
Leaguer product specification content

华冠电容规格承认书目录

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1、 Parts lists 物料清单:

Customer's Part No. 客户代码	Leaguer's Part No. 华冠代码	Leaguer Series	Size(mm) D×L	W.V (V)	Cap. (μ F)	Cap. Tol. \pm (%)	$\tan \delta$ 损耗	Iu(uA) 漏电流	Ripple Current 纹波电流 (mA)
	RCL1H4R7M0511F3	RCL	5×11	50	4.7	20	0.10	0.47	41

2、Explanation of Leaguer Part Number 代码解释

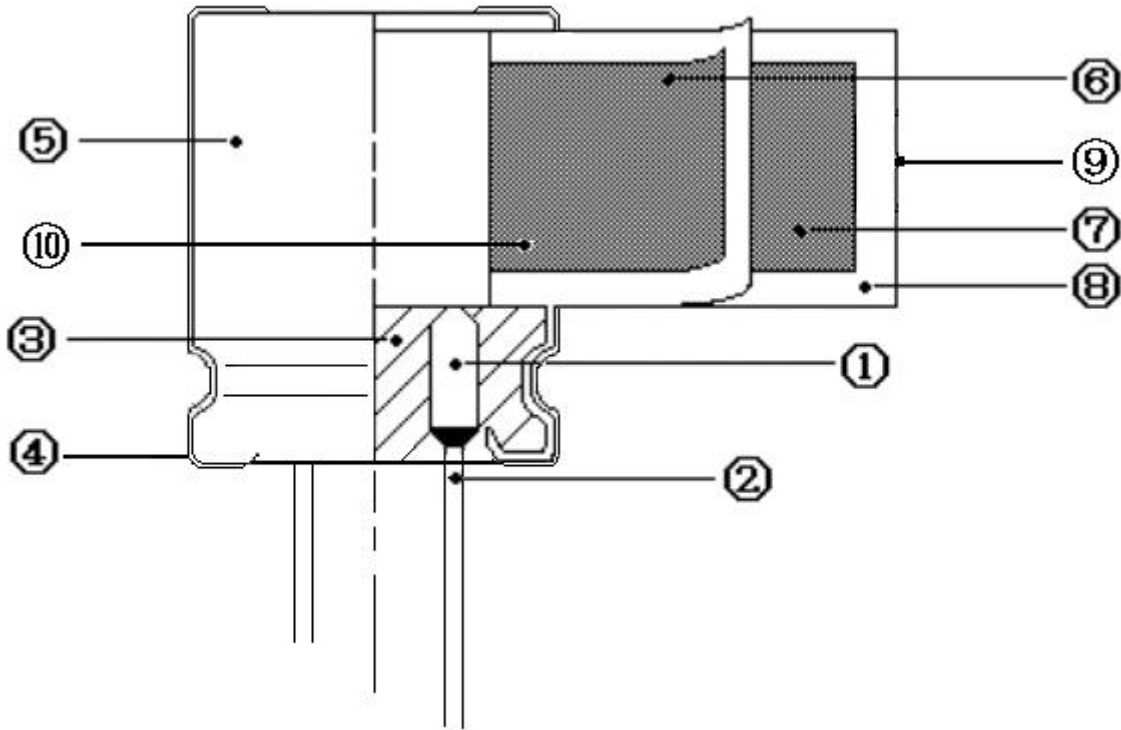


型号
Series
额定电压
R.W.Voltage
静电容量
N.Capacitance
容量允许误差
Cap.Tol
尺寸
Case Size
引线脚型
Radial Lead Type

