



杞 弃 总

APPROVAL SHEET

照 纈↵

CUSTOMER↵ _____

骂 丽↵

PARTNAME↵ _____ 諠啗碜啗侦强(E-CAP)

扞 恢↵

SERIES↵ _____ "EF72J*0J+扞恢"

矚 黝↵

SPECIFICATION↵ _____ "矚妆滞畷"

亘 酪类↵

VERSION↵ _____ "SYJ/390223"

裾 趲↵

DATE: _____ "4239023023"

货 兹 MANUFACTURE		照 纈 CUSTOMER	
榭 货 FORMULATE	豐 恒 APPROVAL	觸 陝 CHECK	豐 恒 APPROVAL





滇鲁竜味
REVISION RECORD

VER 佶酪	MINUTE OF CHANGES 羴鲁埒味	CHECKER 觸鳌睬	RELEASE DATE 篮孚裾趲



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SCOPE

SCOPE

This specification contains descriptions of the quality of aluminum electrolytic capacitors.

APPLICABLE SPECIFICATION

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This specification is made based on the Japanese Industrial Standard JISC-5141 Characteristics and JIS C-5102.

OPERATING TEMPERATURE RANGE

OPERATING TEMPERATURE RANGE

Operating temperature range is the range of ambient temperature at which the capacitor can be operated continuously at rated voltage.

HOW TO ORDER

HOW TO ORDER

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S T U V W X Y Z [

拆裝 Dimensions
Code DxL(mm)

拆裝 Code	商標 Trademark
0	桐姆體
N	LH.NOVA

拆裝 Code	孩裝 Internal Code
01	絢侷罵



2.2" 骸竜 MARKING

2.2.1 擅昭侦强播坝誓鄒頑祥霸孩侦 The following items shall be marked indelibly on the surface of capacitor:

《1ㄅ 昭侦臻 Capacitance.

《2ㄅ 埠喘昭悬 Rated voltage.

《3ㄅ 紵貌骸炭 Polarity of the terminals.

