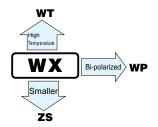






- Chip type with 5.5mm height.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine using carrier tape.
- Load life of 2000 hours at 85°C.

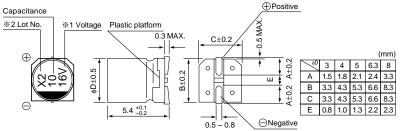




■Specifications

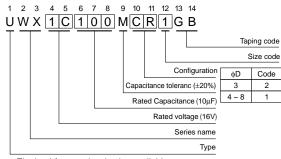
Item	Performance Characteristics												
Category Temperature Range	4 ~ 50V												
Rated Voltage Range													
Rated Capacitance Range													
Capacitance Tolerance	±20% at 120Hz, 20°C												
Leakage Current	After 2 minutes' application of rated voltage, leakage current is not more than 0.01CV or 3 (µA) ,whichever is greater.												
	Measurement frequency : 120Hz, Temperature : 20°C												
tan δ	Rated voltage (V)	4	6.3	10		6	25		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	.16) 0	.12 (0.14)	0.12 (0.14)	Valu	ues in () applicable to WR, \$\psi 3\$ case size.
	Measurement frequency : 120Hz												
Ctability at Law Tagas and a	Rated vo	Itage (V)		4	6.3	1	0	16	25	35	5	0	
Stability at Low Temperature		Z-25°C /		7	4		3	2	2	2		2	
	ZT / Z20 (MAX.)	Z-40°C /	Z+20°C	15	8	1	3	4	4	3	;	3	
	After 2000 hours' application of rated voltage Capacitance change Within ±20% of initial value (Within ±25% for 4 V and \$03.WR series units)												
Endurance	at 85°C, capacitors meet the characteristic							200% or less of initial specified value					
							Leakage Current						
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 characteristic requirements listed at right.									Within ±10% of initial value Initial specified value or less Initial specified value or less			
Marking	Black print on the o												

■Chip Type



- % 1. Voltage mark for 6.3V is $\lceil 6 \text{V} \rfloor.$
- In case of marking for $\phi 3$ units, "V" for rated voltage is omitted. $\divideontimes 2$. In case of marking for $\phi 3$ units, Lot No.is expressed by a digit (month code).

Type numbering system (Example: 16V 10µF)



- The lead-free product is also available upon request.
 In this case, will be put at 11th digit of type numbering system.
- 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.



Dimensions

	V		1	6	.3		10	1	6	2	25	3	5	5	50
Cap. (µF) Code		0G		0J		1A		1C		1E		1V		1H	
0.1	0R1												}	4 (3)	1.0
0.22	R22						-						1	4 (3)	2.0
0.33	R33													4 (3)	2.8
0.47	R47						1							4 (3)	4.0
1	010												1	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)		1		
100	101	5	56	∘ 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)								
220	221	6.3	96	□ 8	110 (74)	8	135							Case size	Rated
330	331	8	145	8	170									φD (mm)	ripple

^() is also available with $\phi3mm$ upon request.

Rated Ripple (mA rms) at 85°C 120Hz

Size $\phi 4$ is available for capacitors marked. " \bullet " Size $\phi 5$ is available for capacitors marked. " \circ " Size $\phi 6.3$ is available for capacitors marked. " \Box "

In such a case, MR 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

• 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.

- Taping specifications are given in page 22.
- Recommended land size are given in page 23
- Please refer to page 3 for the minimum order quantity.

^{() =} φ3 units and WR Series