Chip Type, High Reliability. Low temperature ESR specification.







- 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,(EU)2015/863).
- AEC-Q200 compliant. Please contact us for details.



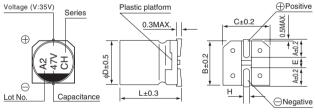


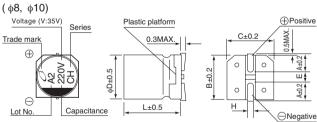
# ■Specifications

Item	Performance Characteristics				
Category Temperature Range	-40 to +125°C				
Rated Voltage Range	25 to 35V				
Rated Capacitance Range	47 to 560μF				
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 $\delta$ )	Rated voltage (V)   25   35   tan δ (MAX.)   0.18   0.16   Measurement frequency : 120Hz at 20°C				
Stability at Low Temperature	Rated voltage (V)   25   35				
Endurance	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.  Capacitance change Within $\pm 30\%$ of the initial capacitance value $\tan \delta$ 300% or less than the initial specified value Leakage current Less than 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	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.   Capacitance change   Within $\pm 10\%$ of the initial capacitance value $\tan \delta$   Less than or equal to the initial specified value   Leakage current   Less than or equal to the initial specified value   Leakage current   Less than or equal to the initial specified value   Leakage current   Less than or equal to the initial specified value   Leakage current   Leakage current   Less than or equal to the initial specified value   Leakage current   Leakage curr				
Marking	Black print on the case top.				

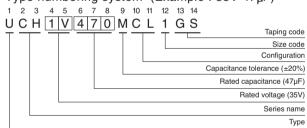
# ■Chip Type







# Type numbering system (Example: 35V 47µF)



Voltage					
V	25	35			
Code	Е	V			

			(mm)
øDXL	6.3×7.7	8×10	10×10
Α	2.4	2.9	3.2
В	6.6	8.3	10.3
С	6.6	8.3	10.3
Е	2.2	3.1	4.5
L	7.7	10	10
Н	0.5 to 0.8	0.8 to 1.1	0.8 to 11

## Dimensions

	V	25					35				
Cap. (µF)	Code	1E							1V		
47	470					1	6.3 × 7.7	0.30	3	. 6 .	197
100	101		1	1	!	1	6.3 × 7.7	0.30	3	6 1	197
150	151	6.3 × 7.7	0.30	3	6	197		1		I I	
220	221			1		1	8 × 10	0.20	2	4.5	270
330	331	8 × 10	0.20	2	4.5	270	10 × 10	0.15	1.5	3.5	500
560	561	10 × 10	0.15	1.5	3.5	500		1		1 1	
Frequency coefficient of rated ripple current						Case size φD × L	Initial 20°C 100kHz	Initial -40°C 100kHz	after       endurance test   2000hours   -40°C     400kHz	Rated	

### 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

Rated ripple Current (mArms) at 125°C 100kHz

ESR

• Taping specifications are given in page 23.

(mm)

- · Recommended land size, soldering by reflow are given in page 18, 19.
- Please refer to page 3 for the minimum order quantity.

ripple