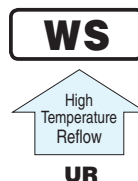


ALUMINUM ELECTROLYTIC CAPACITORS

WS Chip Type, High CV
High Temperature (260°C) Reflow series



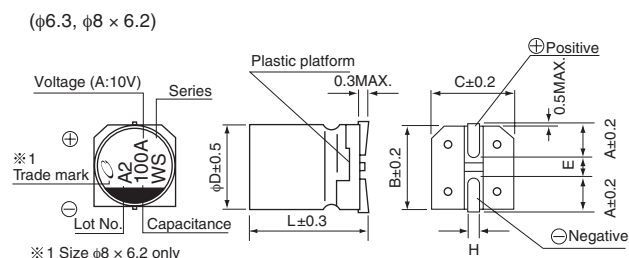
- Corresponding with 260°C peak reflow soldering
Recommended reflow condition : 260°C peak 5 sec. 230°C over 60 sec. 2 times (φ8 × 6.2, φ10 × 10 : 1 time)
- Chip type higher capacitance in large case size.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU).



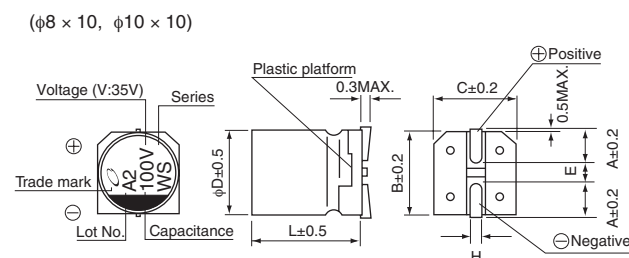
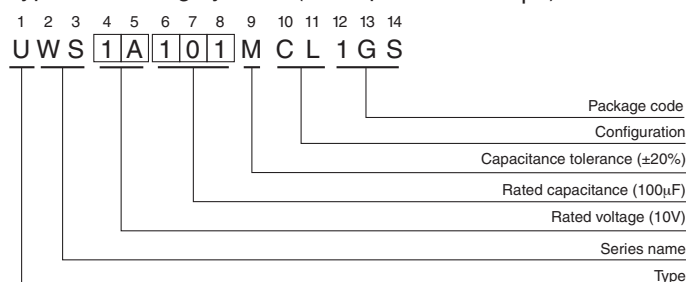
Specifications

Item	Performance Characteristics						
Category Temperature Range	-40 to +85°C						
Rated Voltage Range	6.3 to 50V						
Rated Capacitance Range	22 to 1500μF						
Capacitance Tolerance	±20% at 120Hz, 20°C						
Leakage Current	After 1 minute's application of rated voltage, leakage current is not more than 0.03CV (μA) .						
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C						
	Rated voltage (V)	6.3	10	16	25	35	50
Stability at Low Temperature	Measurement frequency: 120Hz						
	Rated voltage (V)	6.3	10	16	25	35	50
	Impedance ratio ZT / Z20 (MAX.)	Z-25°C / Z+20°C	5	4	3	2	2
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		
			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



Type numbering system (Example : 10V 100μF)



φD×L	(mm)				
	6.3 × 5.8	6.3 × 7.7	8 × 6.2	8 × 10	10 × 10
A	2.4	2.4	3.3	2.9	3.2
B	6.6	6.6	8.3	8.3	10.3
C	6.6	6.6	8.3	8.3	10.3
E	2.2	2.2	2.3	3.1	4.5
L	5.8	7.7	6.2	10	10
H	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	j	A	C	E	V	H

- Dimension table in next page.

■ Dimensions

Cap. (μF)	Code	V		6.3		10		16		25		35		50	
		0J	1A	1C	1E	1V	1H								
22	220													6.3 × 5.8	45
33	330											6.3 × 5.8	55	8 × 6.2	95
47	470								6.3 × 5.8	65	8 × 6.2	105	8 × 10	140	
100	101			6.3 × 5.8	70	8 × 6.2	125	8 × 6.2	145	8 × 10	175	10 × 10	195		
150	151			6.3 × 5.8	85	6.3 × 7.7	151	8 × 10	192	8 × 10	214	10 × 10	238		
220	221	8 × 6.2	160	8 × 6.2	175	8 × 10	215	10 × 10	250	10 × 10	265	10 × 10	289		
330	331	8 × 6.2	190	8 × 10	240	8 × 10	270	10 × 10	305	10 × 10	324				
470	471	8 × 10	265	8 × 10	290	10 × 10	330	10 × 10	393						
680	681	8 × 10	318	10 × 10	374	10 × 10	396								
1000	102	10 × 10	400	10 × 10	454										
1500	152	10 × 10	489											Case size φ D × L (mm)	Rated ripple

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

● Frequency coefficient of rated ripple current

Cap. (μF)	Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Less than 47		0.80	1.00	1.15	1.40	1.67
100 to 1500		0.85	1.00	1.08	1.20	1.30

- 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.