Series	Voltage		Capacitance		Cap Tol		Case Size		引线脚型 Radial Lead Type	
VS1	4	0G	0.1	0R1	±5%	J	3×5	0305	直线切脚 Straight cut 	C*
VT1	6.3	0J	0.22	R22			4×5	0405		
VT2	10	1A	0.33	R33	±10%	K	5×5	0505	成形切脚 Forming cut 	FC
VTD	16	1C	0.47	R47			6.3×5	0605		
VTG	25	1E	1	010	±20%	M	4×7	0407	折曲切脚 Kink cut 	KC
VZ2	35	1V	2.2	2R2			5×7	0507		
VTK	50	1H	3.3	3R3	+30%		6.3×7	0607	长脚散装 Bulk 成型散装 Bulk & Forming	B1 BF
VTL	63	1J	4.7	4R7	-10%	Q	8×7	0807		
VUL	80	1K	10	100			5×11	0511	直脚编带 Taping	F1 F2 F3
VBP	100	2A	22	220	+50%		6.3×11.5	0611		
VLD	160	2C	33	330	-10%	T	8×12	0812	片式产品 v-chip	V1 V2
MS1	200	2D	47	470			8×14	0814		
MT1	250	2E	100	101			8×16	0816		
MZ1	350	2V	220	221			8×20	0820		
MBP	400	2G	330	331			10×12.5	1012		
SS1	450	2W	470	471			10×16	1016		
ST1			1000	102			10×20	1020		
SBP			2200	222			10×25	1025		
STL			3300	332			10×30	1030		
RS1			47000	473			13×20	1320		
RS2							13×25	1325		
RT1							13×30	1330		
RLL							13×36	1336		
RTE							13×40	1340		
RTZ							16×16	1616		
RCL							16×20	1620		
							16×25	1625		
							16×32	1632		
							16×36	1636		
							18×20	1820		
							18×26	1826		
							18×34	1834		
							18×40	1840		
							22×32	2232		
							22×36	2236		
							片式 SMD			
							4×5.4	0405		
							6.3×5.4	0605		
							6.3×5.8	0606		
							6.3×7.7	0607		
							8×6.2	0806		
							8×10.2	0810		
							10×10.2	1010		

例：RCL1H4R7M0511F3 表示：RCL 50V4.7UF 5×11 ±20% Taping

3、 Construction 结构图

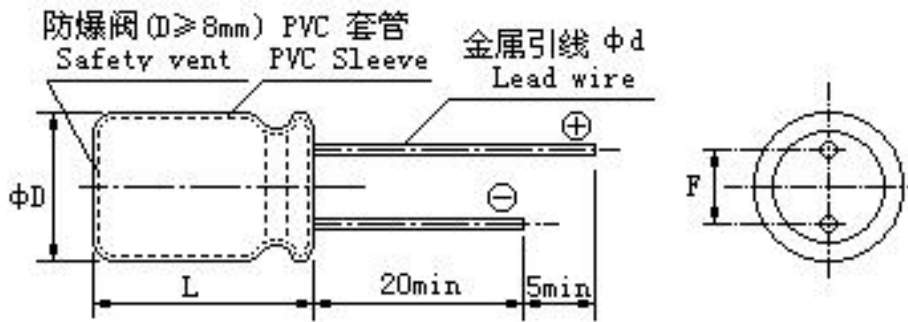


NO	Component	Materials
1	Lead line	Aluminum 99. 93%
2	Terminal	Tinned copper-ply wire(Lead Free)
3	Sealing pad	IIR
4	Sleeve	PVC
5	Case	Aluminum 99. 5%
6	Anode foil	Formed aluminum 99. 98%
7	Cathode foil	Etched aluminum 99. 8%
8	Separator	Pulp
9	Adhesive glue	PVA
10	Electrolyte	Glycol
*	Ink	White ink

4、 Standard Rating 基本参数

No.	Item	Ratings						
1	Temperature Range 使用温度范围	- 40~+85℃						
2	Rated Voltage Range 额定电压范围	6.3~50V						
3	Capacitance Range 标称容量范围	0.1~330 μ F						
4	Capacitance Tol 容量容许偏差	±20% (120Hz, 20℃)						
5	Surge Voltage 浪涌电压(V.DC)	R.V.	6.3	10	16	25	35	50
		S.V.	7.2	11.5	18.4	28.8	40.3	57.5

5、 Dimension & Appearance 外形尺寸



mm						
$\Phi D \pm 0.5$	4	5	6.3	8	5	6.3
$L^{+1.0}$	5	7	7	7	11	11.5
$F \pm 0.5$	1.5	2.0	2.5	3.5	2.0	2.5
$\Phi d \pm 0.05$	0.45			0.50		

