

●高圧長寿命品

OPVシリーズ

JIS C 5101
CE-04

●High Voltage, Long Life Assurance

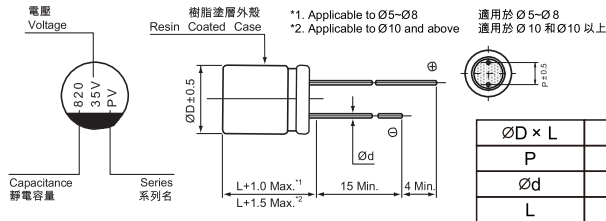
TYPE **OPV**

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■FEATURES

- Operating with wide temperature range -55~+105°C
- High voltage, low ESR, high ripple current
- Load life of 3000 hours
- RoHS & REACH compliant, Halogen-free

■寸法図/DIAGRAM OF DIMENSIONS



■性能/PERFORMANCE SPECIFICATIONS

カテゴリー温度範囲	CATEGORY TEMPERATURE RANGE	-55 ~ +105°C										
標準静電容量許容差	STANDARD CAPACITANCE TOLERANCE	±20% at 120Hz, 20°C										
漏れ電流 (最大値)	LEAKAGE CURRENT (MAX.VALUE)	≤Specified value (after 2 minutes application of rated voltage at 20°C)										
損失角の正接 (最大値)	DISSIPATION FACTOR (MAX.VALUE)	≤Specified value at 120KHz, 20°C.										
E.S.R	E.S.R.	≤Specified value at 100KHz, 20°C.										
低温特性	Stability at Low Temperature	Measurement frequency 測試頻率: 100KHz <table border="1"> <tr> <td>Impedance Ratio 阻抗比</td> <td>Z(+105°C)/Z(20°C) ≤ 1.25</td> </tr> <tr> <td>ZT/Z20 (max)</td> <td>Z(-55°C)/Z(20°C) ≤ 1.25</td> </tr> </table>	Impedance Ratio 阻抗比	Z(+105°C)/Z(20°C) ≤ 1.25	ZT/Z20 (max)	Z(-55°C)/Z(20°C) ≤ 1.25						
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耐久性	LOAD LIFE TEST	<table border="1"> <tr> <td>Capacitance Change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Dissipation Factor</td> <td>150% or less of initial specified value</td> </tr> <tr> <td>ESR</td> <td>150% or less of initial specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Initial specified value or less</td> </tr> </table> <p>After 2000 hours application of the rated voltage at 105°C, they meet the characteristics listed below.</p>	Capacitance Change	Within ±20% of initial value	Dissipation Factor	150% or less of initial specified value	ESR	150% or less of initial specified value	Leakage Current	Initial specified value or less		
	Capacitance Change	Within ±20% of initial value										
Dissipation Factor	150% or less of initial specified value											
ESR	150% or less of initial specified value											
Leakage Current	Initial specified value or less											
	MOISTURE RESISTANCE	After reflow soldering and restored at room temperature, they meet the characteristics listed below.										
定格リプル電流補正係数	RIPPLE CURRENT & FREQUENCY MULTIPLIERS	<table border="1"> <tr> <th>Frequency(Hz)</th> <th>120Hz ≤ f ≤ 1KHz</th> <th>1KHz ≤ f ≤ 10KHz</th> <th>10KHz ≤ f ≤ 100KHz</th> <th>100KHz ≤ f ≤ 300KHz</th> </tr> <tr> <td>Coefficient</td> <td>0.10</td> <td>0.40</td> <td>0.70</td> <td>1.00</td> </tr> </table>	Frequency(Hz)	120Hz ≤ f ≤ 1KHz	1KHz ≤ f ≤ 10KHz	10KHz ≤ f ≤ 100KHz	100KHz ≤ f ≤ 300KHz	Coefficient	0.10	0.40	0.70	1.00
Frequency(Hz)	120Hz ≤ f ≤ 1KHz	1KHz ≤ f ≤ 10KHz	10KHz ≤ f ≤ 100KHz	100KHz ≤ f ≤ 300KHz								
Coefficient	0.10	0.40	0.70	1.00								

■定格リプル電流補正係数

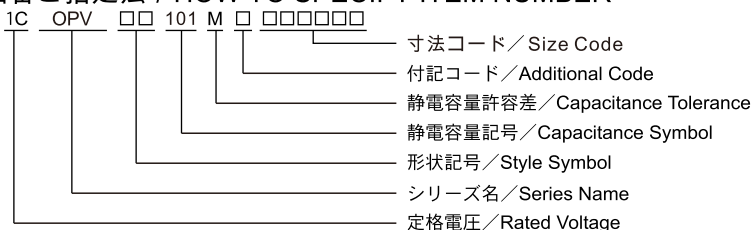
リプル周波数が標準品一覧表の規定値と異なる場合には、下表の係数を乗じた値以下でご使用下さい。

When the ripple frequency differs from the specification shown in the list of standard products, multiply the value with the coefficient shown below, and use the products under the obtained value.

