## **ALUMINUM ELECTROLYTIC CAPACITORS**





- Corresponding with 260°C peak reflow soldering Recomended reflow condition: 260°C peak 5 sec. 230°C over 60 sec. 2 times (φ10 x 10:1 time)
- Chip type, low impedance temperature range up to +105°C.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU).



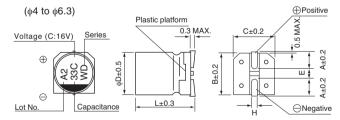


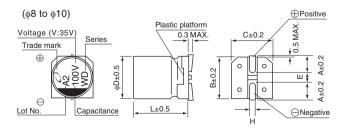


## ■ Specifications

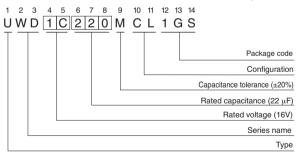
Item	Performance Characteristics											
Category Temperature Range	−55 to +105°C											
Rated Voltage Range	6.3 to 50V	3.3 to 50V										
Rated Capacitance Range	1 to 1500μF	to 1500µF										
Capacitance Tolerance	±20% at 120Hz, 2	±20% at 120Hz, 20°C										
Leakage Current	After 2 minutes' ap	oplication of	rated \	oltage, le	eakage o	current is no	t more	than 0.01	CV or 3 (	uA), whichever is greater.		
Tangent of loss angle (tan $\delta$ )	Measurement frequency : 120Hz at 20°C           Rated voltage (V)         6.3         10         16         25         35         50           tan δ (MAX.)         0.26 (0.28)         0.20 (0.24)         0.16 (0.20)         0.14 (0.16)         0.12 (0.14)         0.12 (0.14)         ( ) is φ8 over									( ) is $\phi 8$ over		
	Measurement frequency : 120Hz											
Stability at Low Temperature		ltage (V)		6.3	10	16	25	35	50			
Otability at Low Tomporature	Impedance ratio ZT / Z20 (MAX.)	Z-25°C / Z- Z-55°C / Z-		<u>3</u> 5	4	4	3	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 5000 hours (2000 hours for $\phi D = 4$ , 5 and 6.3) at 105°C.  Capacitance change Within ±30% of the initial capacitance value $\tan \delta$ 200% or less than the initial specified value Leakage current Less than or equal to the initial specified value									an the initial specified value		
Shelf Life	After storing the capacitors under no load at 105°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	maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate.  Less than or equal to the initial specified value.							Within ±10% of the initial capacitance value Less than or equal to the initial specified value Less than or equal to the initial specified value				
Marking	Black print on the	Black print on the case top.										

## ■Chip Type





## Type numbering system (Example : $16V 22\mu F$ )



						(mm)
φD×L	4 × 5.8	5 × 5.8	6.3 × 5.8	6.3 × 7.7	8 × 10	10 × 10
Α	1.8	2.1	2.4	2.4	2.9	3.2
В	4.3	5.3	6.6	6.6	8.3	10.3
С	4.3	5.3	6.6	6.6	8.3	10.3
E	1.0	1.3	2.2	2.2	3.1	4.5
L	5.8	5.8	5.8	7.7	10	10
Н	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

