ALUMINUM ELECTROLYTIC CAPACITORS

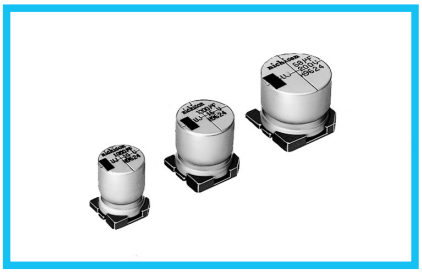
nichicon

UJ Chip Type, Higher Capacitance Range series

For SMD | Long Life | Anti-Solvent Feature (Through 100V only)

- Chip Type, higher capacitance in larger case sizes (φ12.5, φ16, φ18, φ20)
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape and tray.
- Compliant to the RoHS directive (2011/65/EU).

UJ → Bi-Polarized → UN



■Specifications

Item	Performance Characteristics		
Category Temperature Range	−55 to +105°C (6.3 to 100V), −40 to +105°C (160 to 450V)		
Rated Voltage Range	6.3 to 450V		
Rated Capacitance Range	3.3 to 6800μF		
Capacitance Tolerance	±20% at 120Hz, 20°C		
Leakage Current	Rated voltage (V)	6.3 to 100	160 to 450
	—	After 1 minute's application of rated voltage, leakage current is not more than 0.03CV or 4 (μA), whichever is greater.	I = 0.04CV+100 (μA) max. (1 minute's)

Tangent of loss angle (tan δ) — Measurement frequency : 120Hz at 20°C

Rated voltage (V)	6.3	10	16	25	35	50	63	100	160 to 250	400・450
tan δ (MAX.)	0.26	0.22	0.18	0.16	0.14	0.12	0.10	0.08	0.15	0.20

For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF.

Stability at Low Temperature — Measurement frequency: 120Hz

Rated voltage (V)		6.3	10	16	25	35	50	63	100	160 to 250	400・450
Impedance ratio ZT / Z20 (MAX.)	Z−25°C / Z+20°C	5	4	3	2	2	2	2	2	3	6
	Z−40°C / Z+20°C	10	8	6	4	3	3	3	3	6	10

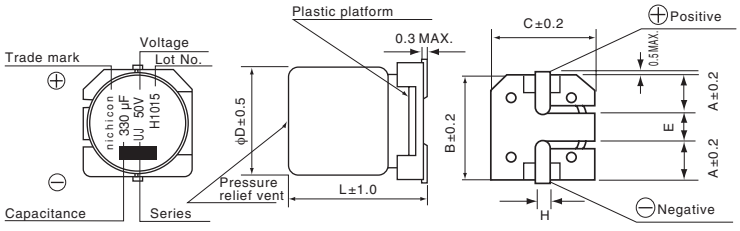
Endurance — The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 5000 hours at 105°C.

Capacitance change	Within ±20% of the initial capacitance value
tan δ	200% 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 105°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.

Marking — Black print on the case top.

■Chip Type



(mm)

φD	12.5×13.5	12.5×16	12.5×21	16×16.5	16×21.5	18×16.5	18×21.5	20×16.5	20×21.5
A	4.8	4.8	4.8	5.4	5.4	6.4	6.4	6.2	6.2
B	13.6	13.6	13.6	17.1	17.1	19.1	19.1	21.1	21.1
C	13.6	13.6	13.6	17.1	17.1	19.1	19.1	21.1	21.1
E	4.0	4.0	4.0	6.3	6.3	6.3	6.3	8.8	8.8
L	13.5	16.0	21.0	16.5	21.5	16.5	21.5	16.5	21.5
H	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.3 to 1.7	1.3 to 1.7

Type numbering system (Example : 50V 330μF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	U	J	1	H	3	3	1	M	N	Q	1	M	S

Package code

Taping	MS
Tray	ZD

Size code

Configuration

φD	Code
12.5 to 18	NQ
20	RQ

Capacitance Tolerance (±20%)

Rated capacitance (330μF)

Rated voltage (50V)

Series name

Type

※ The vibration structure-resistant product is also available upon request, please ask for details.

● Dimension table in next page.

UJ series

■Dimensions

(μF) Cap. \ V / Code	6.3		10		16		25		35		50	
	0J		1A		1C		1E		1V		1H	
220	221								12.5 × 13.5	280	12.5 × 16	320
330	331						12.5 × 13.5	320	12.5 × 16	360	● 16 × 16.5	440
470	471				12.5 × 13.5	360	12.5 × 16	400	● 16 × 16.5	490	△ 18 × 16.5	550
1000	102	12.5 × 13.5	440	12.5 × 16	500	● 16 × 16.5	630	△ 18 × 16.5	700	△ 18 × 16.5	750	18 × 21.5	820
2200	222	● 16 × 16.5	750	● 16 × 16.5	810	△ 18 × 16.5	930	18 × 21.5	1050	□ 20 × 21.5	1150		
3300	332	△ 18 × 16.5	930	△ 18 × 16.5	1000	18 × 21.5	1150						
4700	472	★ 18 × 21.5	1100	18 × 21.5	1200								
6800	682	□ 20 × 21.5	1350	□ 20 × 21.5	1450								

(μF) Cap. \ V / Code	63		100		160		200		250		400		450	
	1J		2A		2C		2D		2E		2G		2W	
3.3	3R3												12.5 × 13.5	40
4.7	4R7								12.5 × 13.5	65	12.5 × 16	50	12.5 × 16	50
10	100						12.5 × 13.5	80	12.5 × 16	105	16 × 16.5	85	16 × 16.5	85
22	220						12.5 × 16	105	● 16 × 16.5	180	18 × 21.5	130	18 × 21.5	130
33	330				12.5 × 13.5	95	● 16 × 16.5	220	△ 18 × 16.5	230	□ 20 × 21.5	160	□ 20 × 21.5	160
47	470		12.5 × 13.5	160	● 16 × 16.5	260	△ 18 × 16.5	270	★ 18 × 21.5	280				
68	680	12.5 × 13.5	175	12.5 × 16	205	△ 18 × 16.5	320	★ 18 × 21.5	330	□ 20 × 21.5	340			
100	101	12.5 × 16	225	● 16 × 16.5	285	★ 16 × 21.5	380	□ 20 × 21.5	410					
220	221	● 16 × 16.5	385	△ 18 × 16.5	440									
330	331	△ 18 × 16.5	490	□ 20 × 21.5	500								Case size φD × L (mm)	Rated ripple
470	471	18 × 21.5	590											

Size φ12.5 × 21 is available for capacitors marked,"●".
Size φ16 × 21.5L is available for capacitors marked,"△".
Size φ18 × 21.5L is available for capacitors marked,"□".
Size φ20 × 16.5L is available for capacitors marks," ★ ".
※ In this case, [6] will be put at 12th digit of type numbering system.

Rated ripple current (mArms) at 105°C 120Hz

● Frequency coefficient of rated ripple current

V	Cap.(μF) \ Frequency	50Hz	120Hz	300Hz	1kHz	10kHz or more
6.3 to 100	47 to 68	0.75	1.00	1.35	1.57	2.00
	100 to 470	0.80	1.00	1.23	1.34	1.50
	1000 to 6800	0.85	1.00	1.10	1.13	1.15
160 to 450	3.3 to 100	0.80	1.00	1.25	1.40	1.60

- 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.

Mouser Electronics

Authorized Distributor

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Nichicon:

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