

No. CANEC1401693701

Date: 26 Feb 2014

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CAMBRIDGE ELECTRONICS LTD.

HUANG YONG NO.3 INDUSTRIAL DISTRICT, ZHONG TANG TOWN, DONG GUAN CITY, GUANG DONG CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as : DIODE

SGS Job No.: CP14-005635 - GZ

Client Ref. Info. : BRIDGE

Date of Sample Received: 20 Feb 2014

Testing Period: 20 Feb 2014 - 26 Feb 2014

Test Requested: As requested by client, SVHC screening is performed according to:

(i) One hundred and forty four (144) substances in the Candidate List of Substances of Very High Concern (SVHC) for authorization published by European Chemicals Agency (ECHA) on and before Jun 20, 2013 regarding Population (EC) No. 1907/2006 expressing the REACH.

Regulation (EC) No 1907/2006 concerning the REACH.

(ii) Seven (7) substances in the Candidate List of Substances of Very High Concern (SVHC) for authorization published by European Chemicals Agency (ECHA) on Dec 16, 2013 regarding Regulation (EC) No 1907/2006 concerning the

REACH.

Test Result(s): Please refer to next page(s).

Summary:

According to the specified scope and analytical techniques, concentrations of tested SVHC are ≤ 0.1% (w/w) in the submitted sample.

Signed for and on behalf of SGS-CSTC Ltd.

Zm guan

Approved Signatory





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Remark:

(1) The chemical analysis of specified SVHC is performed by means of currently available analytical techniques against the following SVHC related documents published by ECHA: http://echa.europa.eu/web/guest/candidate-list-table These lists are under evaluation by ECHA and may subject to change in the future.

(2) Concerning article(s):

In accordance with Regulation (EC) No 1907/2006, any EU producer or importer of articles shall notify ECHA, in accordance with paragraph 4 of Article 7, if a substance meets the criteria in Article 57 and is identified in accordance with Article 59(1) of the Regulation, if (a) the substance in the Candidate List is present in those articles in quantities totaling over one tonne per producer or importer per year; and (b) the substance in the Candidate List is present in those articles above a concentration of 0.1% weight by weight (w/w).

Article 33 of Regulation (EC) No 1907/2006 requires supplier of an article containing a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in a concentration above 0.1% weight by weight (w/w) shall provide the recipient of the article with sufficient information, available to the supplier, to allow safe use of the article including, as a minimum, the name of that substance in the Candidate List.

SGS adopts the interpretation of ECHA for SVHC in article unless indicated otherwise. Detail explanation is available at the following link:

http://webstage.contribute.sgs.net/corpreach/documents/SGS-CTS_SVHC-paper-EN-11.pdf

(3) Concerning material(s):

Test results in this report are based on the tested sample. This report refers to testing result of tested sample submitted as homogenous material(s). In case such material is being used to compose an article, the results indicated in this report may not represent SVHC concentration in such article. If this report refers to testing result of composite material group by equal weight proportion, the material in each composite test group may come from more than one article.

If the sample is a substance or mixture, and it directly exports to EU, client has the obligation to comply with the supply chain communication obligation under Article 31 of Regulation (EC) No. 1907/2006 and the conditions of Authorization of substance of very high concern included in the Annex XIV of the Regulation (EC) No. 1907/2006.

(4) Concerning substance and preparation:

If a SVHC is found over 0.1% (w/w) and/or the specific concentration limit which is set in Regulation (EC) No 1272/2008 and No 790/2009, client is suggested to prepare a Safety Data Sheet (SDS) against the SVHC to comply with the supply chain communication obligation under Regulation (EC) No 1907/2006, in which:

- a substance that is classified as hazardous under the CLP Regulation (EC) No 1272/2008.
- a mixture that is classified as dangerous according Dangerous Preparations Directive 1999/45/EC or classified as hazardous under the CLP Regulation (EC) No 1272/2008, when their concentrations are equal to, or greater than, those defined in the Article 3(3) of





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1999/45/EC or the lower values given in Part 3 of Annex VI of Regulation (EC) No. 1272/2008; or

- a mixture is not classified as dangerous under Directive 1999/45/EC, but contains either:
- (a) a substance posing human health or environmental hazards in an individual concentration of \geq 1 % by weight for mixtures that are solid or liquids (i.e., non-gaseous mixtures) or \geq 0.2 % by volume for gaseous mixtures; or
- (b) a substance that is PBT, or vPvB in an individual concentration of ≥ 0.1 % by weight for mixtures that are solid or liquids (i.e., non-gaseous mixtures); or
- (c) a substance on the SVHC candidate list (for reasons other than those listed above), in an individual concentration of \geq 0.1 % by weight for non-gaseous mixtures; or
- (d) a substance for which there are Europe-wide workplace exposure limits.
- (5) If a SVHC is found over the reporting limit, client is suggested to identify the component which contains the SVHC and the exact concentration of the SVHC by requesting further quantitative analysis from the laboratory.

