HONGZHI ELECTRONIC LTD.

NO.6,PUJIANG ROAD,SHANTOU,GUANGDONG REPORT NO.201001150002

ENGINEERING REPORT

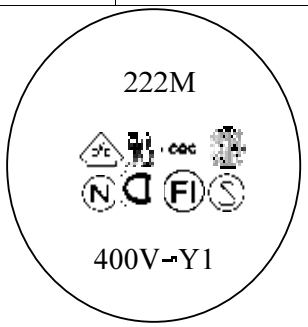
Customer Part No.____ _____HEL Part No. or Sample No.___ Y1-12-2F4-1D-472M

Customer_____ _____

Description:_____AC400V-472M-F-12MM_____Lot No._____

Date of Inspection:_____2010-1-13_____Inspection size:_____20_____pcs

Room-Temperature:___25_____℃ R.H.___70_____% Test Frequency:____1K_____HZ

Electrical properties:					Mechanical properties:	
NO.	**Cap.(PF)**	**D.F. Dissipation Factor**	**I.Rmin (MΩ)**	**T.V.**	**Item.**	**Measurements**
1	4.486	0.003	10^4	AC4KV	Diameter	Max.13mm
2	4411	0.0031	10^4			
3	4338	0.0032	10^4		Thickness	Max.5.5mm
4	4477	0.0032	10^4			
5	4364	0.0033	10^4		Lead Length	23mm+/-1mm
6	4706	0.003	10^4			
7	4427	0.0031	10^4		Lead Space	10mm+/-1mm
8	4631	0.0031	10^4			
9	4520	0.0031	10^4		Marking:	
10	4552	0.0031	10^4			
11	4334	0.0030	10^4			
12	4555	0.0029	10^4			
13	4538	0.0029	10^4			
14	4391	0.0029	10^4			
15	4378	0.0123	10^4			
16	4912	0.0030	10^4			
17	4391	0.0030	10^4			
18	4689	0.0030	10^4			
19	4552	0.0032	10^4			
20	4505	0.0031	10^4			

Measurement Instrument

Cap.D.F.: HP 4278A

I.R.: Chen Hwa Clc-202A

T.V.:W-CDF-4

Checked by: 陈亮 Date:___2010-1-15____

Safety Recognized Ceramic Capacitors

Part Numbering

Y1-12-2F4-1D-472M

① ② ③ ④ ⑤ ⑥

- Rated Voltage/Safety Standard Recognized Type

Code	Rated voltage
Y1	AC400V
Y2	AC250V

- Diameter of the disc: 5=5mm

- Temperature characteristics

Code	Temperature characteristics	Cap.Change or Temp.Coeff.
2E4	Z5U	+20%-56%
2F4	Z5V	+22%-82%

- Lead space: 1E=7.5MM ; 1D=10MM

- Capacitance:
  Expressed by three figures. The unit is pico-farad (pF). The first and second figures are significant digits, and the third figure expresses the number of zeros which follow the two numbers.
  102PF=0.001UF

- Capacitance Tolerance

Code	Capacitance Tolerance
J	+/-5%
K	+/-10%
M	+/-20%
Z	+80%,-20%

Safety Recognized Ceramic Capacitors

Specification and Test Methods

NO.	Item		Specification	Testing Method
1	Appearance and Dimension		No marked defect on appearance form and dimensions are within specified range.	The capacitor should be visually inspected for evidence of defect. Dimensions should be measured with vernier caliper.
2	Marking		To be easily legible	The capacitor should be visually inspected.
3	Voltage proof	Between lead wires	No failure	Applied Voltage: Y1:4000VAC Y2:250VAC When applied 50/60Hz, use the Autotransformer to applied the specifed voltage for 60s. Increase the test voltage from 0 to specified voltage vaule on the rate of 150V/s. Charge /Discharge current: Y1:below 20mA Y2:below 50mA
		Between lead wires and Body	No failure	First, the terminals of the capacitor should be connected together. A metal foil should be closely wrapped around the body of the capacitor to the distance of about 1mm/1KV of test voltage from each terminal. The test voltage should be applied between the body of the capacitor and terminals.
4	Insulation Resistance (I.R.)		10000MΩ min.	The insulation resistance should be measured with rated voltage within 60+/-5sec. of charging.
5	Capacitance		Within specified tolerance J:+/-5%; K:+/-10% M:+/-20%; Z:+/-80/20%	Test frequency: 1+/-0.2KHZ Test Voltage: 1.0V+/-0.2VRMS
6	Dissipation Factor (D.F.)		≤0.05	As above

<table>
<tr><td>7</td><td>Temperature Characteristics</td><td></td><td>Y5P-B
Y5U-E
Y5V-F</td><td>Temperature characteristic guarantee is -25 to +80℃<table><tr><td>Char.</td><td>Capacitance Change</td></tr><tr><td>B</td><td>Within+/- 10%</td></tr><tr><td>E</td><td>Within +20%-20%</td></tr><tr><td>F</td><td>Within +56%-20%</td></tr></table></td></tr>
</table>

Safety Recognized Ceramic Capacitors

Specification and Test Methods

<table>
<tr><th>NO.</th><th colspan="2">Item</th><th>Specification</th><th>Testing Method</th></tr>
<tr><td rowspan="2">8</td><td rowspan="2">Robustness of terminals</td><td>Bending</td><td rowspan="2">Lead wire should not be cut off, capacitor should not be broken.</td><td>Each lead wire should be subjected a 90° bend, at the point of egress, in one direction, return to original position, and then apply a 90°bend in the opposite direction a the rate of one bend in 2 to 3 sec.</td></tr>
<tr><td>Tensile</td><td>Applied a tensile weight gradually to each lead wire in the radial direction of the capcitor up to 0.5N and keep it for 10+/-1 sec.</td></tr>
<tr><td>9</td><td>Solderability of Leads</td><td></td><td>Lead wire should be soldered with uniform coating on the axial direction over 60% of the circumferential direction.</td><td>The lead wire of a capacitor should be dipped into molten solder of 270+/-5℃ for 2+/-0.5sec.</td></tr>
<tr><td rowspan="2">10</td><td rowspan="2">Soldering Effect</td><td>Appearance</td><td>No marked defect</td><td rowspan="2">The lead wires should be immersed in solder of 270+/-5℃ for 3.0+/-0.5 sec.
The inspect samples should be stored for</td></tr>
<tr><td>Capacitance</td><td>Within specified tolerance</td></tr>
</table>

		Change		24+/-2 hours at room condition.
		Voltage proof	Short Circuit Phenomenon was not occurred.	