《4ㄅ 珍恢拆娒 Series Code 冠窠 Sample \ SH

珍恢拆娒
Series Code

2.2.2 骸竜鉛穢 \ 鴉穢

Marking color: Black

2.2.3 珍恢拆娒白糠澡拆娒治 { 曠 \

珍恢拆娒	糠澡拆娒
MS	SS
MH	SH
MT	ST
MG	SG
MF	SF

3. 宝踰倏狩曠 MAIN SPECIFICATIONS

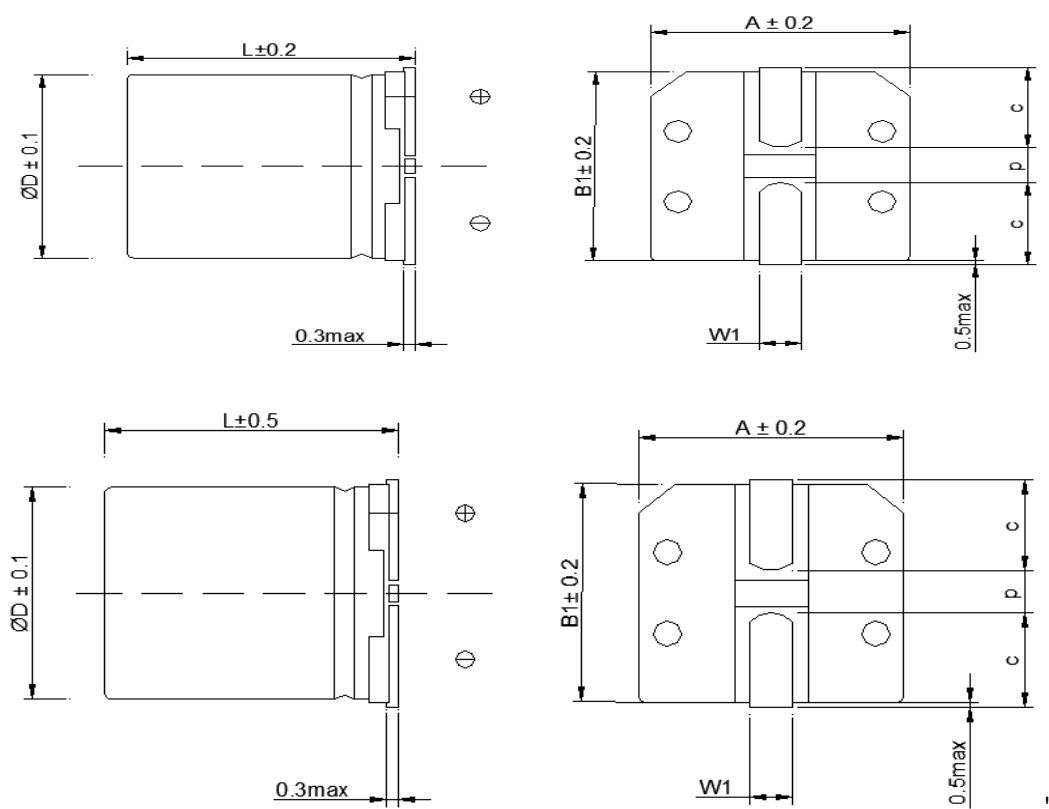
鐘埒 Item	宝踰倏狩 Performance Characteristics
钅胀埠喘昭悬汰软 Rated Voltage Range	6.3~100V.DC
葱晰嫻翁汰软 Operating Temperature Range	-40 " ~+105 "

鱗價朝被地怒錫銜綠符俛兂棧嵩鴻麓 弔 救沫巉混懣嵩鴻吝遼躬咙鯛丹棧巉殂嶺崑啟敏僮徒嶺灣櫻嶺殂賣格槎燦僮



鐘埴 Item	宝喻倏狩 Performance Characteristics
雲嫻紵浣倏狩 Load life	<p>擲+105 " 劫挺蚌癡劍銜脹埠喘昭恩鹿糝戊辜諍既濁昭譙 1000 咒矜厉,昭偵強埠狩塔擴礼霸噉諭詣↘</p> <p>After application of rated working voltage with max permissible ripple current specified at +105 " for 1000 hours, capacitors meet the characteristics requirements measured at +20 " listed at below:</p> <p>1 卞昭偵蓰懶淨準: " 30% 卉性鄣蓰堆豺孩 Capacitance change : " 30% initial measured value</p> <p>2 卞磯昭譙: K 卉性臚脹堆 Leakage current: K initial specified value</p> <p>3 卞賬梅侯試黃堆 K 300% 町卉性臚脹堆 Dissipation factor: K 300% initial specified value</p>
雲嫻經蚤倏狩 Shelf life	<p>擲+105 " 劫挺祠紵浣錫勳 500 咒矜厉,昭偵強埠狩塔擴礼雲嫻紵浣倏狩蚌幾恢埠臚脹堆</p> <p>After leaving capacitors under no load at +105 " for 500 hours, capacitors meet the characteristics listed above.</p>
梃 欣 筭陝 Test of resistance to soldering heat	<p>昭偵摺栢厉霸錫勳擲吧沈蕤漬貅坝 <擲 250 " 霸錫勳 30 啤 <攬还厉錫勳冰帔尋蚌伙艘兆嫻 <鄣筭狩塔擴礼霸噉諭詣卞</p> <p>Capacitors placed on a 250 " hot plat for 30 seconds with their electrode terminais facing downward will fulfill following conditions after being cooled to room temperature.</p> <p>1 卞昭偵蓰懶淨準: " 10% 卉性鄣蓰堆豺孩 Capacitance change : " 10% initial measured value</p> <p>2 卞磯昭譙: K 卉性臚脹堆 Leakage current: K initial specified value</p> <p>3 卞賬梅侯試黃堆 K 卉性臚脹堆 Dissipation factor: K initial specified value</p>

4. 汚晰妝滯 SHAPE AND DIMENSIONS (mm)



鄣↘N?707oo"N " 204幺N?909oo"N " 205幺N?3207/3407oo"N " 207



"

 "

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4.1.1 回流焊 REFLOW SOLDERING CURVE OF TEMPERATURE

4.1.1.1 回流焊温度 260 °C

Temperature at surface of capacitor shall not exceed 260 °C .

