

● 低ESR品

OMAシリーズ

JIS C 5101
CE-32

● low E.S.R.

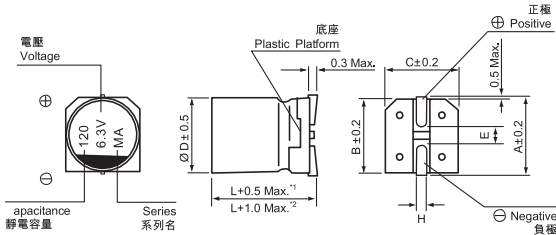
TYPE OMA

JIS C 5101
CE-32

■ FEATURES

- Operating with wide temperature range -55~+105°C
- Low ESR, high ripple current
- Load life of 2000 hours
- RoHS & REACH compliant, Halogen-free

■ 寸法図/DIAGRAM OF DIMENSIONS



*1. Applicable to Ø5-Ø8 適用於Ø5-Ø8
*2. Applicable to Ø10 and above 適用於Ø10 和Ø10 以上

ØD × L	4×5.5	5×6	6.3×5.5/6	8×7	8×12	10×8/10	10×12.7
A	5.0	6.0	7.3	9.0	9.0	11.0	11.0
B	4.3	5.3	6.6	8.3	8.3	10.3	10.3
C	4.3	5.3	6.6	8.3	8.3	10.3	10.3
E	1.0	1.6	2.1	3.2	3.2	4.6	4.6
L	5.5	6.0	5.5/6.0	7.0	12.0	8.0/10.0	12.7
H	0.5~0.8	0.5~0.8	0.5~0.8	0.8~1.1	0.8~1.1	0.8~1.1	0.8~1.1

■ 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 ZT/Z20 (max)</td> <td>Z(+105°C)/Z(20°C) ≤ 1.25 Z(-55°C)/Z(20°C) ≤ 1.25</td> </tr> </table>	Impedance Ratio 阻抗比 ZT/Z20 (max)	Z(+105°C)/Z(20°C) ≤ 1.25 Z(-55°C)/Z(20°C) ≤ 1.25								
Impedance Ratio 阻抗比 ZT/Z20 (max)	Z(+105°C)/Z(20°C) ≤ 1.25 Z(-55°C)/Z(20°C) ≤ 1.25											
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

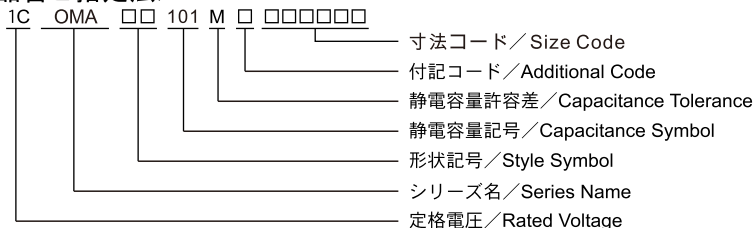
リプル周波数が標準品一覧表の規定値と異なる場合には、下表の係数を乗じた値以下でご使用下さい。

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)		2.5 (0E)					4 (0G)				
Cap. (μF)	Parameter	Case size ∅D×L (mm)	Dissipation factor (tan δ)	Leakage current (μA)	ESR (mΩ) max. 20°C, 100KHz	Ripple current (mA rms) 105°C, 100KH	Case size ∅D×L (mm)	Dissipation factor (tan δ)	Leakage current (μA)	ESR (mΩ) max. 20°C, 100KHz	Ripple current (mA rms) 105°C, 100KH
33	330						4 × 5.5	0.12	26.4	200	700
100	101	6.3 × 6	0.12	50	22	2600	6.3 × 5.5 (6.3 × 6)	0.12 (0.12)	80 (80)	22 (22)	2600 (2600)
150	151						6.3 × 5.5 (5 × 6) (6.3 × 6)	0.12 (0.12) (0.12)	120 (300) (120)	22 (30) (22)	2800 (2000) (2800)
220	221	6.3 × 5.5 (6.3 × 6)	0.12 (0.12)	110 (110)	20 (20)	2800 (2800)	8 × 7	0.12	176	21	3200
330	331						8 × 7	0.12	264	21	3400
470	471	8 × 7	0.12	235	20	3300	10 × 8	0.12	376	17	4200
560	561						8 × 12	0.12	448	13	4520
680	681						10 × 8	0.12	544	17	4400
820	821	10 × 8	0.12	410	17	4400	10 × 10	0.12	656	13	4800
1200	122						10 × 12.7	0.12	960	10	5500
1500	152	10 × 10 (10 × 12.7)	0.12 (0.12)	750 (750)	13 (12)	4700 (5440)					