6、 Electrical Requirements 电性能要求

1	Capacitance Tolerance 容量允许偏差	$\pm 20\%$ at 120Hz,20°C																
2	Operation Temperature Range 使用温度范围	6.3V~50V -40°C~+85°C																
3	Leakage Current 漏电流	<p>After DC Voltage is applied to capacitor through the series protective resistance(1K Ω),and then terminal voltage may reach the rated working voltage. The leakage current when measured after 2 minutes (6.3~50V)shall be below the value of the following equation.</p> <p>将电容器串联 1K Ω 电阻后，施加额定直流电压 2 分钟，测量漏电流满足以下要求。</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>6.3~50V $I \leq 0.002CV$ or $0.4 \mu A$, Whichever is greater</p> </div> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>Where I=Leakage Current(μA) C=Capacitance(μF) V=Rated DC Working Voltage(V)</p> </div>																
4	Dissipation Factor 损耗角正切值 (Tan δ at 120Hz,20°C)	<table border="1" style="width: 100%; text-align: center;"> <tr> <th>Rated Voltage</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> <tr> <th>Tan δ (max)</th> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> </tr> </table>	Rated Voltage	6.3	10	16	25	35	50	Tan δ (max)	0.24	0.20	0.16	0.14	0.12	0.10		
Rated Voltage	6.3	10	16	25	35	50												
Tan δ (max)	0.24	0.20	0.16	0.14	0.12	0.10												
5	Low Temperature Characteristics 低温特性 (at 120Hz)	<table border="1" style="width: 100%; text-align: center;"> <tr> <th colspan="2">Rated Voltage</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> <tr> <th>Impedance Ratio</th> <th>Z(-40°C)/ Z(+20°C)</th> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>4</td> <td>4</td> </tr> </table>	Rated Voltage		6.3	10	16	25	35	50	Impedance Ratio	Z(-40°C)/ Z(+20°C)	8	6	4	4	4	4
Rated Voltage		6.3	10	16	25	35	50											
Impedance Ratio	Z(-40°C)/ Z(+20°C)	8	6	4	4	4	4											
6	Rated Ripple Current 纹波电流 (at 120Hz,85°C)	Page 8																

Case Size and Ripple Current 尺寸和纹波电流

DxL(mm) ω mA μ F	6.3V 0J		10V 1A		16 1C		25V 1E		35V 1V		50V 1H	
	Φ DxL	mA	Φ DxL	mA	Φ DxL	mA	Φ DxL	mA	Φ DxL	mA	Φ DxL	mA
	0.1 (0R1)											4x7 5x11
0.22 (R22)											4x7 5x11	2.3 3.1
0.33 (R33)											4x7 5x11	3.5 4.8
0.47 (R47)											4x7 5x11	5.0 6.9
1.0 (010)											4x7 5x11	10 13
2.2 (2R2)											4x7 5x11	15 20
3.3 (3R3)									4x7	12	4x7 5x11	18 24
4.7 (4R7)							4x7 4x5	21 18	4x7	20	4x7 5x11	23 41
10 (100)					4x7 5x11	29 40	4x7 5x11	17 23	4x7 5x11	30 41	5x7 5x11	27 32
22 (220)			4x7	35	4x7 5x11	39 53	5x7 5x11	48 58	5x7 5x11	55 67	6.3x7 5x11	65 69
33 (330)	4x7	40	4x7	43	5x7 5x11	55 67	6.3x7 5x11	63 67	6.3x7 5x11	67 71	8x7 6.3x11.5	71 74
47 (470)	4x7	48	5x7 5x11	86 104	5x7 5x11	65 79	6.3x7 5x11	69 73	8x7 6.3x11.5	110 115	6.3x11.5	105
100 (101)	5x7 5x11	78 95	6.3x7 5x11	120 127	6.3x7 6.3x11.5	98 118	8x7 6.3x11.5	126 132				
220 (221)	6.3x7 6.3x11.5	120 145	8x7 6.3x11.5	132 138	8x7	132						
330 (331)	8x7	129										

Remark: (备注)

Customers' specification will be accorded on request.