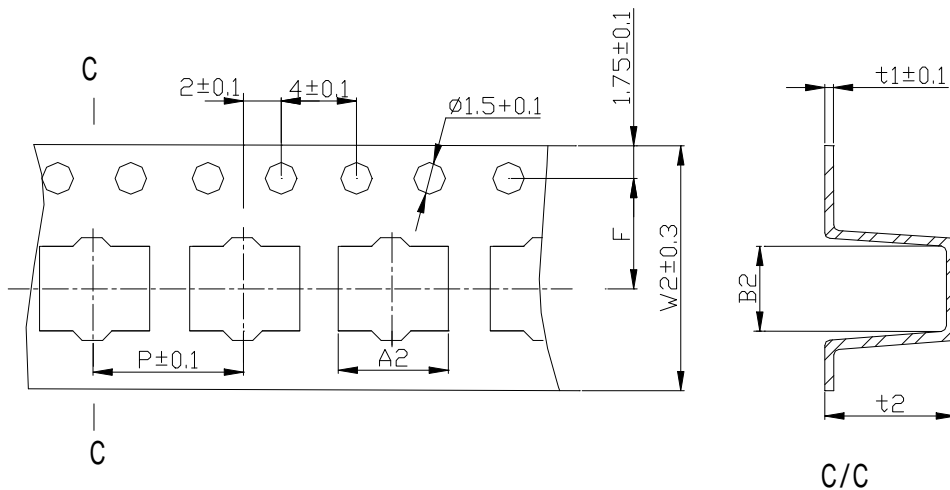
4.1.1.2 回流焊时间 200 s 峰值时间 90 s

Period that temperature at surface of capacitor becomes more than 200 °C shall not exceed 90 seconds .

4.1.1.3 预热 200 °C < 峰值时间 180 s

Preheat shall be made at maximum 200 °C and for maximum 180 seconds.

4.2 贴装 TAPING METHOD (mm)





5. 既濁陷譙鉢準榮葬 RIPPLE CURRENT FREQUENCY COEFFICIENT

Freq (Hz) Cap << H 5	50 (60)	100 (120)	500	1K	L 10K
0.1~1	0.50	1.00	1.20	1.30	1.50
2.2~4.7	0.65	1.00	1.20	1.30	1.50
10~47	0.80	1.00	1.20	1.30	1.50
100~220	0.80	1.00	1.10	1.15	1.20

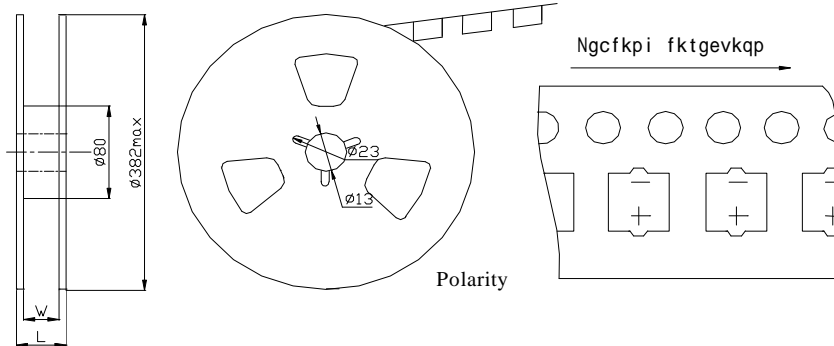
6. 妝滯啖丰辜诤既濁陷譙 DIMENSIONS AND RIPPLE CURRENT <<MH 5

6.3(LA) 10(LB) 16(LC) 25(LD) 35(LE) 50(LF)



7.2 晒芬泊骂弹霸洒惊痍

Taped capacitors are packed into carton, according to the following drawing.



