

WG

Chip Type, Low Impedance

series



For SMD



Low Impedance

Anti-Solvent
Feature

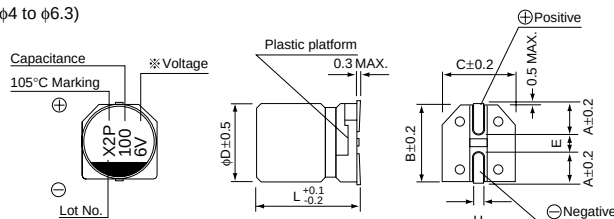
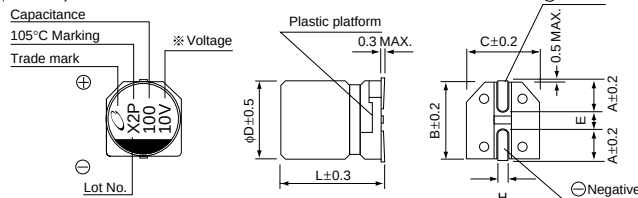
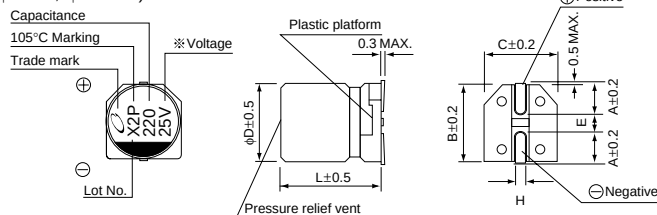
- Chip type, operating over wide temperature range of to -55 to $+105^{\circ}\text{C}$.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2002/95/EC).



Specifications

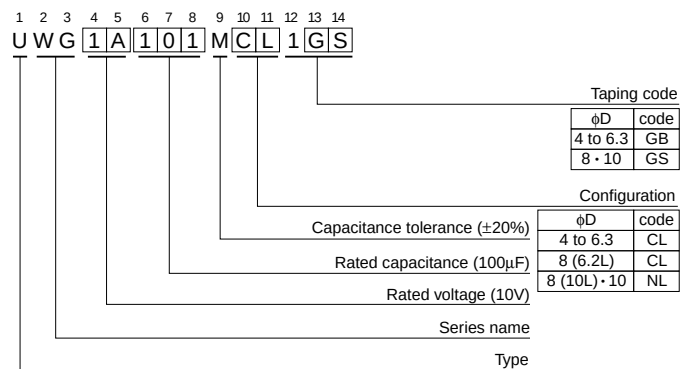
Item	Performance Characteristics							
Category Temperature Range	-55 to +105°C							
Rated Voltage Range	6.3 to 50V							
Rated Capacitance Range	1 to 1500μF							
Capacitance Tolerance	±20% at 120Hz, 20°C							
Leakage Current	After 2 minutes' application of rated voltage, leakage current is not more than 0.01CV or 3 (μA) , whichever is greater.							
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz, Temperature : 20°C							
	Rated voltage (V)	6.3	10	16	25	35	50	
	tan δ (MAX.)	0.26	0.19	0.16	0.14	0.12	0.12	
Stability at Low Temperature	Measurement frequency : 120Hz							
	Rated voltage (V)		6.3	10	16	25	35	50
	Impedance ratio	Z-25°C / Z+20°C	2	2	2	2	2	2
	ZT / Z20 (MAX.)	Z-55°C / Z+20°C	4	4	3	3	3	3
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 105°C.			Capacitance change		Within ±20% of the initial capacitance value		
				tan δ		200% or less than the initial specified value		
				Leakage current		Less than or equal to the initial specified value		
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.							
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C.			Capacitance change		Within ±10% of the initial capacitance value		
				tan δ		Less than or equal to the initial specified value		
				Leakage current		Less than or equal to the initial specified value		
Marking	Black print on the case top.							

Chip Type

($\phi 4$ to $\phi 6.3$)($\phi 8 \times 6.2$)($\phi 8 \times 10$, $\phi 10 \times 10$)

※ Voltage mark for 6.3V is 「6V」.

Type numbering system (Example : 10V 100 μF)



$\phi D \times L$	4 × 5.4	5 × 5.4	6.3 × 5.4	8 × 6.2	8 × 10	10 × 10
A	1.8	2.1	2.4	3.3	2.9	3.2
B	4.3	5.3	6.6	8.3	8.3	10.3
C	4.3	5.3	6.6	8.3	8.3	10.3
E	1.0	1.3	2.2	2.3	3.1	4.5
L	5.4	5.4	5.4	6.2	10	10
H	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

■Dimensions

Cap. (μF)	V Code	6.3			10			16		
		0J			1A			1C		
10	100							4 × 5.4	3.0	60
22	220	4 × 5.4	3.0	60				5 × 5.4	1.8	95
33	330				5 × 5.4	1.8	95			
47	470	5 × 5.4	1.8	95				6.3 × 5.4	1.0	140
68	680	6.3 × 5.4	1.0	140				8 × 6.2	0.4	230
100	101	6.3 × 5.4	1.0	140	8 × 6.2	0.4	230	8 × 6.2	0.4	230
150	151				8 × 6.2	0.4	230			
220	221	8 × 6.2	0.4	230	8 × 10	0.3	450	10 × 10	0.15	670
330	331	8 × 10	0.3	450				10 × 10	0.15	670
470	471				10 × 10	0.15	670	10 × 10	0.15	670
680	681							10 × 10	0.15	670
1000	102	10 × 10	0.15	670	10 × 10	0.15	670			
1500	152	10 × 10	0.15	670						

Cap. (μF)	V Code	25			35			50		
		1E			1V			1H		
1	010				4 × 5.4	3.0	60	4 × 5.4	5.0	30
2.2	2R2				4 × 5.4	3.0	60	4 × 5.4	5.0	30
3.3	3R3				4 × 5.4	3.0	60	4 × 5.4	5.0	30
4.7	4R7				4 × 5.4	3.0	60	5 × 5.4	3.0	50
6.8	6R8	4 × 5.4	3.0	60	5 × 5.4	1.8	95			
10	100				5 × 5.4	1.8	95	6.3 × 5.4	2.0	70
22	220	6.3 × 5.4	1.0	140	6.3 × 5.4	1.0	140	8 × 6.2	0.7	120
33	330	6.3 × 5.4	1.0	140	8 × 6.2	0.4	230	8 × 10	0.6	300
47	470	8 × 6.2	0.4	230	8 × 6.2	0.4	230	10 × 10	0.3	500
68	680	8 × 10	0.3	450						
100	101	8 × 10	0.3	450	10 × 10	0.15	670	10 × 10	0.3	500
220	221	10 × 10	0.15	670	10 × 10	0.15	670	10 × 10	0.3	500
330	331	10 × 10	0.15	670	10 × 10	0.15	670	Case size φ D × L (mm)	Impedance	Rated ripple
470	471	10 × 10	0.15	670						

Max. Impedance (Ω) at 20°C 100kHz
Rated ripple current (mA_{rms}) at 105°C 100kHz

●Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.35	0.50	0.64	0.83	1.00

- Taping specifications are given in page 23.
- Recommended land size, soldering by reflow are given in page 18, 19.
- Please select UJ(p.102) series if high C/V products are required.
- Please refer to page 3 for the minimum order quantity.