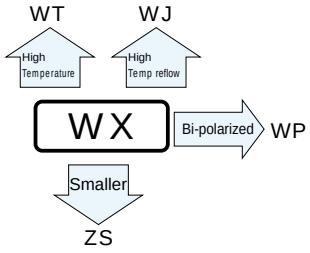
ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

WX 5.5mmL Chip Type series

For SMD | Anti-Solvent Feature

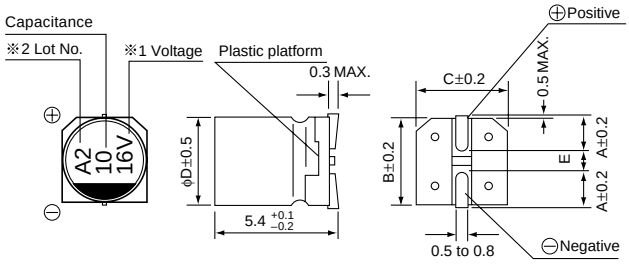
- Chip type with 5.5mm height.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Load life of 2000 hours at 85°C.
- Compliant to the RoHS directive (2002/95/EC).



■Specifications

Item	Performance Characteristics
Category Temperature Range	–40 to +85°C
Rated Voltage Range	4 to 50V
Rated Capacitance Range	0.1 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.
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C Rated voltage (V): 4 / 6.3 / 10 / 16 / 25 / 35 / 50 tan δ (MAX.): 0.35 (0.40) / 0.26 (0.30) / 0.20 (0.24) / 0.16 (0.19) / 0.14 (0.16) / 0.12 (0.14) / 0.12 (0.14) Values in ( ) applicable to WR, φ3 case size.
Stability at Low Temperature	Measurement frequency : 120Hz Rated voltage (V): 4 / 6.3 / 10 / 16 / 25 / 35 / 50 Impedance ratio ZT / Z20 (MAX.) Z–25°C / Z+20°C: 7 / 4 / 3 / 2 / 2 / 2 / 2 Impedance ratio ZT / Z20 (MAX.) Z–40°C / Z+20°C: 15 / 8 / 8 / 4 / 4 / 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 2000 hours at 85°C. Capacitance change: Within ±20% of the initial capacitance value (Within ±25% for 4 V and φ3,WR series units) 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 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. 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



(mm)

φD	3	4	5	6.3	8
A	1.5	1.8	2.1	2.4	3.3
B	3.3	4.3	5.3	6.6	8.3
C	3.3	4.3	5.3	6.6	8.3
E	0.8	1.0	1.3	2.2	2.3

※1. Voltage mark for 6.3V is「6V」.
In case of marking for φ3 units, "V" for rated voltage is omitted.
※2. In case of marking for φ3 units, Lot No.is expressed by a digit (month code).

Type numbering system (Example : 16V 10µF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	W	X	1	C	1	0	0	M	C	L	1	G	B

- 14: Taping code
- 12: Size code
- 11: Configuration

φD	Code
3	2
4 to 8	1

- 9: Capacitance toleranc (±20%)
- 6–8: Rated capacitance (10µF)
- 4–5: Rated voltage (16V)
- 2–3: Series name
- 1: Type

• In the case of size φ3 in ( ),parentheses, use WX in the 2nd and 3rd digit and put a 2 in the 12th digit of type numbering system.

● Dimension table in next page.

WX series

■Dimensions

Cap. (μF) \ V	4		6.3		10		16		25		35		50	
Code	0G		0J		1A		1C		1E		1V		1H	
0.1	0R1												4 (3)	1.0
0.22	R22												4 (3)	2.0
0.33	R33												4 (3)	2.8
0.47	R47												4 (3)	4.0
1	010												4 (3)	8.4 (8.0)
2.2	2R2										3	8.4	4 (3)	13 (10)
3.3	3R3										3	10	4	17
4.7	4R7								4 (3)	16 (12)	4	18	● 5	20 (18)
10	100						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							Case size φD (mm)	Rated ripple
330	331	8	145	8	170										

( ) is also available with φ3mm upon request.

