



Verification Report (supplementary)

No.: GZ0904027146/CHEM

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DONGGUAN SANYOU ELECTRICAL APPLIANCES CO., LTD
ERHUAN RD.XITOU.ZONE, HOUIE TOWN, DONGGUAN CITY, GUANGDONG, 523952, CHINA

Sample Description : Relays
SGS Ref No. : GZ11720126EC-41.41
Model No. (P.O No.) : SARF
Test Period : APR 03, 2009 TO APR 28, 2009
Test Requested (1) Screening test for Cadmium, Lead, Mercury, Chromium and Bromine contents in the submitted sample according to the requirements of SANYOU.
(2) To determine the Mercury Content.
(3) To determine the Hexavalent Chromium Content.
(4) Determination of PBBs (polybrominated biphenyls), PBDEs (Polybrominated diphenylethers).
Test Method 1 Review was performed for the samples disjointed from the submitted articles and the related test reports submitted by the Applicant
2 Tests was performed for the samples indicated by the photos in the report with test methods reference to IEC 62321:2008: Procedures for the Determination of Levels of Six Regulated substances in Electrotechnical Products
(1) Screening by XRF Spectroscopy
(2) Wet Chemical Test Method
a. Determination of Mercury by ICP.
b. Determination of Hexavalent Chromium by Colorimetric Method.
c. Determination of PBBs and PBDEs by GC/MS.
Test Results : Please refer to next page
Test Conclusion : Based on the review of previous reports and verification results of the submitted samples, the results **comply with** the requirements of SANYOU
Remark : According to declaration from client, the materials of other parts in model SARF are the same as those in model SRD (data and photos are shown on report GZ0904027106/CHEM)

Signed for and on behalf of
SGS-CSTC Ltd.

Deng Yiqin, Shining
Sr. Engineer

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SGS-CSTC Standards Technical Services Co., Ltd.
Guangzhou Testing Service Center Chemical Laboratory

130 Kazhu Road, Science and Technology Park, Guangzhou Economic & Technology Development District, Guangzhou, China 510663 | (86-20) 82155555 | (86-20) 82075125 | www.cn.sgs.com
中国·广州·经济技术开发区科学城科珠路198号 邮编: 510663 | (86-20) 82155555 | (86-20) 82075125 | e sgs.china@sgs.com

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Details on Verification

Part No.	Part Name	Restricted Substances	Results of EDXRF ⁽¹⁾	No. of Related Test Report	Results in Related Test Report(mg/kg)	Result of Wet Chemical Testing ⁽²⁾ (mg/kg)	Conclusion on RoHS	Sample Submitted / Resubmitted Date
1	Black plastic shell w/ white printing	Cd	BL	\	\	\	Comply	Apr 03, 2009
		Pb	BL		\	\	Comply	
		Hg	BL		\	\	Comply	
		Cr ⁶⁺	BL		\	\	Comply	
		PBBs	IN		\	N.D.	Comply	
		PBDEs ^{##}			\	N.D.	Comply	
2	Black plastic (base) (connected w/ No.1)	Cd	BL	\	\	\	Comply	Apr 03, 2009
		Pb	BL		\	\	Comply	
		Hg	BL		\	\	Comply	
		Cr ⁶⁺	BL		\	\	Comply	
		PBBs	IN		\	N.D.	Comply	
		PBDEs ^{##}			\	N.D.	Comply	
3	Copper-colored metal terminal (connected w/ No.2)	Cd	BL	\	\	\	Comply	Apr 03, 2009
		Pb	BL		\	\	Comply	
		Hg	IN		\	N.D.	Comply	
		Cr ⁶⁺	BL		\	\	Comply	
		PBBs	---		\	\	\	
		PBDEs ^{##}			\	\	\	
4	Silvery metal pin (connected w/ No.2)	Cd	BL	\	\	\	Comply	Apr 03, 2009
		Pb	BL		\	\	Comply	
		Hg	BL		\	\	Comply	
		Cr ⁶⁺	BL		\	\	Comply	
		PBBs	---		\	\	\	
		PBDEs ^{##}			\	\	\	
5	Copper-colored metal sheet (movable) (on armature)	Cd	BL	\	\	\	Comply	Apr 03, 2009
		Pb	BL		\	\	Comply	
		Hg	BL		\	\	Comply	
		Cr ⁶⁺	BL		\	\	Comply	
		PBBs	---		\	\	\	
		PBDEs ^{##}			\	\	\	
6	Copper-colored metal wire (on No.5)	Cd	BL	\	\	\	Comply	Apr 03, 2009
		Pb	BL		\	\	Comply	
		Hg	BL		\	\	Comply	
		Cr ⁶⁺	BL		\	\	Comply	
		PBBs	---		\	\	\	
		PBDEs ^{##}			\	\	\	
7	Silvery metal spring (connected w/ Yoke)	Cd	BL	\	\	\	Comply	Apr 03, 2009
		Pb	BL		\	\	Comply	
		Hg	BL		\	\	Comply	
		Cr ⁶⁺	IN		\	Negative	Comply	
		PBBs	---		\	\	\	
		PBDEs ^{##}			\	\	\	