#### Voltage

V	6.3	10	16	25	35	50	
Code	i	Α	С	F	V	Н	



### **■** Dimensions

V		6.3		10		16 1C			25 1E			35 1V			50 1H				
Cap. (µF)	Code 0J 1A																		
1	010								 						! !		4×5.8	5.00	30
2.2	2R2														 		4×5.8	5.00	30
3.3	3R3								İ			i i			i		4×5.8	5.00	30
4.7	4R7								 					4×5.8	1.80	80	5×5.8	1.52	85
10	100								! !	!	$4 \times 5.8$	1.80	80	5×5.8	0.76	150	$6.3 \times 5.8$	0.88	165
15	150							4 × 5.8	1.80	80	5 × 5.8	0.76	150	5×5.8	0.76	150	6.3 × 5.8	0.88	165
22	220				4×5.8	1.80	80	5 × 5.8	0.76	150	5 × 5.8	0.76	150	5×5.8	0.76	150	6.3 × 5.8	0.88	165
27	270	4×5.8	1.80	80	5×5.8	0.76	150	5×5.8	0.76	150	$6.3 \times 5.8$	0.44	230	6.3×5.8	0.44	230	6.3×7.7	0.68	185
33	330	5×5.8	0.76	150	5×5.8	0.76	150	6.3×5.8	0.44	230	$6.3 \times 5.8$	0.44	230	$6.3 \times 5.8$	0.44	230	6.3×7.7	0.68	185
47	470	5×5.8	0.76	150	$6.3 \times 5.8$	0.44	230	6.3 × 5.8	0.44	230	$6.3 \times 5.8$	0.44	230	$6.3 \times 5.8$	0.44	230	6.3×7.7	0.68	185
56	560	5×5.8	0.76	150	6.3×5.8	0.44	230	6.3×5.8	0.44	230	$6.3 \times 5.8$	0.44	230	6.3×7.7	0.34	280	8 × 10	0.34	300
68	680	6.3×5.8	0.44	230	6.3×5.8	0.44	230	6.3×5.8	0.44	230	$6.3 \times 5.8$	0.44	230	6.3×7.7	0.34	280	8 × 10	0.34	300
100	101	6.3×5.8	0.44	230	6.3×5.8	0.44	230	6.3×5.8	0.44	230	$6.3 \times 7.7$	0.34	280	8×10	0.17	450	8 × 10	0.34	300
150	151	6.3×5.8	0.44	230	6.3×5.8	0.44	230	6.3×7.7	0.34	280	8 × 10	0.17	450	8 × 10	0.17	450	10 × 10	0.18	670
220	221	6.3×5.8	0.44	230	6.3×7.7	0.34	280	6.3×7.7	0.34	280	8 × 10	0.17	450	10 × 10	0.09	670	10 × 10	0.18	670
330	331	6.3×7.7	0.34	280	8×10	0.17	450	8×10	0.17	450	10 × 10	0.09	670	10 × 10	0.09	670			i
470	471	8×10	0.17	450	8×10	0.17	450	8×10	0.17	450	10×10	0.09	670		 				
680	681	8×10	0.17	450	10×10	0.09	670	10×10	0.09	670									
1000	102	10×10	0.09	670	10×10	0.09	670		i						i I		Case size		Rated
1500	152	10×10	0.09	670	_									_	 		$\varphiD\times L\ (mm)$	Impedancei	ripple

 $\label{eq:max.mpedance} \mbox{Max. Impedance } (\Omega) \mbox{ at 20°C 100kHz},$  Rated ripple current (mArms) at 105°C 100kHz

• Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.35	0.50	0.64	0.83	1.00

- Taping specifications are given in page 23.
- Recommended land size, soldering by reflow are given in page 18, 19.
- Please refer to page 3 for the minimum order quantity.

# **Mouser Electronics**

**Authorized Distributor** 

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## Nichicon:

```
UWD0J101MCL1GS UWD0J102MCL1GS UWD0J151MCL1GS UWD0J152MCL1GS UWD0J221MCL1GS
UWD0J270MCL1GS UWD0J330MCL1GS UWD0J331MCL1GS UWD0J470MCL1GS UWD0J471MCL1GS
UWD0J560MCL1GS UWD0J680MCL1GS UWD0J681MCL1GS UWD1A101MCL1GS UWD1A102MCL1GS
UWD1A151MCL1GS UWD1A220MCL1GS UWD1A221MCL1GS UWD1A270MCL1GS UWD1A330MCL1GS
UWD1A331MCL1GS UWD1A470MCL1GS UWD1A471MCL1GS UWD1A560MCL1GS UWD1A680MCL1GS
UWD1A681MCL1GS UWD1C101MCL1GS UWD1C150MCL1GS UWD1C151MCL1GS UWD1C220MCL1GS
UWD1C221MCL1GS UWD1C270MCL1GS UWD1C330MCL1GS UWD1C331MCL1GS UWD1C470MCL1GS
UWD1C471MCL1GS UWD1C560MCL1GS UWD1C680MCL1GS UWD1C681MCL1GS UWD1E100MCL1GS
UWD1E101MCL1GS UWD1E150MCL1GS UWD1E151MCL1GS UWD1E220MCL1GS UWD1E221MCL1GS
UWD1E270MCL1GS UWD1E330MCL1GS UWD1E331MCL1GS UWD1E470MCL1GS UWD1E471MCL1GS
UWD1E560MCL1GS UWD1E680MCL1GS UWD1H010MCL1GS UWD1H100MCL1GS UWD1H101MCL1GS
UWD1H150MCL1GS UWD1H151MCL1GS UWD1H2R2MCL1GS UWD1H220MCL1GS UWD1H221MCL1GS
UWD1H270MCL1GS UWD1H3R3MCL1GS UWD1H330MCL1GS UWD1H4R7MCL1GS UWD1H470MCL1GS
UWD1H560MCL1GS UWD1H680MCL1GS UWD1V100MCL1GS UWD1V101MCL1GS UWD1V150MCL1GS
UWD1V151MCL1GS UWD1V220MCL1GS UWD1V221MCL1GS UWD1V270MCL1GS UWD1V330MCL1GS
UWD1V331MCL1GS UWD1V4R7MCL1GS UWD1V470MCL1GS UWD1V560MCL1GS UWD1V680MCL1GS
UUX2G4R7MNL1GS UWD1V221MCQ6GS UWD1H220MCQ1GS UWD1V101MCQ1GS UWD1H221MCQ1GS
UWD1V220MCQ1GS UWD1V221MCQ1GS
```