## **ALUMINUM ELECTROLYTIC CAPACITORS**

UUJ

Chip Type, Higher Capacitance Range







- Chip Type, higher capacitance in larger case sizes (φ12.5, φ16, φ18)
- Designed for surface mounting on high density PC board.
- 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.



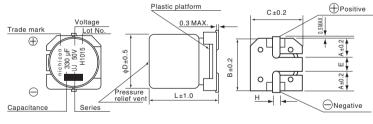


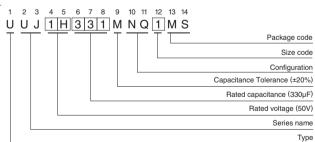
#### ■ Specifications

14.0						Df									
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	₿ to 450V													
Rated Capacitance Range	3.3 to 6800µF	3 to 6800µF													
Capacitance Tolerance	±20% at 120Hz, 20	20% at 120Hz, 20°C													
	Rated voltag	je (V)				6	6.3	to 100					160 to 45	60	
Leakage Current	_			After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV or 4 ( $\mu$ A), whichever is greater.									I = 0.04CV+100 (μA) max. (1 minute's at 20°C)		
	Measurement frequency: 120Hz at 20°C														
Tangent of loss angle (tan δ)	Rated voltage (V	6.3	1	10		25		35		(	63	100	160 to 250	400 • 450	
rangent or loss angle (tan 8)	tan δ (MAX.)	0.26	0.26 0.		0.18	0.16	,	0.14	0.12	0	.10	0.08	0.15	0.20	
	For capacitance of more than 1000 $\mu$ F, add 0.02 for every increase of 1000 $\mu$ F. ( $\phi$ 12.5 to $\phi$ 18)														
	Measurement frequency: 120Hz														
O(-1-17)	Rated voltage (V)			6.3	10	16		25	35	50	63	100	160 to 250	400 • 450	
Stability at Low Temperature	Impedance ratio	Z-25°C / Z-		5	4	3		2	2	2	2	2	3	6	
	(MAX.)	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								/alue						
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	e top.													

### ■Chip Type

Type numbering system (Example: 50V 330µF)





(mm)

φD	12.5×13.5	12.5×16	12.5×21	16×16.5	16×21.5	18×16.5	18×21.5
Α	4.8	4.8	4.8	5.4	5.4	6.4	6.4
В	13.6	13.6	13.6	17.1	17.1	19.1	19.1
С	13.6	13.6	13.6	17.1	17.1	19.1	19.1
E	4.0	4.0	4.0	6.3	6.3	6.3	6.3
L	13.5	16.0	21.0	16.5	21.5	16.5	21.5
Н	1.0 to 1.4						

 $\fint *$  The vibration structure-resistant product is also available upon request, please ask for details.



#### Dimensions

(μF)	V	6.3		10		16		25		35		50	
_	Code	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	□ 18 × 21.5	1150		
3300	332	△ 18 × 16.5	930	△ 18 × 16.5	1000	18 × 21.5	1150		į				
4700	472	18 × 21.5	1100	18 × 21.5	1200		i		i				
6800	682	□ 18 × 21.5	1350	□ 18 × 21.5	1450		 		 				

(μF)	V	63		100		160		200		250		400		450	
	Code	1J		2A		2C		2D		2E		2G		2W	
3.3	3R3		 										   	12.5 × 13.5	40
4.7	4R7		l I							12.5 × 13.5	65	12.5 × 16	50	12.5 × 16	50
10	100		i I		i I		i	12.5 × 13.5	80	12.5 × 16	105	16 × 16.5	85	16 × 16.5	85
22	220		l I		1			12.5 × 16	105	• 16 × 16.5	180	18 × 21.5	130	18 × 21.5	130
33	330		l I		 	12.5 × 13.5	95	• 16 × 16.5	220	△ 18 × 16.5	230	□ 18 × 21.5	160	□ 18 × 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	□ 18 × 21.5	340				
100	101	12.5 × 16	225	• 16 × 16.5	285	16 × 21.5	380	□ 18 × 21.5	410				 		
220	221	• 16 × 16.5	385	△ 18 × 16.5	440		-		!				! !		!
330	331	△ 18 × 16.5	490	□ 18 × 21.5	500		i		i				i I	Case size	Rated
470	471	18 × 21.5	590		I I				I I				I I	$\phi D \times L (mm)$	ripple

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

□: In this case, [6] will be put at 12th digit of type numbering system.

Size φ12.5×21L is available for capacitors marked." • "

Size φ16×21.5L is available for capacitors marked." Δ"

In this case, [6] will be put at 12th digit of type numbering system.

## • Frequency coefficient of rated ripple current

V	Cap.(µF) Frequency	50Hz	120Hz	300Hz	1kHz	10kHz or more
	47 to 68	0.75	1.00	1.35	1.57	2.00
6.3 to 100	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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