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Part No.	Part Name	Restricted Substances	Results of EDXRF ⁽¹⁾	No. of Related Test Report	Results in Related Test Report(mg/kg)	Result of Wet Chemical Testing ⁽²⁾ (mg/kg)	Conclusion on RoHS	Sample Submitted / Resubmitted Date
8	Copper-colored metal pin (on No.2)	Cd	BL	\	\	\	Comply	Apr 03, 2009
		Pb	BL		\	\	Comply	
		Hg	BL		\	\	Comply	
		Cr ⁶⁺	BL		\	\	Comply	
		PBBs	---		\	\	\	
PBDEs ^{##}	---	\	\	\				

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Guangzhou Environmental Chemistry Laboratory

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Remark

- (1) (a) It is the result on total Br while test item on restricted substances is PBBs/PBDEs. It is the result on total Cr while test item on restricted substances is Cr⁶⁺.
- (b) Results are obtained by EDXRF for primary screening, and further chemical testing by ICP (for Cd, Pb, Hg), UV-VIS (for CrVI) and GCMSD (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to the requirements of SANYOU (unit: mg/kg)

Element	Polymer	Metal
Cd	BL ≤20 < X < 130 ≤ OL	BL ≤20 < X < 130 ≤ OL
Pb	BL ≤ 300 < X < 1300 ≤ OL	BL ≤ 300 < X < 1300 ≤ OL
Hg	BL ≤ 50 < X < 1300 ≤ OL	BL ≤ 50 < X < 1300 ≤ OL
Br	BL ≤ 100 < X	---
Cr	BL ≤ 300 < X	BL ≤ 300 < X

X = XRF Screening result

- (c) OL = Over Limit, BL = Below Limit, IN = Inconclusive
 - (d) The XRF screening test for RoHS elements – The reading may be different to the actual content in the sample be of non-uniformity composition
- (2) (a) mg/kg = ppm=0.0001%, N.D. = not detected (<MDL), --- = not conducted, \ = not available.
 (b) Unit and Method Detection Limit (MDL) in wet chemical test

Test Items	Pb	Cd	Hg
Units	mg/kg	mg/kg	mg/kg
MDL	2	2	2

The MDL for single compound of PBBs & PBDEs is 5 mg/kg and MDL of Cr⁶⁺ for polymer & composite sample is 2 mg/kg.

- (c) According to IEC 62321:2008, result on Cr⁶⁺ for metal sample is shown as Positive/Negative. Negative = Absence of Cr⁶⁺ coating, Positive = Presence of Cr⁶⁺ coating.
Storage conditions and production date of the tested sample are unavailable and thus results of Cr(VI) represent status of the sample at the time of testing.
- (d) ## = The exemption of DecaBDE in polymeric application according 2005/717/EC was overruled by the European Court of Justice by its decision of 01.04.2008. Subsequently DecaBDE is included in the sum of PBDE after 01.07.2008

