



# UL Series

- Super low ESR at a high frequency range
- Low profile 6.3x6 max, 8x7 max
- 2,000 hours at 105°C



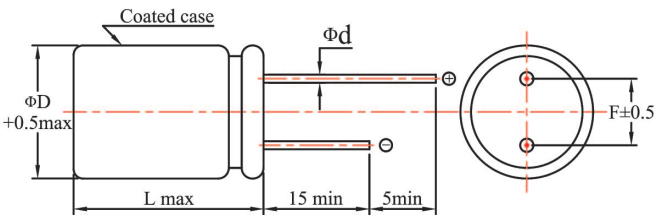
## SPECIFICATIONS

Item	Performance Characteristics								
Category Temperature Range	-55 ~ +105°C								
Working Voltage Range	2.5 ~ 16Vdc								
Surge Voltage	Rated Voltage x1.15								
Capacitance Tolerance	M: ±20% (at 25°C and 120Hz)								
ESR	See the standard ratings table (at 25°C, 100~300KHz)								
Dissipation Factor (Tanδ)	See the standard ratings table (at 25°C, 120Hz)								
Leakage Current ※1	See the standard ratings table (Impress the rated voltage for 2 minutes)								
Low Temperature Characteristics Impedance Ratio	Z(-25°C)/Z(+25°C) ≤ 1.15 at 100KHz Z(-55°C)/Z(+25°C) ≤ 1.25 at 100KHz								
Endurance	The following specifications shall be satisfied when the capacitors are restored to 25°C after subjected to DC voltage with the rated ripple current is applied for 2,000 hours at 105°C <table border="1" style="margin-left: 20px;"> <tr> <td>Capacitance change</td> <td>≤ ±20% of the initial value</td> </tr> <tr> <td>ESR</td> <td>≤ 150% of the specified value</td> </tr> <tr> <td>Dissipation factor(tanδ)</td> <td>≤ 150% of the specified value</td> </tr> <tr> <td>Leakage current</td> <td>≤ specified value</td> </tr> </table>	Capacitance change	≤ ±20% of the initial value	ESR	≤ 150% of the specified value	Dissipation factor(tanδ)	≤ 150% of the specified value	Leakage current	≤ specified value
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ESR	≤ 150% of the specified value								
Dissipation factor(tanδ)	≤ 150% of the specified value								
Leakage current	≤ specified value								
Damp Heat (Steady State)	The following requirements shall be satisfied when the capacitor are restored to 25°C after exposing them for 1,000 hours at 60°C 90 to 95% RH <table border="1" style="margin-left: 20px;"> <tr> <td>Capacitance change</td> <td>≤ ±20% of the initial value</td> </tr> <tr> <td>ESR</td> <td>≤ 150% of the specified value</td> </tr> <tr> <td>Dissipation factor(tanδ)</td> <td>≤ 150% of the specified value</td> </tr> <tr> <td>Leakage current</td> <td>≤ specified value</td> </tr> </table>	Capacitance change	≤ ±20% of the initial value	ESR	≤ 150% of the specified value	Dissipation factor(tanδ)	≤ 150% of the specified value	Leakage current	≤ specified value
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ESR	≤ 150% of the specified value								
Dissipation factor(tanδ)	≤ 150% of the specified value								
Leakage current	≤ specified value								

※1 In case of some problems for measured values, measure after applying rated voltage for 120 minutes at 105°C

※2 ESR should be measured at both of the terminal ends closest to the capacitor body

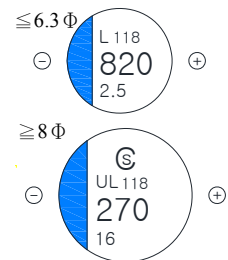
### DIMENSIONS (mm)



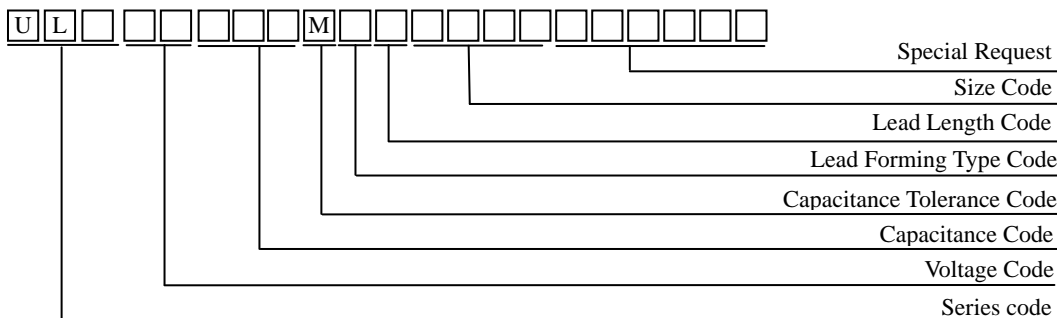
### Lead

ΦD	6.3	8
Φd	0.45	0.6
	6	7
F	2.5	3.5

### Marking



### PART NUMBER SYSTEM





## UL Series

◆ Standard Ratings

Rated Voltage (Vdc)	Rated Capacitance (μF)	Case Size ΦD×L (mm)	ESR 100~300KHz (mΩ max)	Rated Ripple Current 105°C, 100KHz (mArms max)	Tan δ max	Leakage Current (μA max)	Part Number
2.5(0E)	220	6.3×6	8	3400	0.10	500	UL0E221MNN6306
	390	6.3×6	8	3900	0.10	500	UL0E391MNN6306
	560	6.3×6	8	3900	0.10	500	UL0E561MNN6306
	680	6.3×6	8	4500	0.10	500	UL0E681MNN6306
6.3(0J)	220	6.3×6	17	3000	0.10	500	UL0J221MNN6306
	330	6.3×6	17	3300	0.10	500	UL0J331MNN6306
16(1C)	100	6.3×6	24	2490	0.10	500	UL1C101MNN6306
	150	6.3×6	22	3220	0.10	500	UL1C151MNN6306
	180	6.3×6	22	3300	0.10	576	UL1C181MNN6306
	220	8×7	13	4150	0.10	704	UL1C221MNN0807
	270	8×7	12	4300	0.10	864	UL1C271MNN0807
	330	8×7	12	4300	0.10	1056	UL1C331MNN0807
	390	8×7	12	4300	0.10	1248	UL1C391MNN0807
	470	8×7	13	4700	0.10	1504	UL1C471MNN0807