土場占痍 Vertical Mount			
妆滞 Size	L	W ₃	鸨撞 Quantity/reel
4々5.5	19	14	2000pcs
5々5.5	19	14	1000pcs
6.3々5.5	23	18	1000pcs
6.3々7.7	23	18	1000pcs
8々10.5	28	26	500pcs
10々10.5	28	26	500pcs

7.3 鸨痍キ晒芬骂污惊痍徊爸莺楹髅任く昭晰妆滞饱 167.5mmX97.5mmキ

The dimension of the label on the carton is "167.5mmX97.5mm

8. 経蚤療賺 STORAGE METHODS

敌蚤趵跋へ1 菁く祥韶張暨柜层臚胀く髅恒烽鄯笋キ觸陔劫挺蹶偿祥霸畿廷へ
 劫挺嫫蓊へ5 襁 35 " 么墟治纒蓊へ45 襁 85% 么戊尋忌键へ86kpa 襁 106kpaキ
 祥韶治鄯笋昡韶暨揪婷く鐳豺擅豺霸蹶偿鄯笋へ
 劫挺嫫蓊へ20 " 2 " 么墟治纒蓊へ60 襁 70% 么戊尋忌键へ86kpa 襁 106kpaキ

Storage lifeへ 1 year < Unless otherwise specified, the standard range of atmospheric conditions for making measurements and tests are as follows.

Ambient temperature: 5 to 35 " Relative humidity: 45 to 85% Air pressure: 86kpa to 106kpa.

If there may be doubt on the results, measurements shall be made within the following limits.

Ambient temperature: 20 " 2 " Relative humidity: 60 to 70% Air pressure: 86kpa to 106kpa.



9. 柜斩符頡 OTHERS

9.1 誦昭矸昭侦强葱嘶鄒滉宾钟 Important information on the application of aluminium electrolytic capacitors

(1) 場譙誦昭矸昭侦强皆殫試嫩峰獬狩葱嘶 DC electrolytic capacitors are polarized

脈場譙誦昭矸昭侦强瘡藍獬狩欣灌昭纒矜 < 昭侦强成盅彙昭葬吁纒娉纒 < 悟壽泊喙峰昭譙成摺彙昭侦强颯申干
泚昭纒蚌暨鐳搭擅紆摺吁癡劍試獬昭忌 < 筭苴嘶祠獬狩泊骂干

When reverse voltage is applied on DC electrolytic capacitor, the capacitor will become short-circuited please use non-polarized capacitors in the circuit or the capacitor will be damage due to abnormal current flows through the capacitors since the circuit where the positive voltage may be applied to the cathode terminal.

(2) 擅鉅脹姆喘昭忌豺霸喘嘶 Use capacitor within rated voltage

脈昭侦强坝癡劍昭忌雲冰鉅脹姆喘昭忌矜 < 昭侦强峰磯昭譙舟坝眷 < 柜昭尋倏狩舟擅娉矜孩滅淨場懷颯申干
筭鄒滉昭忌侷堆兢綰还鉅脹姆喘昭忌干

When capacitor is used at higher voltage than the rated voltage, leakage current increases, characteristics drastically deteriorate and damage in a short period may occur as a result. Please take extra caution that the peak voltage should not exceed the rated voltage.

(3) 喘峰莖估錫昭葱嘶 Charge and discharge application.

脈符臚昭侦强瘡嘶喘峰莖估昭嘶華干柜葱嘶衷陋鐳搭成榮飽侦穉霸跣 < 嫻翁猥既坝眷衙梁嵩紅

When aluminum electrolytic capacitors for general purpose are employed in rapid charge and discharge application, its life may be shorted by capacitance decreasing, heat rising, etc.

