tr><td>Test Time</td><td>1,000 Hrs</td></tr> <tr><td>Capacitance Change</td><td>Within ±20% of initial value</td></tr> <tr><td>Tanδ</td><td>Less than 150% of specified value</td></tr> <tr><td>ESR</td><td>Less than 150% of specified value</td></tr> <tr><td>Leakage Current</td><td>Within specified value</td></tr> </table>	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
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	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°C after subjecting them at 60°C, 90 to 95% RH for 1,000 hours. Leakage current should be tested after voltage treatment*.											
Resistance to Soldering Heat * (Please refer to page 22 for reflow soldering conditions)	<table border="1"> <tr><td>Capacitance Change</td><td>Within ±10% of initial value</td></tr> <tr><td>Tanδ</td><td>Less than 130% of specified value</td></tr> <tr><td>ESR</td><td>Less than 130% of specified value</td></tr> <tr><td>Leakage Current</td><td>Within specified value</td></tr> </table>	Capacitance Change	Within ±10% of initial value	Tanδ	Less than 130% of specified value	ESR	Less than 130% of specified value	Leakage Current	Within specified value		
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Ripple Current & Frequency Multipliers	<table border="1"> <tr> <th>Frequency (Hz)</th> <th>120 ≤ f < 1k</th> <th>1k ≤ f < 10k</th> <th>10k ≤ f < 100k</th> <th>100k ≤ f < 500k</th> </tr> <tr> <td>Multiplier</td> <td>0.05</td> <td>0.3</td> <td>0.7</td> <td>1.0</td> </tr> </table>	Frequency (Hz)	120 ≤ f < 1k	1k ≤ f < 10k	10k ≤ f < 100k	100k ≤ f < 500k	Multiplier	0.05	0.3	0.7	1.0
	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



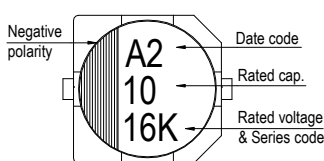
Lead Spacing and Diameter

Unit: mm

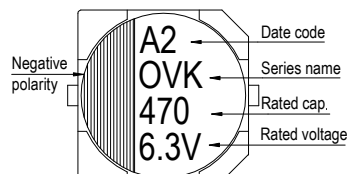
φ D	L	A	B	C	W	P ± 0.2
6.3	5.9+0.1/-0.3	6.6	6.6	7.2	0.5 ~ 0.8	2.0
8	6.7 ± 0.3	8.4	8.4	9.0	0.7 ~ 1.1	3.1
8	12.0 ± 0.5	8.4	8.4	9.0	0.7 ~ 1.1	3.1
10	7.7 ± 0.3	10.4	10.4	11.0	0.7 ~ 1.3	4.7
10	12.6 +0.1/-0.4	10.4	10.4	11.0	0.7 ~ 1.3	4.7

Marking

φ D = 6.3



φ D = 8 ~ 10





Dimension: $\phi D \times L$ (mm)
Ripple Current: mA/rms at 100k Hz, 105°C

Standard Ratings

W. V. (V)	Surge Voltage (V)	Capacitance (μ F)	Size $\phi D \times L$ (mm)	Tan δ (120Hz, 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)
4V (0G)	4.6	150	6.3 x 5.9	0.12	120	22	2,570
		270	8 x 6.7	0.12	216	22	3,220
		330	6.3 x 5.9	0.12	264	20	2,800
			8 x 6.7	0.12	264	22	3,220
		560	8 x 6.7	0.12	448	18	3,600
680	10 x 7.7	0.12	544	20	4,130		
6.3V (0J)	7.2	100	6.3 x 5.9	0.12	126	22	2,800
		120	6.3 x 5.9	0.12	151	22	2,800
		220	6.3 x 5.9	0.12	277	20	2,800
			8 x 6.7	0.12	277	22	3,220
		390	8 x 6.7	0.12	491	22	3,220
470	10 x 7.7	0.12	592	20	4,130		
10V (1A)	12.0	56	6.3 x 5.9	0.12	112	27	2,300
		68	6.3 x 5.9	0.12	136	27	2,300
		120	6.3 x 5.9	0.12	240	27	2,300
		150	8 x 6.7	0.12	300	30	2,760
			10 x 7.7	0.12	300	30	3,020
		270	8 x 6.7	0.12	540	22	3,200
330	10 x 7.7	0.12	660	24	3,770		
16V (1C)	18.0	39	6.3 x 5.9	0.12	125	30	2,200
		68	6.3 x 5.9	0.12	218	30	2,200
		82	8 x 6.7	0.12	262	28	2,800
		100	10 x 7.7	0.12	320	35	2,670
		120	8 x 6.7	0.12	384	28	2,800
		180	10 x 7.7	0.12	576	29	3,430
20V(1D)	23.0	820	10 x 12.6	0.12	2,624	12	5,400
		56	6.3 x 5.9	0.12	224	48	1,300
		270	8 x 12	0.12	1,080	21	4,000
		390	8 x 12	0.12	1,560	14	4,950
		470	10 x 12.6	0.12	1,880	20	4,300
		25V(1E)	29.0	47	6.3 x 5.9	0.12	235
150	8 x 12			0.12	750	28	2,200
270	10 x 12.6			0.12	1,350	27	2,700
35V(1V)	40.0	18	6.3 x 5.9	0.12	126	64	900
		82	8 x 12	0.12	574	29	2,200
		150	10 x 12.6	0.12	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 470 μ F \pm 20% 6.3V Carrier Tape 10 ϕ x 7.7L Pb-free and PET coating case

OVK **471** **M** **OJ** **TR** - **1008**

Series name Capacitance Capacitance Tolerance Rated Voltage Package Type Terminal Type Case size Lead Wire and Coating Type

Note: For more details, please refer to "Part Numbering System (SMD Type)" on page 12.