





- Corresponding with 260°C peak reflow soldering Recomended reflow condition: 260°C peak 5 sec. 230°C over 60 sec. 2 times (φ8 × 6.2, φ10 × 10:1 time)
- Chip type high temperature range, for +125°C use.
- Applicable to automatic mounting machine using carrier tape.
- Adapted to the RoHS directive (2002/95/EC).



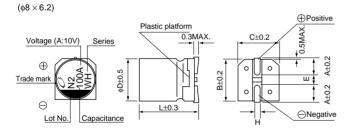
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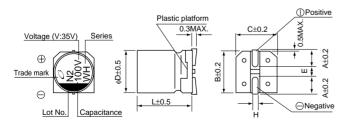
Specifications

Item	Performance Characteristics									
Category Temperature Range	-40 ~ +125°C									
Rated Voltage Range	10 ~ 50V									
Rated Capacitance Range	10 ~ 330μF									
Capacitance Tolerance	±20% at 120Hz, 20°C	±20% at 120Hz, 20°C								
Leakage Current	After 1 minute's application of rated vo	oltage, le	akage cur	ent i	s not n	ore tha	n 0.03C	√or 4(µ	A) , whichever is greater.	
		Measurem	ent frequer	cy:	120Hz,	Temper	ature : 20	°C		
tan δ	Rated voltage (V) 10	16	25		35		50			
	tan δ (MAX.) 0.32	0.24	0.21		0.18	3	0.18			
	Measurement frequency : 120Hz									
Stability at Low Temperature	Rated voltage (V)	10	16	2	5	35	50			
Clability at 2011 Tomporataro	Impedance ratio ZT / Z20 (MAX.) Z-40°C / Z+20°C	12	8	6	6	4	4			
Endurance	After 1000 hours' application of rated voltage at 125°C, capacitors meet the characteristic requirements listed at right.						change	300%	±30% of initial value or less of initial specified value specified value or less	
Shelf Life	After leaving capacitors under no load at 125°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. Capacitance change Within $\pm 10\%$ of initial value $\tan \delta$ Initial specified value or less Leakage current Initial specified value or less									
Marking	Black print on the case top.									

■Chip Type

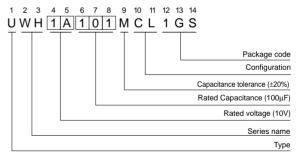


 $(\phi 8 \times 10, \phi 10 \times 10)$



Voltage					
V	10	16	25	35	50
Code	Δ	_	F	W	н

Type numbering system (Example : 10V 100µF)



			(mm)
φD×L	8×6.2	8×10	10×10
Α	3.3	2.9	3.2
В	8.3	8.3	10.3
С	8.3	8.3	10.3
E	2.3	3.1	4.5
L	6.2	10	10
Н	0.5 ~ 0.8	0.8 ~ 1.1	0.8 ~ 1.1



■Dimensions

 $\phi D \times L (mm)$

	V	1	0	1	6	2	5	35	5	50)
Cap.(µF)	Code	1	A	1	С	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				Rated
330	331	10×10	112		i I					Case size	Rated ripple

Rated Ripple (mA rms) at 125°C 120Hz

• 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	

- Taping specifications are given in page 24.
- Recommended land size, soldering by reflow are given in page 25.
- Please refer to page 3 for the minimum order quantity.