客户的特殊要求将被遵守。

7、Endurance characteristic 寿命特性

No.	Item 项目	Performance Characteristics 性能要求	Test 测试		
			Step	Test Temperature	Time
1	Characteristics at High and Low Temperature 高低温特性	<p><u>Step2 (阶段 2)</u> Impedance Ratio: (阻抗比) Less than the item 5 Value of page 7 小于第 7 页第 5 项中的值 Ratio against step 1 相对于阶段 1 比值</p> <p><u>Step4 (阶段 4)</u> Leakage Current: (漏电流) ≤800% of the value of item 3 of page 7 小于或等于第 7 页第 3 项规定值 8 倍 Capacitance Change: (容量变化) Within ±20% of the value in step 1 与阶段 1 的值比变化率不大于 20%</p>			
			1	20±2℃	-
			2	-40±3℃	30min
			3	20±2℃	10-15min
			4	85±2℃	30min
			5	20±2℃	10-15min
2	Surge Voltage Test 浪涌测试	<p>Leakage Current: (漏电流) ≤the value of item 3 of page 7 ≤第 7 页第 3 项规定值 Capacitance Change: (容量变化) Within ±15% of the initial measured value 与初始测量值比, 变化率不大于 15%</p> <p>Tangent of Loss Angle: (损耗角正切值) ≤100% of the value of item 4 of page 7 ≤第 7 页第 4 项规定值</p>	<p>After surge voltage(the value of P10) applied at a cycling rate of 30 seconds charge and 5.5 minutes discharge 1000 successive test cycle. Test temperature:15~35℃.对电容器施加浪涌电压, 每充电 30s, 放电 5min30sec, 连续循环 1000 次后测量。测试温度: 15~35℃。</p>		
3	Tensile Test 拔出力测试	No broken and undamaged 无损坏	The lead tabs shall not be broken or any malformed condition after fixing capacitor vertically and pressing the following weight on the lead tabs of capacitor for 10 ± 1 secs.		
			Lead diameter	Weight(N)	
			0.45mm	0.3	
			0.5mm	0.5	
4	Solderability 可焊性	More than 95% of the terminal surface shall be covered with new solder. 引线端子表面 95%以上的面积附着新焊料。	<p>Temperature: 235±5℃ (温度) Immersing Time: 2±0.5sec (浸入时间) Immersing Depth: Dip the terminal for Approx. 0.5~1mm thick 浸入深度: 浸入引线约 0.5~1mm Flux: Approx. 25% rosin in Ethanol 助焊剂: 约 25%的松香溶于酒精</p>		