周波数補正係数/FREQUENCY CORRECTION FACTOR

Cap.(µF)	Frequency (Hz)			
	120	1K	10K	100K
27 ~ 180	0.40	0.75	0.90	1.00
220 ~ 560	0.50	0.85	0.94	1.00
680 ~ 1800	0.60	0.87	0.95	1.00
2200 ~ 3900	0.75	0.90	0.95	1.00
4700 ~ 10000	0.85	0.95	0.98	1.00

■品番ご指定法 / HOW TO SPECIFY ITEM NUMBER



■ 寸法表 / CASE SIZE TABLE
■ Impedance [Max. Value Ω] at 20°C 100kHz
■ Ripple Current [Max. value mA] at 105°C 100kHz

WV (V) Parameter Cap. (μF)		16 (1C)					20 (1D)				
		Case size ∅D×L (mm)	Dissipation factor (tan δ)	Leakage current (μA)	ESR (mΩ) max. 20°C, 100KHz	Ripple current (mA rms) 105°C, 100KHz	Case size ∅D×L (mm)	Dissipation factor (tan δ)	Leakage current (μA)	ESR (mΩ) max. 20°C, 100KHz	Ripple current (mA rms) 105°C, 100KHz
150	151										
220	221	8 × 9	0.12	704	26	2100	8 × 12	0.12	880	25	2400
270	271	8 × 12	0.12	864	24	2500					
330	331						10 × 13	0.12	1320	24	2800
470	471	10 × 13	0.12	1504	23	2900					
680	681	10 × 13	0.12	2176	23	2900					
2200	222	10 × 21	0.12	7040	14	4800					

WV (V) Parameter Cap. (μF)		25 (1E)					35 (1V)				
		Case size ∅D×L (mm)	Dissipation factor (tan δ)	Leakage current (μA)	ESR (mΩ) max. 20°C, 100KHz	Ripple current (mA rms) 105°C, 100KHz	Case size ∅D×L (mm)	Dissipation factor (tan δ)	Leakage current (μA)	ESR (mΩ) max. 20°C, 100KHz	Ripple current (mA rms) 105°C, 100KHz
10							5 × 8	0.12	70	65	1000
47							5 × 8 (6.3 × 6)	0.12 (0.12)	329 (329)	55 (35)	1700 (1800)
56	560						8 × 9	0.12	392	29	1900
82	820						8 × 12	0.12	574	27	2300
100	101						6.3 × 8 (8 × 8)	0.12 (0.12)	700 (700)	28 (28)	2500 (2500)
120	121	8 × 9	0.12	600	28	2000					
150	151	6.3 × 9 (8 × 12)	0.12 (0.12)	750 (750)	23 (26)	3300 (2400)	10 × 13	0.12	1050	26	2700
220	221	8 × 8 (8 × 11)	0.12 (0.12)	1100 (1100)	22 (22)	2400 (2600)	8 × 11 (8 × 12)	0.12 (0.12)	1540 (1540)	16 (16)	2800 (2800)
270	271	6.3 × 12 (10 × 13)	0.12 (0.12)	1350 (1350)	27 (25)	2300 (2800)					
330	331	6.3 × 12 (10 × 10) (10 × 12)	0.12 (0.12) (0.12)	1650 (1650) (1650)	27 (22) (22)	2300 (3100) (3300)	10 × 12	0.12	2310	20	3600
470	471	8 × 12	0.12	2350	20	3300	10 × 10	0.12	3290	20	3600
560	561	8 × 12	0.12	2800	15	3400					
680	681	8 × 12 (10 × 13)	0.12 (0.12)	3400 (3400)	15 (15)	3700 (3900)	10 × 13	0.12	4760	20	3600
1000	102	10 × 16	0.12	5000	25	4500	10 × 21	0.12	7000	16	4700

WV (V) Parameter Cap. (μF)		50 (1H)					63 (1J)				
		Case size ∅D×L (mm)	Dissipation factor (tan δ)	Leakage current (μA)	ESR (mΩ) max. 20°C, 100KHz	Ripple current (mA rms) 105°C, 100KHz	Case size ∅D×L (mm)	Dissipation factor (tan δ)	Leakage current (μA)	ESR (mΩ) max. 20°C, 100KHz	Ripple current (mA rms) 105°C, 100KHz
22	220						8 × 9	0.12	277	35	1800
27	270						8 × 12	0.12	340	33	2100
33	330	8 × 9	0.12	330	32	1900					
39	390	8 × 12	0.12	390	29	2200					
47	470						10 × 13	0.12	592	29	2600
56	560						10 × 12	0.12	705	29	2600
68	680	10 × 13	0.12	680	28	2600					
180	181						10 × 12	0.12	2268	27	3400
220	221	10 × 12	0.12	2200	22	3500					
330	331						10 × 21	0.12	4158	20	4600

■寸法表/CASE SIZE TABLE
■Impedance[Max.Value Ω] at 20°C 100kHz
■Ripple Current [Max. value mA] at 105°C 100kHz

WV (V) Parameter		80 (1K)					100 (2A)				
		Case size ∅D×L (mm)	Dissipation factor (tan δ)	Leakage current (μA)	ESR (mΩ) max. 20°C, 100KHz	Ripple current (mA rms) 105°C, 100KHz	Case size ∅D×L (mm)	Dissipation factor (tan δ)	Leakage current (μA)	ESR (mΩ) max. 20°C, 100KHz	Ripple current (mA rms) 105°C, 100KHz
6.8	6R8						8 × 9	0.12	136	45	1600
10	100	8 × 9	0.12	160	40	1700	8 × 12	0.12	200	42	1800
12	120	8 × 12	0.12	192	38	1900					
15	150										
18	180						10 × 13	0.12	360	38	2200
22	220	10 × 13	0.12	352	35	2300					