



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



For SMD

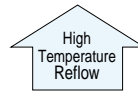


Long Life



Anti-Solvent  
Feature

- Corresponding with 260°C peak reflow soldering  
Recommended reflow condition : 260°C peak 5 sec. 230°C over 60 sec. 2 times  
( $\phi 8 \times 6.2$ ,  $\phi 10 \times 10$  : 1 time)
- Chip type high temperature range, for +125°C use.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU).



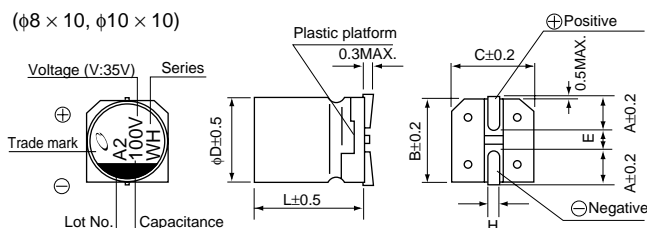
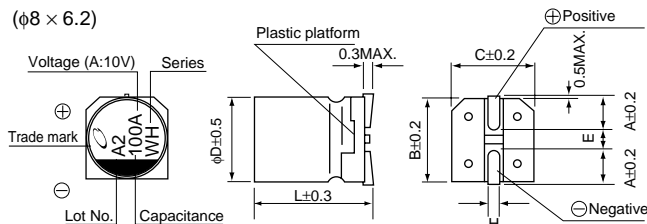
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## Specifications

Item	Performance Characteristics					
Category Temperature Range	-40 to +125°C					
Rated Voltage Range	10 to 50V					
Rated Capacitance Range	10 to 330 $\mu$ F					
Capacitance Tolerance	$\pm 20\%$ at 120Hz, 20°C					
Leakage Current	After 1 minute's application of rated voltage, leakage current is not more than 0.03CV or 4( $\mu$ A) , whichever is greater.					
Tangent of loss angle (tan $\delta$ )	Measurement frequency : 120Hz at 20°C					
	Rated voltage (V)	10	16	25	35	50
	tan $\delta$ (MAX.)	0.32	0.24	0.21	0.18	0.18
Stability at Low Temperature	Measurement frequency : 120Hz					
	Rated voltage (V)	10	16	25	35	50
	Impedance ratio ZT / Z20 (MAX.)	Z-40°C / Z+20°C	12	8	6	4
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 125°C.					
Shelf Life	After storing the capacitors under no load at 125°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.					
Marking	Black print on the case top.					

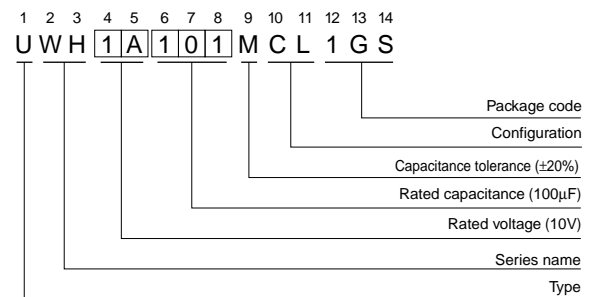
## Chip Type



### Voltage

V	10	16	25	35	50
Code	A	C	E	V	H

## Type numbering system (Example : 10V 100 $\mu$ F)



$\phi D \times L$	8 $\times$ 6.2	8 $\times$ 10	10 $\times$ 10 (mm)
A	3.3	2.9	3.2
B	8.3	8.3	10.3
C	8.3	8.3	10.3
E	2.3	3.1	4.5
L	6.2	10	10
H	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

## ■Dimensions

Cap.(μF)	V	10		16		25		35		50	
	Code	1A		1C		1E		1V		1H	
10	100									8×6.2	24
22	220									8×6.2	38
33	330							8×6.2	44	8×10	46
47	470					8×6.2	48	8×10	52	10×10	58
100	101	8×6.2	58	8×10	66	8×10	74	10×10	80		
220	221	8×10	90	10×10	102	10×10	116			Case size φ D×L (mm)	Rated ripple
330	331	10×10	112								

Rated ripple current (mA<sub>rms</sub>) at 125°C 120Hz

## ●Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

- 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.