

UCH

Chip Type, High Reliability.
Low temperature ESR specification.



For SMD



Long Life



Anti-Solvent
Feature

Expanded

- Added ESR specification after the test at -40°C.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU).

UCH Low ESR UCZ

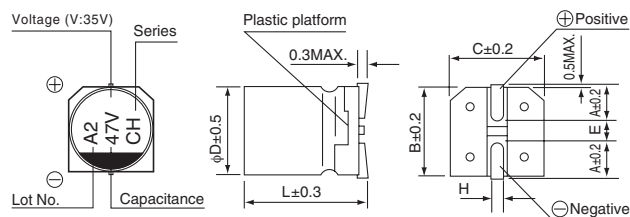


Specifications

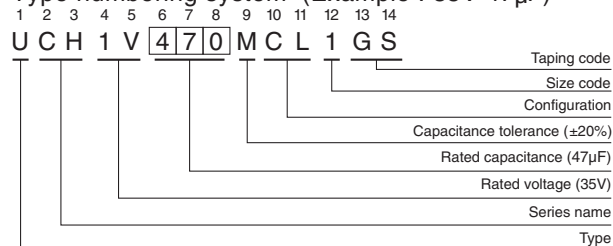
Item	Performance Characteristics								
Category Temperature Range	-40 to +125°C								
Rated Voltage Range	35V								
Rated Capacitance Range	47 to 330μF								
Capacitance Tolerance	±20% at 120Hz, 20°C								
Leakage Current	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV (μA).								
Tangent of loss angle (tan δ)	<table><tr><td>Rated voltage (V)</td><td>35</td></tr><tr><td>tan δ (MAX.)</td><td>0.16</td></tr></table>	Rated voltage (V)	35	tan δ (MAX.)	0.16	Measurement frequency : 120Hz at 20°C			
Rated voltage (V)	35								
tan δ (MAX.)	0.16								
Stability at Low Temperature	<table><tr><td>Rated voltage (V)</td><td>35</td></tr><tr><td>Impedance ratio ZT / Z20 (MAX.)</td><td>Z-40°C / Z+20°C</td><td>3</td></tr></table>	Rated voltage (V)	35	Impedance ratio ZT / Z20 (MAX.)	Z-40°C / Z+20°C	3	Measurement frequency : 120Hz		
Rated voltage (V)	35								
Impedance ratio ZT / Z20 (MAX.)	Z-40°C / Z+20°C	3							
Endurance	<div>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 125°C.</div> <table><tr><td>Capacitance change</td><td>Within ±30% of the initial capacitance value</td></tr><tr><td>tan δ</td><td>300% or less than the initial specified value</td></tr><tr><td>Leakage current</td><td>Less than or equal to the initial specified value</td></tr></table>			Capacitance change	Within ±30% of the initial capacitance value	tan δ	300% or less than the initial specified value	Leakage current	Less than or equal to the initial specified value
Capacitance change	Within ±30% of the initial capacitance value								
tan δ	300% or less than the initial specified value								
Leakage current	Less than or equal to the initial specified value								
Shelf Life	<div>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.</div>								
Resistance to soldering heat	<div>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.</div> <table><tr><td>Capacitance change</td><td>Within ±10% of the initial capacitance value</td></tr><tr><td>tan δ</td><td>Less than or equal to the initial specified value</td></tr><tr><td>Leakage current</td><td>Less than or equal to the initial specified value</td></tr></table>			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
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

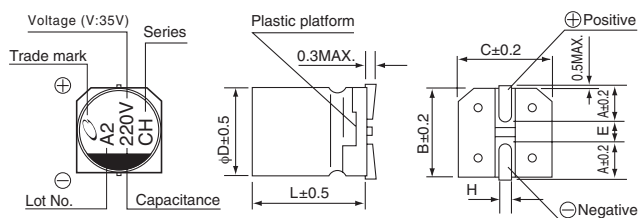
(φ 6.3)



Type numbering system (Example : 35V 47μF)



(φ8, φ10)



Voltage	35
Code	V

φD×L	(mm)	
	6.3×7.7	8×10
A	2.4	2.9
B	6.6	8.3
C	6.6	8.3
E	2.2	3.1
L	7.7	10
H	0.5 to 0.8	0.8 to 1.1

Dimensions

V		35					
Cap. (μF)	Code	1V					
47	470	6.3 × 7.7	0.30	3	6	197	
100	101	6.3 × 7.7	0.30	3	6	197	
220	221	8 × 10	0.20	2	4.5	270	
330	331	10 × 10	0.15	1.5	3.5	500	
		Case size	Initial	Initial	Initial	Initial	Rated
		φD × L	20°C	40°C	100kHz	100kHz	100kHz
		(mm)	100kHz	100kHz	100kHz	100kHz	100kHz
			ESR	ESR	ESR	ESR	ESR

Max. ESR (Ω) at 20°C / -40°C 100k to 400kHz,
Rated ripple Current (mArms) at 125°C 100kHz

Frequency coefficient of rated ripple current

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz or more
Coefficient	0.35	0.50	0.64	0.83	1.00