5	Vibration 振动	<p>Capacitance: (容量)</p> <p>During test, measured value shall be stabilized(measured several times within 30 min. Before completion of test)</p> <p>在测试的 30 分钟内, 观测电容量测试值无明显变化</p> <p>Appearance: (外观)</p> <p>No significant change can be observe</p> <p>无可见损伤</p> <p>Capacitance change: (容量变化)</p> <p>Within $\pm 5\%$ of initial measured value</p> <p>容量变化率不超过 5%</p>	<p>Frequency: 10~55Hz reciprocation for 1 min</p> <p>频率: 10 到 55 Hz, 每分钟互换</p> <p>Total amplitudes:0.75mm</p> <p>振幅: 0.75mm</p> <p>Direction and during of vibration: 3 orthogonal directions, Mutually each for 2hrs total 6hrs</p> <p>在互相垂直的 3 个方向上, 每个方向振动 2 小时, 共 6 小时。</p>
6	Solder Heat-Resistance Test 耐焊接热	<p>Appearance: (外观)</p> <p>No significant change can be observe</p> <p>无可见损伤</p> <p>Capacitance change: (容量变化)</p> <p>Within $\pm 5\%$ of initial measured value</p> <p>容量变化率不超过 5%</p>	<p>The section of lead below 4mm form the body of capacitor must be immersed in $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ liquid tin 10 ± 1 seconds. Then. removing the capacitor terminal is restored to 20°C within two hours or over an hour.</p> <p>电容器本体 4mm 以下浸入 $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ 焊锡中, 持续 $10 \pm 1\text{s}$, 然后室温 20°C 恢复 1-2 小时。</p>
7	Humidity Test 潮湿试验	<p>Leakage Current: (漏电流)</p> <p>\leq the value of item 3 of page 7</p> <p>\leq 第 7 页第 3 项规定值</p> <p>Capacitance Change: (容量变化)</p> <p>Within $\pm 10\%$ of the initial measured value 与初始测量值比变化率不大于 10%</p> <p>Tangent of Loss Angle: (损耗角正切值)</p> <p>$\leq 120\%$ of the value of item 4 of page 7</p> <p>\leq 第 7 页第 4 项规定值的 1.2 倍</p> <p>Appearance: (外观)</p> <p>No significant change can be observed.</p> <p>无可见损伤</p>	<p>Capacitors shall be exposed for $500 \pm 6\text{hrs}$ in an atmosphere of 90~95% R.H. at 40°C. And then the capacitor shall be subjected to standard atmospheric conditions for 16 hours, after which measurements shall be made.</p> <p>电容器放置在温度 40°C、湿度 90~95% 的环境下 500 ± 6 小时, 然后放置在标准环境中恢复 16 小时</p>

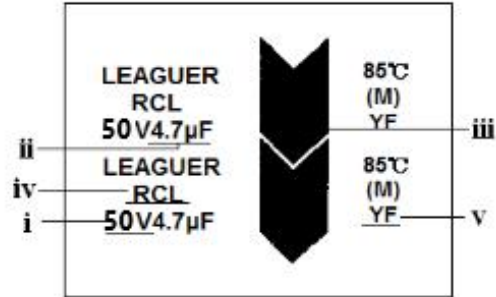
<p style="text-align: center;">8</p>	<p style="text-align: center;">High Temperature Load Life Test 高温负荷寿命</p>	<p>Leakage Current: (漏电流) \leq the value of item 3 of page 7 \leq 第 7 页第 3 项规定值</p> <p>Capacitance Change: (容量变化) Within $\pm 25\%$ of the initial measured value 与初始测量值比变化率不大于 25%</p> <p>Within $\pm 20\%$ of the initial measured value 与初始测量值比变化率不大于 20%</p> <p>Tangent of Loss Angle: (损耗角正切值) $\leq 200\%$ of the value of item 4 of page 7 \leq 第 7 页第 4 项规定值的 2 倍</p> <p>Appearance: (外观) No significant change can be observed. 无可见损伤</p>	<p>Test Temperature 温度: $85 \pm 2^\circ\text{C}$ Test Duration: 2000hours 试验持续时间: 2000 小时</p> <p>Applied Voltage: Rated Voltage 施加电压: 额定电压</p> <p>After subjected to the test, the capacitors shall be left at the room temperature for 2 hours prior to the measurement. 试验完成后, 电容器在测量前应在室温中恢复 2 小时。</p>
<p style="text-align: center;">9</p>	<p style="text-align: center;">High Temperature Unload Life Test 高温储存</p>	<p>Leakage Current: (漏电流) $\leq 200\%$ of the value of item 3 of page 7 \leq 第 7 页第 3 项规定值的 2 倍</p> <p>Capacitance Change: (容量变化) Within $\pm 25\%$ of the initial measured value 与初始测量值比变化率不大于 25%</p> <p>Within $\pm 20\%$ of the initial measured value 与初始测量值比变化率不大于 20%</p> <p>Tangent of Loss Angle: (损耗角正切值) $\leq 200\%$ of the value of item 4 of page 7 \leq 第 7 页第 4 项规定值的 2 倍</p> <p>Appearance: (外观) No significant change can be observed. 无可见损伤</p>	<p>Test Temperature 温度: $85 \pm 2^\circ\text{C}$ Test Duration: 1000hours 试验持续时间: 1000 小时</p> <p>Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4. 电容器在测量前应按照 JIS C 5101-4 第 4.1 项规定进行加压预处理。</p>

8、Marking 标示

a) Following items shall be marked on the sleeving.

