







- Corresponding with 260°C peak reflow soldering Recomended reflow condition: 260°C peak 5 sec. 230°C over 60 sec. 2 times (\$8 × 6.2, \$10 × 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 (2002/95/EC).



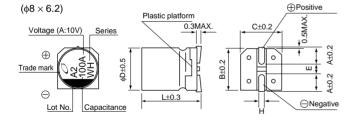
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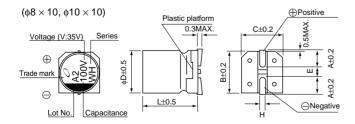


■ Specifications

Item	Performance Characteristics									
Category Temperature Range	-40 to +125°C									
Rated Voltage Range	10 to 50V									
Rated Capacitance Range	10 to 330µF									
Capacitance Tolerance	±20% at 120Hz, 20°C	±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(µA), whichever is greater.									
	Measurement frequency : 120Hz at 20°C									
Tangent of loss angle (tan δ)	Rated voltage (V) 10	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	25	5	35	50			
Stability at Low Temperature	Impedance ratio ZT / Z20 (MAX.)	12	8	6		4	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.					tan δ 300			:30% of the initial capacitance value or less than the initial specified value an or equal to the initial specified value	
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	maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate tan δ Less than or equal to the initial specified visual tan δ					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 case top.									

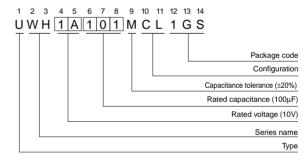
■Chip Type





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

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



			(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 to 0.8	0.8 to 1.1	0.8 to 1.1





Dimensions

	V	1	0	1	16		:5	35		50	
Cap.(µF)	Code	1	A	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	Rated
330	331	10×10	112		i !					φD×L (mm)	ripple

Rated ripple current (mArms) 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.