Test Sample:

Sample Description:

Specimen No.	SGS Sample ID	Description
SN1	CAN14-016937.001	"DIODE"
SN2	CAN14-016937.002	"DIODE"

Test Method:

SGS In-House method- GZTC CHEM-TOP-092-01, GZTC CHEM-TOP-092-02, Analyzed by ICP-OES, UV-VIS, GC-MS, HPLC-DAD/MS and Colorimetric Method.





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Test Result: (Substances in the Candidate List of SVHC)

Batch	Substance Name	CAS No.	001 Concentration (%)	RL (%)
VIII	Lead cyanamidate*	20837-86-9	NA^	0.005
VIII	Lead dinitrate*	10099-74-8	NA^	0.005
VIII	Lead monoxide*	1317-36-8	NA^	0.005
VIII	Lead oxide sulfate*	12036-76-9	NA^	0.005
VIII	Lead tetroxide (orange lead)*	1314-41-6	NA^	0.005
VIII	Pyrochlore, antimony lead yellow*	8012-00-8	NA^	0.005
VIII	Sulfurous acid, lead salt, dibasic*	62229-08-7	NA^	0.005
VIII	Tetralead trioxide sulphate*	12202-17-4	NA^	0.005
VIII	Trilead bis(carbonate)dihydroxide (basic lead carbonate)*	1319-46-6	NA^	0.005
-	Other tested SVHC in candidate list	-	ND	-

Batch	Substance Name	CAS No.	002 Concentration (%)	RL (%)
Х	Lead di(acetate)*	301-04-2	NA^	0.005
-	Other tested SVHC in candidate list	-	ND	-





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Notes:

- 1. The table above only shows detected SVHC, and SVHC that below RL are not reported. Please refer to Appendix for the full list of tested SVHC.
- 2. RL = Reporting Limit. All RL are based on homogenous material ND = Not detected (lower than RL), ND is denoted on the SVHC substance.
- 3. * The test result is based on the calculation of selected element(s) / marker(s) and to the worst-case scenario. For detail information, please refer to the SGS REACH website: www.reach.sgs.com/substance-of-very-high-concern-analysis-information-page.htm
- 4. RL = 0.005% is evaluated for element (i.e. cobalt, arsenic, lead, chromium (VI), aluminum, zirconium, boron, strontium, zinc, antimony, titanium, barium and cadmium respectively), except molybdenum RL=0.0005%, boron RL=0.0025% (only for Lead bis(tetrafluoroborate)).
- 5. Calculated concentration of boric compounds are based on the water extractive boron by ICP-OES.
- 6. $^{\Delta}$ CAS No. of diastereoisomers identified (α -HBCDD, β -HBCDD, γ -HBCDD): 134237-50-6, 134237-51-7, 134237-52-8
- 7. A CAS No. of Hexahydromethylphthalic anhydride, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride: 25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9; EC No. of those: 247-094-1, 243-072-0, 256-356-4, 260-566-1.
- 8. § The substance is proposed for the identification as SVHC only where it contains Michler's ketone (CAS Number: 90-94-8) or Michler's base (CAS Number: 101-61-1) \geq 0.1% (w/w).
- 9. NA^ = Upon further test verification on the specific detected element(s) of SVHC and also information provided from client, the possibility that the element(s) content originate from SVHC is very unlikely, even though their presence cannot be exclude entirely. It may be assumed that the detected element(s) have a non-SVHC source.

Remark: Results & photo(s) of 001 in this report refer to test report CANEC1311154402.





