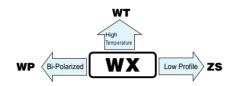
ALUMINUM ELECTROLYTIC CAPACITORS





- 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.

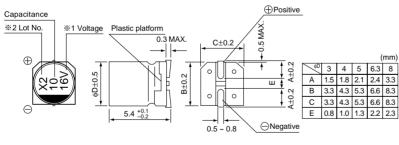




Specifications

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.													
	Measurement frequency : 120Hz, Temperature : 20°C												-	
tan δ	Rated voltage (V)	Rated voltage (V) 4 6.3		10		16	25	5	35 50					
	tan δ (MAX.)	0.35 (0.40)	0.26 (0.30)	0.20 (0.2	24)	0.16 (0.19)	0.14 (0	0.16) 0.	.12 (0.14)	0.12 (0.1	4)	Values in () applicable to WR, $\phi 3$	case size.
	Measurement frequency : 120Hz													
Ctability at Law Tama and	Rated vo	oltage (V)		4	6.	.3	10	16	25	3	5	50		
Stability at Low Temperature	Impedance ratio	Z-25°C /		7	2	•	3	2	2		2	2		
	ZT / Z20 (MAX.)	Z-40°C /	Z+20°C	15	٤	3	8	4	4		3	3		
	After 2000 hours' application of rated voltage Capacitance change								ange Within ±20% of initial value (Within ±25% for 4 V and \$3,WR series units)					
Endurance	at 85°C, capacitors meet the characteristic							200% or less of initial specified value					<u>o unito)</u>	
	requirements listed at right.							ent 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.														
	The capacitors shall be kept on the hot plate maintained at 250°C										initial value			
Resistance to soldering	for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the characteristic requirements listed at right.										Initial specified value or less			
heat												Initial specified value or less		
Marking	Black print on the	case top.												

Chip Type

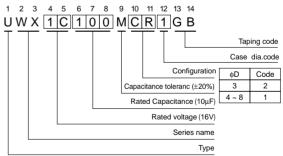


%1. Voltage mark for 6.3V is $\lceil 6V \rfloor$.

In case of marking for \$\$ units, "V" for rated voltage is omitted.

% 2. In case of marking for $\phi3$ units, Lot No.is expressed by a digit (month code).

Type numbering system (Example : $16V \ 10\mu F$)



• The lead-free product is also available upon request.

In this case, L will be put at 11th digit of type numbering system.
In the case of size ¢3 in (),parentheses, use WX in the 2nd and 3rd digit and put a 2 in the 12th digit of type numbering system.

ALUMINUM ELECTROLYTIC CAPACITORS



Dimensions

V		4		6.3		10		16		25		35		50	
Сар. (µF)	Code	0	G	0)J	1A		1C		1E		1V		1H	
0.1	0R1		1											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		1										1	4 (3)	8.4 (8.0
2.2	2R2		1									3	8.4	4 (3)	13 (10)
3.3	3R3		1									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)	o 6.3	33 (30)
22	220	3	19	4 (3)	28 (21)	• 5	33 (30)	• 5	37 (30)	° 6.3	42 (38)	o 6.3	46 (39)	□8	52 (43)
33	330	4	28	• 5	37 (34)	• 5	41 (34)	° 6.3	49 (44)	o 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	o 6.3	52 (46)	° 6.3	57 (50)	o 6.3	63 (57)	□ 8	76 (65)				
100	101	5	56	o 6.3	70 (47)	o 6.3	76 (54)	6.3	86	8	110				
150	151	6.3	79	6.3	71	□ 8	111 (76)						i		1
220	221	6.3	96	□ 8	110 (74)	8	135						 	0	Rated
330	331	8	145	8	170						1			Case size	Rated
) is also available v	with ø3mm ເ	ipon reque	est.									Rated F	Ripple (mA	rms) at 8	5°C 120Hz

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

Size $\varphi4$ is available for capacitors marked. " • " Size $\varphi5$ is available for capacitors marked. " • " Size $\varphi6.3$ is available for capacitors marked. " \square "

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~
Coefficient	0.70	1.00	1.17	1.36	1.50

Taping Specifications are given in page 22.

Please refer to page 3 for the minimum order quantity.