WV (V)		6.3 (0J)					10 (1A)				
Cap. (μF)	Parameter	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
4.7	4R7						4 × 5.5	0.12	9.4	240	670
6.8	6R8						4 × 5.5	0.12	13.6	240	670
10	100						4 × 5.5	0.12	20	220	700
15	150						4 × 5.5	0.12	30	200	700
22	220	4 × 5.5	0.12	27.72	200	700					
33	330						5 × 6	0.12	66	35	1500
47	470	5 × 6	0.12	59.22	35	1600	5 × 6 (6.3 × 6)	0.12 (0.12)	94 (94)	26 (26)	2600 (2600)
56	560						6.3 × 5.5 (6.3 × 6)	0.12 (0.12)	112 (112)	25 (25)	2500 (2500)
82	820	6.3 × 5.5 (6.3 × 6)	0.12 (0.12)	103 (103)	23 (23)	2600 (2600)					
100	101	6.3 × 5.5 (5 × 6) (6.3 × 6)	0.12 (0.12) (0.12)	126 (315) (126)	23 (25) (23)	2800 (2200) (2800)					
120	121	6.3 × 6	0.12	151	23	3000	8 × 7	0.12	240	23	3000
150	151	8 × 7	0.12	189	22	3200	8 × 7 (10 × 8)	0.12 (0.12)	300 (300)	23 (21)	3200 (3300)
220	221	8 × 7	0.12	277	22	3400					
270	271						8 × 12 (10 × 8)	0.12 (0.12)	540 (540)	13 (20)	4500 (3600)
330	331	10 × 8	0.12	416	18	4200	8 × 12 (10 × 8)	0.12 (0.12)	660 (660)	14 (20)	4000 (3700)
470	471	8 × 12 (10 × 8) (10 × 10)	0.12 (0.12) (0.12)	592 (592) (592)	12 (18) (16)	5300 (4300) (4600)	10 × 10 (10 × 12.7)	0.12 (0.12)	940 (940)	16 (12)	4600 (5300)
560	561						10 × 10 (10 × 12.7)	0.12 (0.12)	1120 (1120)	15 (13)	4800 (5230)
680	681	10 × 10 (10 × 12.7)	0.12 (0.12)	857 (857)	14 (10)	5000 (5500)					
820	821	10 × 12.7	0.12	1033	10	5800					

■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		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
3.3	3R3	4 × 5.5	0.12	7.04	260	660					
10	100						4 × 5.5	0.12	40	120	900
22	220	5 × 6	0.12	70.4	45	1210	6.3 × 5.5 (6.3 × 6)	0.12 (0.12)	88 (88)	50 (50)	1700 (1700)
33	330	6.3 × 6	0.12	106	31	2400					
39	390	6.3 × 5.5 (6.3 × 6)	0.12 (0.12)	125 (125)	31 (31)	2400 (2400)	8 × 7	0.12	156	45	2000
47	470						8 × 7	0.12	188	45	2000
56	560	8 × 7	0.12	179	30	2900	10 × 8	0.12	224	40	2400
68	680						10 × 8	0.12	272	40	2600
82	820	8 × 7	0.12	262	28	3200	10 × 8	0.12	328	40	2600
100	101	10 × 8	0.12	320	27	3300	8 × 12	0.12	400	22	3200
120	121						10 × 10	0.12	480	35	2800
150	151	10 × 8 (6.3 × 6.5)	0.12 (0.12)	480 (480)	25 (30)	3500 (2900)	10 × 12.7	0.12	600	20	4320
180	181	8 × 12 (10 × 8)	0.12 (0.12)	576 (576)	16 (25)	4400 (3600)					
220	221	10 × 10 (10 × 12.7)	0.12 (0.12)	704 (704)	20 (14)	3900 (5050)					
330	331	10 × 12.7	0.12	1056	14	5000					

WV (V) Parameter		25 (1E)				
		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	6.3 × 6	0.12	34	80	1200
10	100	8 × 7	0.12	50	60	1600
22	220	10 × 8	0.12	110	50	2200
33	330	8 × 12	0.12	165	30	2800
47	470	8 × 12 (10 × 10)	0.12 (0.12)	235 (235)	30 (45)	3000 (2400)
56	560	10 × 12.7	0.12	280	28	3800
100	101	8 × 7	0.12	500	25	3000