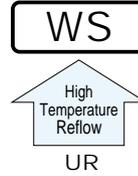


ALUMINUM ELECTROLYTIC CAPACITORS

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 (2002/95/EC).

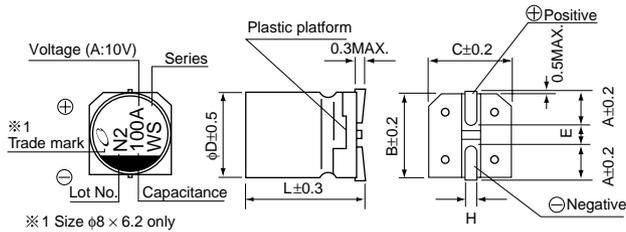


Specifications

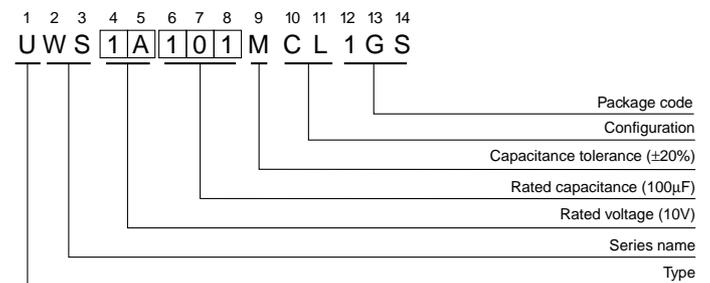
Item	Performance Characteristics							
Category Temperature Range	-40 to +85°C							
Rated Voltage Range	6.3 to 50V							
Rated Capacitance Range	22 to 1500μF							
Capacitance Tolerance	±20% at 120Hz, 20°C							
Leakage Current	After 1 minute's application of rated voltage, leakage current is not more than 0.03CV (μA) .							
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz, Temperature : 20°C							
	Rated voltage (V)	6.3	10	16	25	35	50	
Stability at Low Temperature	tan δ (MAX.)	0.28	0.24	0.20	0.16	0.14	0.12	
	Measurement frequency: 120Hz							
	Rated voltage (V)	6.3	10	16	25	35	50	
Endurance	Impedance ratio	Z-25°C / Z+20°C	5	4	3	2	2	
	ZT / Z20 (MAX.)	Z-40°C / Z+20°C	10	8	6	4	3	
Shelf Life	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
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.		Leakage current					Less than or equal to the initial specified value
			Capacitance change					Within ±10% of the initial capacitance value
Marking			tan δ					Less than or equal to the initial specified value
			Leakage current					Less than or equal to the initial specified value

Chip Type

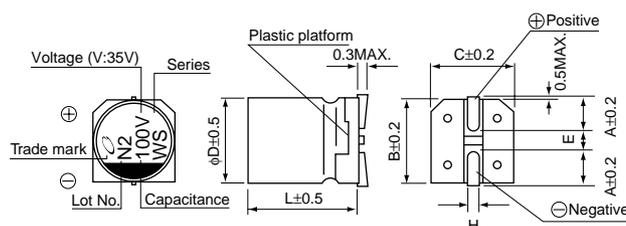
(φ6.3, φ8 × 6.2)



Type numbering system (Example : 10V 100μF)



(φ8 × 10, φ10 × 10)



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															
100	101				6.3×5.8	70	8×6.2	125	8×6.2	145	8×6.2	65	8×6.2	105	8×10	140
150	151				6.3×5.8	85	6.3×7.7	151	8×10	192	8×10		8×10	175	10×10	195
220	221	8×6.2	160	8×6.2	175	8×10	215	10×10	250	10×10	250	10×10	265	10×10	238	
330	331	8×6.2	190	8×10	240	8×10	270	10×10	305	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 φD×L (mm)	Rated ripple	

Rated ripple current (mA_{rms}) 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.