电容器的套管上印刷以下内容

- i. Rated Voltage 额定电压
- ii. Capacitance 额定容量
- iii. Negative Polarity 负极标示
- iv. Series 系列代码
- v. Date Code 日期代码



Date Code:

XI(2018.1~2018.6)	XT(2018.7~2018.12)
YU(2019.1~2019.6)	YC(2019.7~2019.12)
ZV(2020.1~2020.6)	ZP(2020.7~2020.12)
KA(2021.1~2021.6)	KY(2021.7~2021.12)

b) Following items should be marked on the taping box.

电容器的编带包装盒上印刷以下内容。



I) 订单号码 P / O (PURCHASE ORDER)

II) 客户产线号 LINE No (LINE NUMBER)

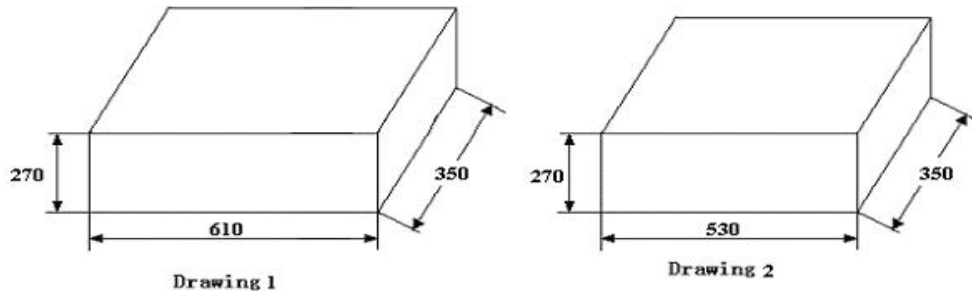
III) 供应商料号 MPN

IV) 客户料号 CPN

V) 包装数量 Qty

9、Packaging 包装（单位：mm）

● Dimensions of Outer Carton Bo 外包装箱尺寸



● 编带产品包装数量 Packaging Specification Of Taping

Size	Quantity/taping box (pcs)	Quantity/one outer box (pcs)	Outer box size
$\phi 4 \times 5$	3000	30000	Drawing 1
$\phi 5 \times 7$	2000	20000	Drawing 2
$\phi 6.3 \times 7$	2000	20000	Drawing 1
$\phi 8 \times 7$	1000	10000	Drawing 2
$\phi 5 \times 11$	2000	10000	Drawing 2
$\phi 6.3 \times 11.5$	2000	10000	Drawing 1

10、Outer Label 外标签



I) 订单号码 P / O (PURCHASE ORDER)

II) 客户产线号 LINE No (LINE NUMBER)