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Appendix Full list of tested SVHC:

Batch	No.	Substance Name	CAS No.	RL (%)	Sample ID
I	1	4,4'-Diaminodiphenylmethane(MDA)	101-77-9	0.050	001
I	2	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	0.050	001
I	3	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	0.050	001
I	4	Anthracene	120-12-7	0.050	001
I	5	Benzyl butyl phthalate (BBP)	85-68-7	0.050	001
I	6	Bis(2-ethylhexyl)phthalate (DEHP)	117-81-7	0.050	001
I	7	Bis(tributyltin)oxide (TBTO)	56-35-9	0.050	001
I	8	Cobalt dichloride*	7646-79-9	0.005	001
I	9	Diarsenic pentaoxide*	1303-28-2	0.005	001
I	10	Diarsenic trioxide*	1327-53-3	0.005	001
I	11	Dibutyl phthalate (DBP)	84-74-2	0.050	001
I	12	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α-HBCDD, β-HBCDD, γ-HBCDD) $^{\triangle}$	25637-99-4, 3194- 55-6	0.050	001
I	13	Lead hydrogen arsenate*	7784-40-9	0.005	001
I	14	Sodium dichromate*	7789-12-0, 10588-01-9	0.005	001
I	15	Triethyl arsenate*	15606-95-8	0.005	001
II	16	2,4-Dinitrotoluene	121-14-2	0.050	001





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II	17	Acrylamide	79-06-1	0.050	001
II	18	Anthracene oil*	90640-80-5	0.050	001
II	19	Anthracene oil, anthracene paste*	90640-81-6	0.050	001
II	20	Anthracene oil, anthracene paste, anthracene fraction*	91995-15-2	0.050	001
II	21	Anthracene oil, anthracene paste, distn. Lights*	91995-17-4	0.050	001
II	22	Anthracene oil, anthracene-low*	90640-82-7	0.050	001
II	23	Diisobutyl phthalate	84-69-5	0.050	001
II	24	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)*	12656-85-8	0.005	001
II	25	Lead chromate*	7758-97-6	0.005	001
II	26	Lead sulfochromate yellow (C.I. Pigment Yellow 34)*	1344-37-2	0.005	001
II	27	Pitch, coal tar, high temp.*	65996-93-2	0.050	001
II	28	Tris(2-chloroethyl)phosphate	115-96-8	0.050	001
III	29	Ammonium dichromate*	7789-09-5	0.005	001
III	30	Boric acid*	10043-35-3, 11113-50-1	0.005	001
III	31	Disodium tetraborate, anhydrous*	1303-96-4, 1330-43-4, 12179-04-3	0.005	001
III	32	Potassium chromate*	7789-00-6	0.005	001
III	33	Potassium dichromate*	7778-50-9	0.005	001
III	34	Sodium chromate*	7775-11-3	0.005	001
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III	35	Tetraboron disodium heptaoxide, hydrate*	12267-73-1	0.005	001
III	36	Trichloroethylene	79-01-6	0.050	001
IV	37	2-Ethoxyethanol	110-80-5	0.050	001
IV	38	2-Methoxyethanol	109-86-4	0.050	001
IV	39	Chromic acid, Oligomers of chromic acid and dichromic acid, Dichromic acid*	7738-94-5,- 13530-68-2	0.005	001
IV	40	Chromium trioxide*	1333-82-0	0.005	001
IV	41	Cobalt(II) carbonate*	513-79-1	0.005	001
IV	42	Cobalt(II) diacetate*	71-48-7	0.005	001
IV	43	Cobalt(II) dinitrate*	10141-05-6	0.005	001
IV	44	Cobalt(II) sulphate*	10124-43-3	0.005	001
V	45	1,2,3-trichloropropane	96-18-4	0.050	001
V	46	1,2-Benzenedicarboxylic acid, di-C6-8- branched alkyl esters, C7-rich	71888-89-6	0.050	001
V	47	1,2-Benzenedicarboxylic acid, di-C7- 11-branched and linear alkyl esters	68515-42-4	0.050	001
V	48	1-methyl-2-pyrrolidone	872-50-4	0.050	001
V	49	2-ethoxyethyl acetate	111-15-9	0.050	001
V	50	Hydrazine	7803-57-8, 302-01-2	0.050	001
V	51	strontium chromate*	7789-06-2	0.005	001
VI	52	1,2-Dichloroethane	107-06-2	0.050	001
VI	53	2,2'-dichloro-4,4'-methylenedianiline	101-14-4	0.050	001





