

OVG Series

Features

- 105°C, 15,000 hours assured
- Ultra low ESR with large permissible ripple current
- RoHS Compliance



Marking color: Blue

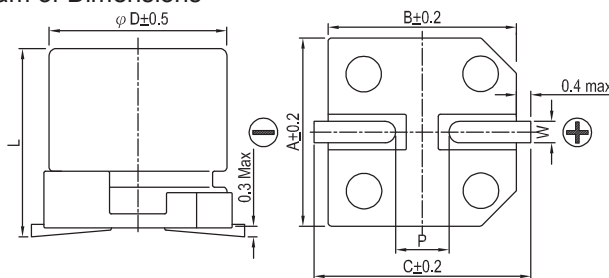
Specifications

Items	Performance																													
Category Temperature Range	-55℃ ~ +105℃																													
Capacitance Tolerance	±20% (at 120Hz, 20℃)																													
Leakage Current (at 20℃)*	Rated voltage applied, after 2 minutes at 20℃. See Standard Ratings																													
Tanδ (at120Hz, 20℃)	See Standard Ratings																													
ESR (at 100k ~ 300k Hz, 20℃)	See Standard Ratings																													
Endurance	<table><tr><td>Test Time</td><td colspan="4">15,000 Hrs</td></tr><tr><td>Capacitance Change</td><td colspan="4">Within ±20% of initial value</td></tr><tr><td>Tanδ</td><td colspan="4">Less than 150% of specified value</td></tr><tr><td>ESR</td><td colspan="4">Less than 150% of specified value</td></tr><tr><td>Leakage Current</td><td colspan="4">Within specified value</td></tr></table>					Test Time	15,000 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			
	Test Time	15,000 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 15,000 hours at 105℃.																														
Moisture Resistance	<table><tr><td>Test Time</td><td colspan="4">1,000 Hrs</td></tr><tr><td>Capacitance Change</td><td colspan="4">Within ±20% of initial value</td></tr><tr><td>Tanδ</td><td colspan="4">Less than 150% of specified value</td></tr><tr><td>ESR</td><td colspan="4">Less than 150% of specified value</td></tr><tr><td>Leakage Current</td><td colspan="4">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			
	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 to 95% RH for 1,000 hours. Leakage current should be tested after voltage treatment*.																														
Resistance to Soldering Heat * (Please refer to page 25 for reflow soldering conditions)	<table><tr><td>Capacitance Change</td><td colspan="4">Within ±10% of initial value</td></tr><tr><td>Tanδ</td><td colspan="4">Less than 130% of specified value</td></tr><tr><td>ESR</td><td colspan="4">Less than 130% of specified value</td></tr><tr><td>Leakage Current</td><td colspan="4">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								
	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																												
Ripple Current and Frequency Multipliers	<table><tr><td>Frequency (Hz)</td><td>120 ≤ f < 1k</td><td>1k ≤ f < 10k</td><td>10k ≤ f < 100k</td><td>100k ≤ f < 500k</td></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



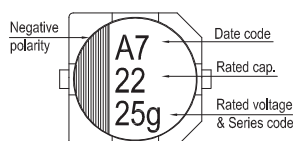
Lead Spacing and Diameter

Unit: mm

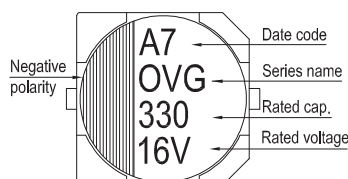
φ D	L	A	B	C	W	P ± 0.2
5	5.8 ± 0.3	5.3	5.3	5.9	0.5 ~ 0.8	1.5
6.3	5.8 ± 0.3	6.6	6.6	7.2	0.5 ~ 0.8	2.0
6.3	7.7 ± 0.3	6.6	6.6	7.2	0.5 ~ 0.8	2.0
8	6.7 ± 0.3	8.4	8.4	9.0	0.7 ~ 1.1	3.1
8	10.0 ± 0.5	8.4	8.4	9.0	0.7 ~ 1.1	3.1
10	7.7 ± 0.3	10.4	10.4	11.0	0.7 ~ 1.3	4.7
10	10.0 ± 0.5	10.4	10.4	11.0	0.7 ~ 1.3	4.7
10	12.6 +0.1/-0.4	10.4	10.4	11.0	0.7 ~ 1.3	4.7

Marking

φ D = 5 ~ 6.3



φ D = 8 ~ 10



Standard Ratings

Dimension: $\phi D \times L$ (mm)

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

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)
16V (1C)	18.0	220	6.3 $\times$ 7.7	0.12	704	22	3,300
		270	8 $\times$ 6.7	0.12	864	22	3,300
		330	8 $\times$ 10	0.12	1,050	21	3,400
		820	10 $\times$ 12.6	0.12	2,620	12	5,400
		1,000	10 $\times$ 12.6	0.12	3,200	12	5,400
20V(1D)	23.0	47	5 $\times$ 5.8	0.12	188	30	2,800
		56	5 $\times$ 5.8	0.12	224	30	2,800
		120	6.3 $\times$ 5.8	0.12	480	25	3,200
		150	6.3 $\times$ 7.7	0.12	600	25	3,200
		180	8 $\times$ 6.7	0.12	720	25	3,200
		220	8 $\times$ 10	0.12	880	23	3,400
		560	10 $\times$ 10	0.12	2,240	18	4,100
25V(1E)	29.0	22	5 $\times$ 5.8	0.12	110	40	2,450
		27	5 $\times$ 5.8	0.12	135	40	2,450
		39	6.3 $\times$ 5.8	0.12	195	30	2,800
		47	6.3 $\times$ 5.8	0.12	235	30	2,800
		56	6.3 $\times$ 5.8	0.12	280	30	2,800
			6.3 $\times$ 7.7	0.12	280	28	2,800
		68	8 $\times$ 6.7	0.12	340	28	3,000
		100	8 $\times$ 10	0.12	500	24	3,300
		120	8 $\times$ 10	0.12	600	22	3,500
		150	10 $\times$ 7.7	0.12	750	25	3,400
		220	10 $\times$ 10	0.12	1,100	20	3,800

Part Numbering System

OVG Series	150 μ F	$\pm 20\%$	25V	Carrier Tape	10 $\phi \times 7.7L$	Pb-free and PET coating case
OVG	151	M	1E	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 15.