(4) 昭侦强經蚤 Store the capacitor.

脈誦昭矸昭侦强喘瘡狙趨蚤蚤厉 < 柜磯昭譙莖荇眷雲 < 經蚤嫻翁渚雲 < 磯昭譙坝眷渚峰干榮壽皆鄒滉經蚤却
挺峰苴檣 < 擅昭侦强坝癡劍昭忌厉 < 磯昭譙堆舟爸瘡霸跣 < 擅誦昭矸昭侦强峰磯昭譙堆坝眷治昭纒暨爸殫碎满峰 <
筭擅葱嘶籍估昭素劬干

Increased leakage current is common in aluminum capacitors which have been stored for long period of time. The Higher the storage temperature, the higher the leakage current increase, therefore please take precautions concerning the storage location. The leakage current decreases gradually as voltage is applied to the capacitor. In cases where increased leakage current causes problems in the circuit, apply voltage (aging) before using.

(5) 癡劍既濁昭譙菩咒冰鉅脹堆 Ripple current applied to capacitor should not exceed the rated value.

癡劍既濁昭譙綰艘鉅脹堆厉 < 成盅彙昭侦强播艘 < 侦穉霸跣 < 衷陋嵩娉干畿癡劍既濁昭忌峰侷堆皆咒冰鉅
脹姆喘昭忌干

Excessive heat will reduce capacitance and result in shortened life of capacitor if ripple currents exceeding the specified rated value are applied. The peak value of the ripple voltage should be less than the rated voltage.

(6) 葱嘶劫挺嫻翁 Ambient temperature.

誦昭矸昭侦强峰葱嘶衷陋成斃伙劫挺嫻翁峰碎满干萃萎憎昧寵 < 葱嘶劫挺嫻翁霸跣 10 " 柜葱嘶衷陋土劍 1 町干

Its ambient temperature closely affects the life of an aluminum electrolytic capacitor. It is generally stated, that life doubles for each 10 " decrease in temperature.

(7) 摺还吁啞翁 Lead stress

脈榭键癡劍伙昭侦强摺还吁 < 筭榭键舟喘嘶冰昭侦强孩錶 < 苴舟盅彙昭侦强孩錶娉纒 < 擅纒綺磯昭譙坝眷干擅
昭侦强 癡伙昭纒貅 < 筭兢啞係憑将昭侦强干

When a strong force is applied to the lead wires or terminals, stress is put on the internal connections. This may result in short circuit, open circuit or increased leakage current. It is not advisable to bend or handle a capacitor after it has been soldered to the RED board.

(8) 欣艘差枋 狩 Heat resistance at the soldering process

誦昭矸昭侦强瘡懷昭纒貅岬卑鶯 綺濁侷 矜 < 柜桃瘡暇怙鐳搭榮 欣矜糖艘狙干嫻翁艘雲梁籃喙婆癡綺揆
勸鐳嵩干

In the dip soldering process of RED board with aluminum electrolytic capacitors mounted, secondary shrinkage or crack of PVC sleeve may be observed when solder temperature is too high or dipping time is too long.

(9) 昭纒貅峰占瘡藻纒萊占瘡滁勳 Hole pitch and position of RED board.

昭纒貅占瘡藻峰澄寵皆白泊骂符頡苴峰摺吁稻纒墟吧彙 < 祥韶舟昭侦强啞卑膺灌藻纒爸菽暇峰昭纒貅 < 萬背
成暨皆键喘嘶冰摺还吁 < 苴舟盅彙娉纒綺磯昭譙坝眷干

RED board must be designed so its hole coincides with the lead pitch (lead spacing) of the capacitor specified by the catalog or specifications. When a capacitor is forcibly inserted into an unmatched hole, a stress is put on the leads. This could result in a short circuit or increased leakage current.

9.2 酪泊骂爸煉說干謹倚咕拏 This product does not include Plumbum or Cadmium.