



# Hongfa Electroacoustic Co.,Ltd

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## Declaration

Subject: Cadmium Free contacts and Lead free soldering relays

Dear Sir/ Madam:

According to **Directive 2002/95/EC of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment**, the relays exported to Europe should be Cadmium-Free substance, Lead-free soldering in near future. There are 18 months of transitional period started from July 1<sup>st</sup>, 2004.

Hongfa has done quite a lot of jobs to correspond to the new requirement, we have the following suggestions to our customers.

### 1. Cadmium Free contacts

All relays have adopted AgSnO<sub>2</sub> or AgNi to replace of AgCdO contact material. Please refer to our updated data sheets on the web site for the ordering code.

### 2. Lead-free soldering relays

We began the study from Jan, 2003 in this field. After a half year work and tests, we have completed our technical tests for lead free application. At present, we are able to carry out the mass production. However, we should point out the requirement when customers are going to adopt Lead-free soldering relays.

- (1) The temperature for soldering relays into PCB is quite different between the lead free relays and the common ones. The melting temperature of tin silver alloy (adopted by lead free soldering) is higher than solder with lead (Pb). Therefore, the temperature for the relevant products soldered into PCB should be higher 30\_~40\_ than that under current technology, which should reach 270\_~280\_ in order to guarantee the soldering reliabilities.
- (2) Customers with their own brand should decide themselves whether they should keep the same ordering P/N for lead-free relays, or they want to add some code to tell from the lead-free version. But all the products with Hongfa brand should be added **the suffix code (555)** for

lead free products, the code will be marked on the relays.

For example:

Normal relay with lead soldering : JQX-115F-012-1ZS3

Lead-Free soldering relay: JQX-115F-012-1ZS3 **(555)**

(3) Please advise us the requested time for the production of lead free products, so that we could unify and coordinate our production.

R and D Center  
Hongfa Electroacoustic Co., Ltd.

Nov. 19, 2003