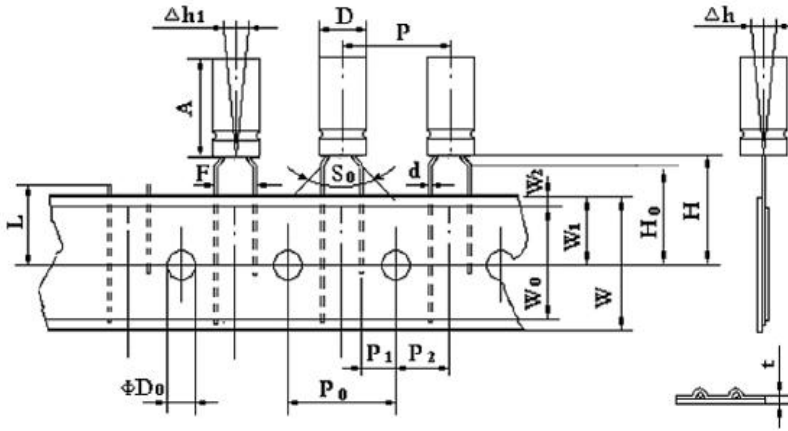
III) 供应商料号 MPN

IV) 客户料号 CPN

V) 包装数量 Qty

11. Taping

RCL1H4R7M0511F3 RCL 50V4.7UF 5×11 ±20% Taping: 2.5mm



代号 F3	外壳尺寸 Case Size		公差 Tol
	4*5 4*7	5*5 5*7 5*11	
Shown in the figure			--
φ d	0.45	0.45 0.5 (5*11)	±0.05
p	12.7		±1.0
P ₀	12.7		±0.3
P ₁	5.1		±0.5
F	2.5		+0.6/-0.2
Δh	0		±1.0
W	18.0		±0.5
W ₀	12min		--
W ₁	9.0		±0.5
W ₂	2.0 max		--
H	18.5 (17.5) *		±0.5
H ₀	16.0		±0.5
D ₀	4.0		±0.3
t	0.6		±0.2
Δh1	0		±0.2

Application Guideline

1、Circuit Design

- (1) Please make sure the environmental and mounting conditions to which the capacitor will be exposed to are within the conditions specified in Leaguer's catalogue.
- (2) Operating temperature and applied ripple must be within Leaguer's specification.
- (3) Appropriate capacitors which comply with the life requirement of the products should be selected when designing the circuit.
- (4) Aluminum electrolytic capacitors are polarized. Do not apply reverse voltage or AC voltage. Please use non-polarized capacitors for a circuit that can possibly see reserved polarity. Note: Even non-polarized capacitors can't be used for AC voltage application.
- (5) Do not use aluminum electrolytic capacitors in a circuit that requires rapid and very frequent charge / discharge. In this type of circuit, it is necessary to use a special design capacitor with extended life characteristics.
- (6) Do not apply excess voltage.
 - ① Please pay attention so that the peak voltage, which is DC voltage overlapped by ripple current, will not exceed the rated voltage.
 - ② In the case where more than 2 aluminum electrolytic capacitors are used in series, please make sure that applied voltage will be lower than rated voltage and the voltage will be applied to each capacitor equally using a balancing resistor in parallel with the capacitor.
- (7) Outer sleeve of the capacitor is not guaranteed as an electrical insulator. Do not use a standard sleeve on a capacitor in applications that require the electrical insulation. When the application requires special insulation, please contact our engineer office for details.
- (8) Capacitors must not be used under the following conditions:
 - ① (a) Capacitors must not be exposed to water (including condensation), brine or oil.
(b) Ambient conditions that include toxic gases such as hydrogen sulfide, sulfurous acid, nitrous acid, chlorine, ammonium, etc..
(c) Ambient conditions that expose the capacitor to ozone, ultraviolet ray and radiation.
 - ② Severe vibration and physical shock conditions that exceed LEAGUER'S specification.
Vibration test condition:

vibration frequency range	: 10-55-10Hz
sweep rate	: 10-55-10Hz/minute
sweep method	: logarithmic
amplitude or acceleration	: 1.5mm (max. acceleration is 10G)
direction of vibration	: X, Y, Z direction
testing time	: 2 hours per each direction

Shock is not applicable normally.
If a particular condition is required, please contact us.
- (9) When designing a circuit board, please pay attention to the following:
 - ① Make the pad spacing on the PC board match the lead space of the capacitor.
 - ② There should not be any circuit pattern or circuit wire above the capacitor safety vent.
- (10) Do not design a circuit board so that heat generating components are placed near an aluminum electrolytic capacitor or reverse side of PC board (under the capacitor).
- (11) Please refer to the pad size layout recommendations in our catalogue when designing in surface mount capacitors.

- (12) Electrical characteristics may vary depending on changes in temperature and frequency. Please consider this variation when you design circuits.
- (13) When you install more than 2 capacitors in parallel, consider the balance of current flowing into the capacitors.