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

• In the case of size φ3 in ( ),parentheses, use WX at 2nd and 3rd digit and put 2 at the 12th digit of type numbering system.

( ) = φ3 units and WR Series

Size φ4 is available for capacitors marked. " ● "
Size φ5 is available for capacitors marked. " ○ "
Size φ6.3 is available for capacitors marked. " □ "
} In such a case, 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 UR(p.106), UG(p.114) series if high C/V products are reqired.
- Please refer to page 3 for the minimum order quantity.

Mouser Electronics

Authorized Distributor

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Nichicon:

UWX0G101MCL1GB UWX0G101MCR1GB UWX0G220MCL2GB UWX0G220MCR2GB UWX0G221MCL1GB UWX0G221MCR1GB UWX0G330MCL1GB UWX0G330MCR1GB UWX0G331MCR1GB UWX0G470MCL1GB UWX0G470MCR1GB UWX0J101MCL1GB UWX0J101MCR1GB UWX0J220MCL1GB UWX0J220MCL2GB UWX0J220MCR1GB UWX0J220MCR2GB UWX0J221MCL1GB UWX0J221MCR1GB UWX0J330MCL1GB UWX0J330MCR1GB UWX0J331MCL1GB UWX0J331MCR1GB UWX0J470MCL1GB UWX0J470MCR1GB UWX1A101MCL1GB UWX1A101MCR1GB UWX1A220MCL1GB UWX1A220MCR1GB UWX1A221MCL1GB UWX1A221MCR1GB UWX1A330MCL1GB UWX1A330MCR1GB UWX1A470MCL1GB UWX1A470MCR1GB UWX1C100MCL1GB UWX1C100MCL2GB UWX1C100MCR1GB UWX1C100MCR2GB UWX1C101MCL1GB UWX1C101MCR1GB UWX1C220MCL1GB UWX1C220MCR1GB UWX1C330MCL1GB UWR1A470MCR1GB UWX1C330MCR1GB UWX1C470MCL1GB UWX1C470MCR1GB UWX1C470MCR1MB UWX1E100MCL1GB UWX1E100MCR1GB UWX1E101MCL1GB UWX1E101MCR1GB UWX1E220MCL1GB UWX1E220MCR1GB UWX1E330MCL1GB UWX1E330MCR1GB UWX1E330MCR1MB UWX1E470MCL1GB UWX1E470MCR1GB UWX1E4R7MCL1GB UWX1E4R7MCL2GB UWX1E4R7MCR1GB UWX1E4R7MCR2GB UWX1H010MCL1GB UWX1H010MCL2GB UWX1H010MCR1GB UWX1H010MCR2GB UWX1H0R1MCL1GB UWX1H0R1MCL2GB UWX1H0R1MCR1GB UWX1H0R1MCR2GB UWX1H100MCL1GB UWX1H100MCR1GB UWX1H220MCL1GB UWX1H220MCR1GB UWX1H2R2MCL1GB UWX1H2R2MCL2GB UWX1H2R2MCR1GB UWX1H2R2MCR2GB UWX1H330MCL1GB UWX1H330MCR1GB UWX1H3R3MCL1GB UWX1H3R3MCR1GB UWX1H4R7MCL1GB UWX1H4R7MCR1GB UWX1HR22MCL1GB UWX1HR22MCL2GB UWX1HR22MCR1GB UWX1HR22MCR2GB UWX1HR33MCL1GB UWX1HR33MCL2GB UWX1HR33MCR1GB UWX1HR33MCR2GB UWX1HR47MCL1GB UWX1HR47MCL2GB UWX1HR47MCR1GB UWX1HR47MCR2GB UWX1V100MCL1GB UWX1V100MCR1GB