ALUMINUM ELECTROLYTIC CAPACITORS

WX series

5.5mmL Chip Type

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 using carrier tape.
- Load life of 2000 hours at 85°C.

WT — High Temperature

WP — Bi-Polarized ← WX → Low Profile — ZS
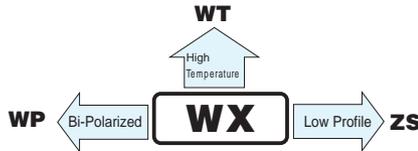
■Specifications

Item	Performance Characteristics								
Category Temperature Range	— 40 ~ +85°C								
Rated Voltage Range	4 ~ 50V								
Rated Capacitance Range	0.1 ~ 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.								

tan δ

Measurement frequency : 120Hz, Temperature : 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
	Z—40°C/Z+20°C	15	8	8	4	4	3	3

Endurance

After 2000 hours' application of rated voltage at 85°C, capacitors meet the characteristics requirements listed at right.

Capacitance change	Within ±20% of initial value (Within ±2%5 for 4 V and φ3,WR series units)
tan δ	200% or less of initial specified value
Leakage Current	Initial specifed value or less

Shelf Life

After leaving capacitors under no load at 85°C for 1000 hours, they meet the specified value for endurance characteristics listed above.

Resistance to soldering heat

The capacitors shall be kept on the hot plate maintained at 250°C for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the characteristics requirements listed at right.

Capacitance change	Within ±10% of initial value
tan δ	Initial specified value or less
Leakage current	Initial specified value or less

Marking

Black print on the case top.

■Chip Type

Capacitance
※2 Lot No.
※1 Voltage
Plastic platform
0.3 MAX.
C±0.2
0.5 MAX.
Positive
φD±0.5
B±0.2
E
A±0.2
A±0.2
5.4 +0.1 −0.2
0.5 ~ 0.8
Negative

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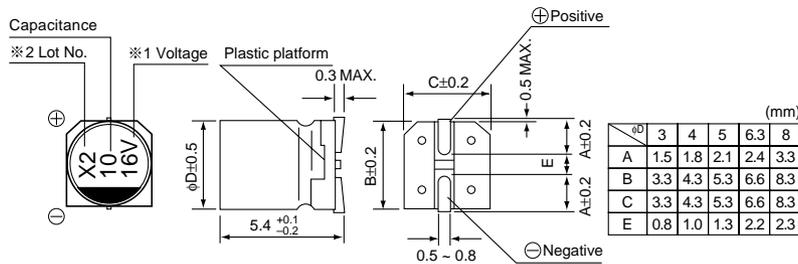
※1. Voltage mark for 6.3V is 「6V」.
 In case of marking for φ3 units, "V" for rated voltage is omitted.
※2. In case of marking for φ3 units, Lot No.is expressed by a digit (month code).

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 R 1 G B

- Taping code
- Case dia.code
- Configuration

φD	Code
3	2
4 ~ 8	1

- Capacitance toleranc (±20%)
- Rated Capacitance (10μF)
- Rated voltage (16V)
- Series name
- Type
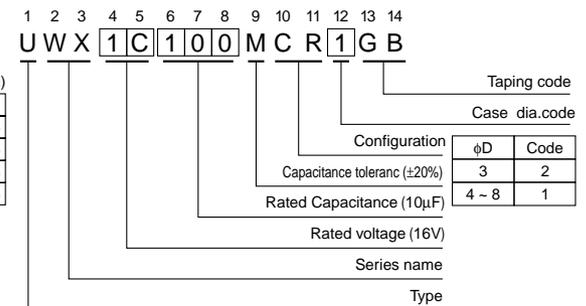
■ Dimension table in next page.

WX series

■Dimensions

Cap. (µF)	Code	4 / 0G		6.3 / 0J		10 / 1A		16 / 1C		25 / 1E		35 / 1V		50 / 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	Rated ripple
	331	8	145	8	170										

( ) is also available with φ3mm upon request.

Rated Ripple (mA rms) at 85°C 120Hz
( ) = 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, [W][R] will be put at 2nd and 3rd digit of type numbering system.

■ Frequency coefficient of allowable ripple current

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

■ Taping Specifications are given in page 21.

Please refer to page 3 for the minimum order quantity.