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Photo for original product

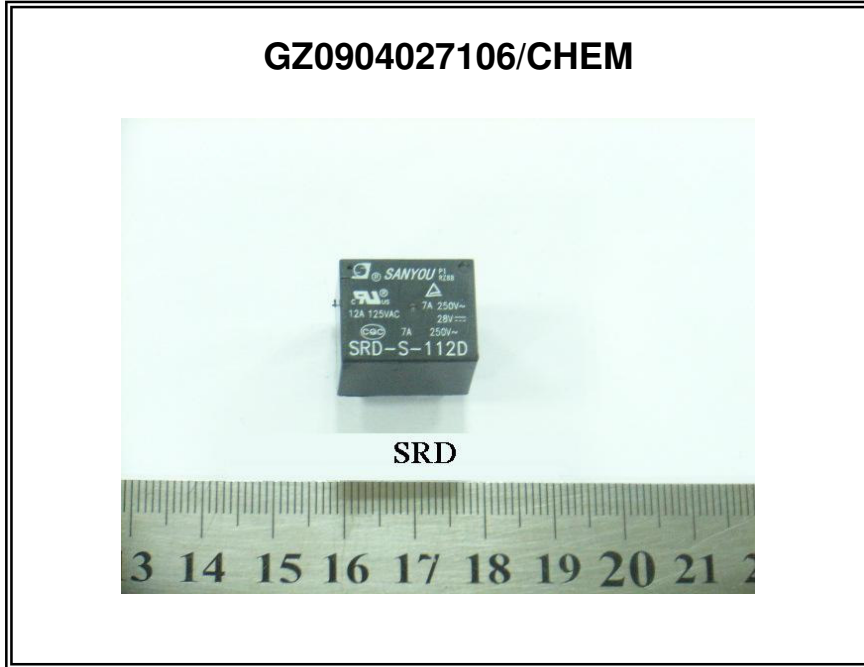


Photo for supplementary product



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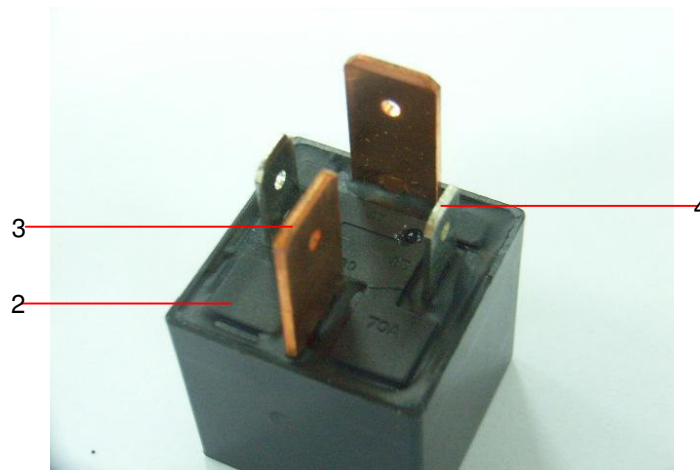
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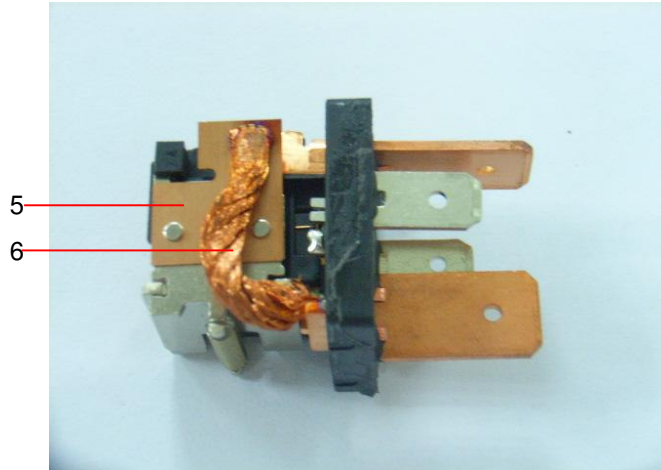
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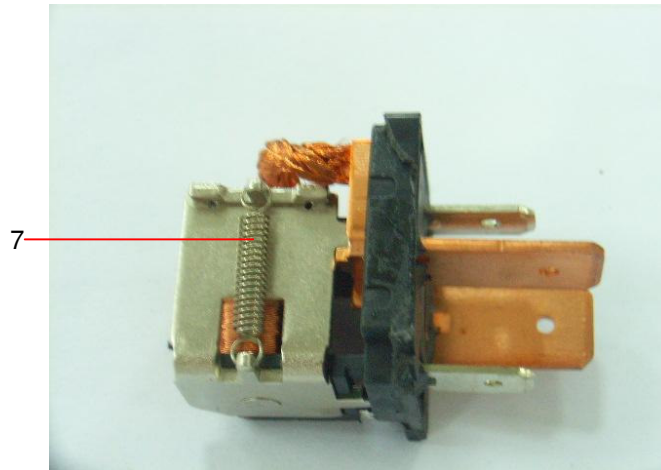
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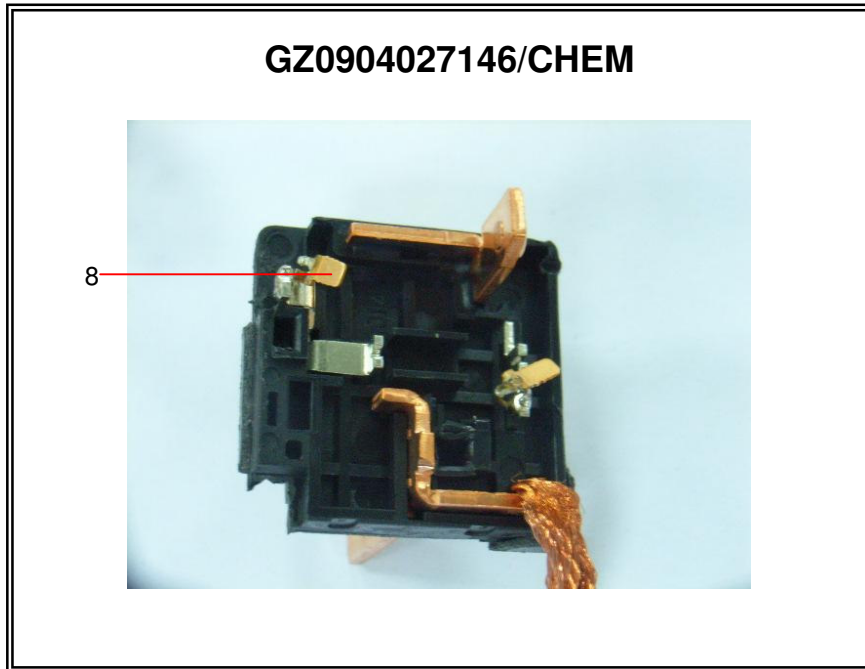


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