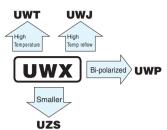


5.5mmL Chip Type



- Chip type with 5.5mm height.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Load life of 2000 hours at 85°C.
- Compliant to the RoHS directive (2011/65/EU).

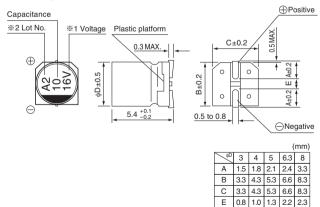




## ■Specifications

Item	Performance Characteristics													
Category Temperature Range	−40 to +85°C													
Rated Voltage Range	4 to 50V													
Rated Capacitance Range	1 to 330μF													
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.													
	Measurement frequency : 120Hz at 20°C													
Tangent of loss angle (tan δ)	Rated voltage (V) 4		6.3	10		16		25		35	50			
	tan δ (MAX.)	0.35 (0.40)	0.26 (0.30)	0.20 (0.2	24)	0.16 (0.1	9) 0.1	4 (0.16)	0.12	2 (0.14)	0.12 (0.14	4)	Values in	( ) applicable to WR, φ3 case size.
	Measurement frequency : 120Hz													
O. 1. 77	Rated voltage (V)			4	6.	.3	10		16	25	3	5	50	
Stability at Low Temperature	Impedance ratio	Z-25°C /	Z+20°C	7	4	4	3		2	2	2	2	2	
	ZT / Z20 (MAX.)	Z-40°C /	Z+20°C	15	8	3	8		4	4	3	3	3	
	The specifications	Cana	Capacitance change Within ±20% of the initial capacitance value (Within ±25% for 4 V and \$3,WR					ithin +25% for 4 V and 63 WR series units)						
Endurance	when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at						tan δ			200% or less than the initial specified value				
2.100.1010										Less than or equal to the initial specified value				
Shelf Life	After storing the capacitors under no load at 85°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.					ta	tan δ Le			Less	Vithin ±10% of the initial capacitance value ess than or equal to the initial specified value ess than or equal to the initial specified value			
Marking	Black print on the case top.													

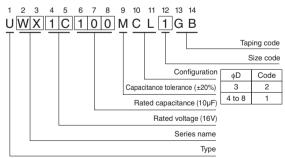
## ■ Chip Type



% 1. Voltage mark for 6.3V is 「6V」.
In case of marking for φ3 units, "V" for rated voltage is omitted.

 $\frak{\%}$  2. In case of marking for  $\phi$ 3 units, Lot No.is expressed by a digit (month code).

Type numbering system (Example : 16V 10µF)



ullet In the case of size  $\phi 3$  in ( ),parentheses, use WX in the 2nd and 3rd 2 digit and put a in the 12th digit of type numbering system.



## ■ Dimensions

V		4		6.3		10		16		25		35		50	
Cap. (µF)	Code	0	G	C	)J	1A		1C		1E		1V		1H	
1	010		 						 				 	4 (3)	8.4(8.0)
2.2	2R2						1		!			3	8.4	4 (3)	13 (10)
3.3	3R3		i i						 			3	10	4	17
4.7	4R7		 				1		l L	4 (3)	16 (12)	4	18	• 5	20 (18)
10	100		i				i	4 (3)	23 (18)	• 5	27 (24)	• 5	29 (24)	° 6.3	33 (30)
22	220	3	19	4 (3)	28 (21)	• 5	33 (30)	• 5	37 (30)	∘ 6.3	42 (38)	∘ 6.3	46 (39)	□8	52 (43)
33	330	4	28	• 5	37 (34)	• 5	41 (34)	∘ 6.3	49 (44)	∘ 6.3	52 (46)	□8	62 (53)	8	71
47	470	4	33	• 5	45 (40)	∘ 6.3	52 (47)	∘ 6.3	58 (52)	□ 8	70 (60)	8	80		
56	560	5	42	∘ 6.3	52 (46)	∘ 6.3	57 (50)	∘ 6.3	63 (57)	□ 8	76 (65)		! !		
100	101	5	56	∘ 6.3	70 (47)	∘ 6.3	76 (54)	6.3	86	8	110				
150	151	6.3	79	6.3	71	□8	111 (76)		 				 		
220	221	6.3	96	□8	110 (74)	8	135		i I				i I	Case size	Rated
330	331	8	145	8	170				 				 	φD (mm)	ripple

( ) is also available with φ3mm upon request.

Rated ripple current (mArms) at 85°C 120Hz

• In the case of size \$\phi 3\$ in ( ),parentheses, use WX at 2nd and 3rd digit and put 2 at the 12th digit of type numbering system. ( ) = \$\phi 3\$ units and UWR

Size  $\phi4$  is available for capacitors marked. "  $^{\bullet}$  " Size  $\phi5$  is available for capacitors marked. "  $^{\circ}$  " Size  $\phi6.3$  is available for capacitors marked. "  $^{\Box}$ 

In such a case,  $\overline{\mbox{WR}}$  will be put at 2nd and 3rd digit of type numbering system.

## • Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

- Taping specifications are given in page 23.
- Recommended land size, soldering by reflow are given in page 18, 19.
- Please select UUR(p.150), UUG(p.156) if high C/V products are reqired.
- Please refer to page 3 for the minimum order quantity.