

UWH1A331MCL1GS Datasheet



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DiGi Electronics Part Number	UWH1A331MCL1GS-DG
Manufacturer	Nichicon
Manufacturer Product Number	UWH1A331MCL1GS
Description	CAP ALUM 330UF 20% 10V SMD
Detailed Description	330 μ F 10 V Aluminum Electrolytic Capacitors Radial, Can - SMD 1000 Hrs @ 125°C

This model UWH1A331MCL1GS is available at DiGi Electronics.

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Purchase and inquiry

Manufacturer Product Number:

UWH1A331MCL1GS

Series:

UWH

Capacitance:

330 μ F

Voltage - Rated:

10 V

Lifetime @ Temp.:

1000 Hrs @ 125°C

Polarization:

Polar

Applications:

General Purpose

Ripple Current @ High Frequency:

168 mA @ 10 kHz

Size / Dimension:

0.394" Dia (10.00mm)

Surface Mount Land Size:

0.406" L x 0.406" W (10.30mm x 10.30mm)

Package / Case:

Radial, Can - SMD

Manufacturer:

Nichicon

Product Status:

Active

Tolerance:

\pm 20%

ESR (Equivalent Series Resistance):

-

Operating Temperature:

-40°C ~ 125°C

Ratings:

-

Ripple Current @ Low Frequency:

112 mA @ 120 Hz

Lead Spacing:

-

Height - Seated (Max):

0.394" (10.00mm)

Mounting Type:

Surface Mount

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8532.22.0020

Moisture Sensitivity Level (MSL):

1 (Unlimited)

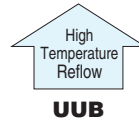
ECCN:

EAR99

ALUMINUM ELECTROLYTIC CAPACITORS

UWH

Chip Type, High Reliability
High Temperature (260°C) Reflow



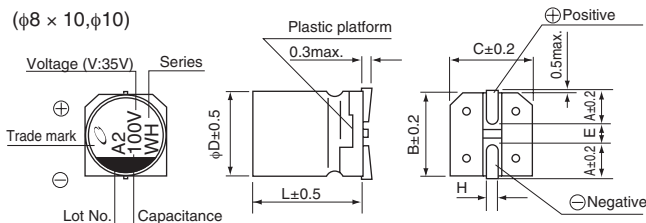
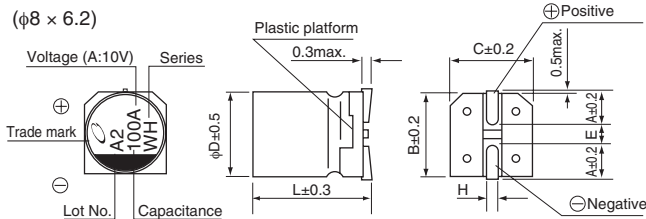
- Corresponding with 260°C peak reflow soldering
Recommended reflow condition : 260°C peak 5 sec. 230°C over 60 sec. 2 times (φ8 × 6.2, φ10 × 10 : 1 time)
- Chip type high temperature range, for +125°C use.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

Specifications

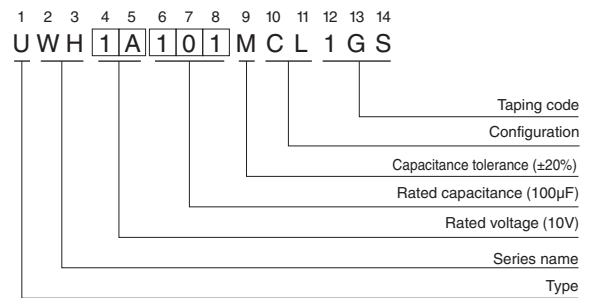
Item	Performance Characteristics												
Category Temperature Range	-40 to +125°C												
Rated Voltage Range	10 to 50V												
Rated Capacitance Range	10 to 330μF												
Capacitance Tolerance	±20% at 120Hz, 20°C												
Leakage Current ※	After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV or 4(μA) , whichever is greater.												
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C												
	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>tan δ (max.)</td> <td>0.32</td> <td>0.24</td> <td>0.21</td> <td>0.18</td> <td>0.18</td> </tr> </table>	Rated voltage (V)	10	16	25	35	50	tan δ (max.)	0.32	0.24	0.21	0.18	0.18
Rated voltage (V)	10	16	25	35	50								
tan δ (max.)	0.32	0.24	0.21	0.18	0.18								
Stability at Low Temperature	Measurement frequency : 120Hz												
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Rated voltage (V)	10	16	25	35	50								
Impedance ratio ZT / Z20 (max.)	Z(-40°C) / Z(+20°C)	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.												
	<table border="1"> <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						
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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.												
	<table border="1"> <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						
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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.												

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

Chip Type



Type numbering system (Example : 10V 100μF)



	(mm)		
φD×L	8×6.2	8×10	10×10
A	3.3	2.9	3.2
B	8.3	8.3	10.3
C	8.3	8.3	10.3
E	2.3	3.1	4.5
L	6.2	10	10
H	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

Voltage

V	10	16	25	35	50
Code	A	C	E	V	H

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

● Dimension table in next page.

ALUMINUM ELECTROLYTIC CAPACITORS

UWH

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μ F)	Case Size ϕ D \times L (mm)	tan δ	Leakage Current (μ A) (at 20°C after 1 minute)	Rated Ripple (mArms) (125°C/120Hz)	Part Number
10 (1A)	100	8 \times 6.2	0.32	30	58	UWH1A101MCL1GS
	220	8 \times 10	0.32	66	90	UWH1A221MCL1GS
	330	10 \times 10	0.32	99	112	UWH1A331MCL1GS
16 (1C)	100	8 \times 10	0.24	48	66	UWH1C101MCL1GS
	220	10 \times 10	0.24	105.6	102	UWH1C221MCL1GS
25 (1E)	47	8 \times 6.2	0.21	35.25	48	UWH1E470MCL1GS
	100	8 \times 10	0.21	75	74	UWH1E101MCL1GS
	220	10 \times 10	0.21	165	116	UWH1E221MCL1GS
35 (1V)	33	8 \times 6.2	0.18	34.65	44	UWH1V330MCL1GS
	47	8 \times 10	0.18	49.35	52	UWH1V470MCL1GS
	100	10 \times 10	0.18	105	80	UWH1V101MCL1GS
50 (1H)	10	8 \times 6.2	0.18	15	24	UWH1H100MCL1GS
	22	8 \times 6.2	0.18	33	38	UWH1H220MCL1GS
	33	8 \times 10	0.18	49.5	46	UWH1H330MCL1GS
	47	10 \times 10	0.18	70.5	58	UWH1H470MCL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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