2. Mounting

- (1) Once a capacitor has been assembled in the set and power applied, do not attempt to re-use the capacitor in other circuits or application.
- (2) Electric potential between positive and negative terminal may exist as a result of returned electromotive force, so please discharge the capacitor using a $1k\ \Omega$ resistor.
- (3) Leakage current of the parts that have been stored for more than 2 years may increase. When leakage current has increased, please perform a voltage treatment using a $1k\ \Omega$ resistor.
- (4) Please confirm ratings before installing capacitors on the PC board.
- (5) Please confirm polarity before installing capacitors on the PC board.
- (6) Do not drop capacitors on the floor, nor use a capacitor that was dropped.
- (7) Be careful not to deform the capacitor during installation.
- (8) Please confirm that the lead spacing of the capacitor matches the pad spacing of the PC board prior to installation.
- (9) Please pay attention to that the mechanical shock to the capacitor by suction nozzle of the automatic insertion machine or automatic mounter, or by product checker, or by centering mechanism.
- (10) soldering
Soldering condition must be confirmed to be within Leaguer's specification.
- (11) Do not tilt lay down or twist the capacitor body after the capacitor are soldered to the PC board.
- (12) Do not carry the PC board by grasping the soldered capacitor.
- (13) Please do not allow anything to touch the capacitor after soldering. If PC board are stored in stack, please make sure PC board or the other components do not touch the capacitor.
The capacitors shall not be effected by any radiated heat from the soldered PC board or other components after soldering.
- (14) Cleaning
 - ① Do not clean capacitors with halogenated cleaning agent. However, if it is necessary to clean with halogenated cleaning agent, please contact us.
 - ② Recommended cleaning method
Applicable: Any type, any ratings
Cleaning agents: Pine Alpha ST-100S, Clean Through 750H/750L/710M, Sanelek B-12, Aqua Cleaner 210SEP, Techno Care FRW14~ 17, Isopropyl Alcohol
Cleaning conditions: Total cleaning time shall be within 5 minutes by immersion, ultrasonic or other method. Temperature of the cleaning agent shall be $60\ ^\circ\text{C}$ or lower. After cleaning, capacitors should be dried using hot air for minimum of 10 minutes along with the PC board. Hot air temperature should be below the maximum operating temperature of the capacitor. Insufficient dry after water rinse may cause appearance problems, sleeve shrink, bottom-plate bulge and such.
 - ③ Avoid using ozone destructive substances for cleaning agents to concern about global environment.
 - ④ Please consult us regarding other cleaning agents or cleaning methods.

3. In the Equipment

- (1) Do not directly touch terminal by hand.
- (2) Do not short between terminals by conductor, nor spill conductible liquid such as alkaline or acidic

solution on or near the capacitor.

- (3) Please make sure that the ambient conditions where the set is installed will be free from spilling water or oil, direct sunlight, ultraviolet rays, radiation, poisonous gases, vibration or mechanical shock.

4. Maintenance and Inspection

Please periodically inspect the aluminum capacitors that are installed in industrial equipment. The following items should be checked:

Appearance: remarkable abnormality such as vent operation, leaking electrolyte etc.

Electrical characteristic: capacitance, dielectric loss tangent, leakage current etc., which are specified in the LEAGUER'S s catalogue.

5. In an Emergency

- (1) If you see smoke due to operation of safety vent, turn off the main switch or pull out the plug from the outlet.
- (2) Do not draw your face to the safety vent since gas of over 100°C will be emitted when the safety vent operates. If the gas has entered your eyes, please flush your eyes immediately in pure water. If you breathed the gas, immediately wash out your mouth and throat with water. Do not ingest electrolyte. If your skin is exposed to electrolyte, please wash it away using soap and water.

6. Storage

- (1) Do not keep capacitor in high temperature and high humidity.

Storage conditions should be:

Temperature :5°C-- 35°C

Humidity :lower than 75%

Place :Indoor

- (2) Avoid ambient conditions where capacitors can be covered with water, brine or oil.
- (3) Avoid ambient conditions where capacitors are exposed poisonous gases such as hydrogen sulfide, sulfurous acid, nitrous acid, chlorine, ammonium etc..
- (4) Do not keep capacitor in conditions that expose the capacitor to ozone, ultraviolet ray or radiation.

7. Disposal

Please dispose capacitors in either of the following ways:

- (1) Incinerate capacitors after crushing parts or making a hole on the capacitor body.
- (2) Bury capacitors in the ground. Please have a disposal specialist do it.