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VI	54	2-Methoxyaniline; o-Anisidine	90-04-0	0.050	001
VI	55	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	0.050	001
VI	56	Aluminosilicate Refractory Ceramic Fibres*	650-017-00-8 (Index no.)	0.005	001
VI	57	Arsenic acid*	7778-39-4	0.005	001
VI	58	Bis(2-methoxyethyl) ether	111-96-6	0.050	001
VI	59	Bis(2-methoxyethyl) phthalate	117-82-8	0.050	001
VI	60	Calcium arsenate*	7778-44-1	0.005	001
VI	61	Dichromium tris(chromate)*	24613-89-6	0.005	001
VI	62	Formaldehyde, oligomeric reaction products with aniline	25214-70-4	0.050	001
VI	63	Lead diazide, Lead azide*	13424-46-9	0.005	001
VI	64	Lead dipicrate*	6477-64-1	0.005	001
VI	65	Lead styphnate*	15245-44-0	0.005	001
VI	66	N,N-dimethylacetamide	127-19-5	0.050	001
VI	67	Pentazinc chromate octahydroxide*	49663-84-5	0.005	001
VI	68	Phenolphthalein	77-09-8	0.050	001
VI	69	Potassium hydroxyoctaoxodizincatedichromate*	11103-86-9	0.005	001
VI	70	Trilead diarsenate*	3687-31-8	0.005	001
VI	71	Zirconia Aluminosilicate Refractory Ceramic Fibres*	650-017-00-8 (Index no.)	0.005	001





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VII	72	[4-[[4-anilino-1-naphthyl][4- (dimethylamino)phenyl]methylene]cycl ohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26)§	2580-56-5	0.050	001
VII	73	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1- ylidene]dimethylammonium chloride (C.I. Basic Violet 3) §	548-62-9	0.050	001
VII	74	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	0.050	001
VII	75	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	0.050	001
VII	76	4,4'-bis(dimethylamino) benzophenone (Michler's Ketone)	90-94-8	0.050	001
VII	77	4,4'-bis(dimethylamino)-4"- (methylamino)trityl alcohol [§]	561-41-1	0.050	001
VII	78	Diboron trioxide*	1303-86-2	0.005	001
VII	79	Formamide	75-12-7	0.050	001
VII	80	Lead(II) bis(methanesulfonate)*	17570-76-2	0.005	001
VII	81	N,N,N',N'-tetramethyl-4,4'- methylenedianiline (Michler's base)	101-61-1	0.050	001
VII	82	TGIC (1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione)	2451-62-9	0.050	001
VII	83	α,α -Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) §	6786-83-0	0.050	001
VII	84	β-TGIC (1,3,5-tris[(2S and 2R)-2,3- epoxypropyl]-1,3,5-triazine-2,4,6- (1H,3H,5H)-trione)	59653-74-6	0.050	001
VIII	85	[Phthalato(2-)]dioxotrilead*	69011-06-9	0.005	001
VIII	86	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	0.050	001
VIII	87	1,2-Diethoxyethane	629-14-1	0.050	001





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VIII	88	1-Bromopropane	106-94-5	0.050	001
VIII	89	3-Ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	0.050	001
VIII	90	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated	-	0.050	001
VIII	91	4,4'-Methylenedi-o-toluidine	838-88-0	0.050	001
VIII	92	4,4'-Oxydianiline and its salts	101-80-4	0.050	001
VIII	93	4-Aminoazobenzene	60-09-3	0.050	001
VIII	94	4-Methyl- <i>m</i> -phenylenediamine	95-80-7	0.050	001
VIII	95	4-Nonylphenol, branched and linear	-	0.050	001
VIII	96	6-Methoxy- <i>m</i> -toluidine	120-71-8	0.050	001
VIII	97	Acetic acid, lead salt, basic*	51404-69-4	0.005	001
VIII	98	Biphenyl-4-ylamine	92-67-1	0.050	001
VIII	99	Bis(pentabromophenyl) ether (DecaBDE)	1163-19-5	0.050	001
VIII	100	Cyclohexane-1,2-dicarboxylic anhydride, cis-cyclohexane-1,2-dicarboxylic anhydride, trans-cyclohexane-1,2-dicarboxylic anhydride	85-42-7, 13149-00-3, 14166-21-3	0.050	001
VIII	101	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	0.050	001
VIII	102	Dibutyltin dichloride (DBTC)	683-18-1	0.050	001
VIII	103	Diethyl sulphate	64-67-5	0.050	001
VIII	104	Diisopentylphthalate	605-50-5	0.050	001
VIII	105	Dimethyl sulphate	77-78-1	0.050	001





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VIII	106	Dinoseb	88-85-7	0.050	001
VIII	107	Dioxobis(stearato)trilead*	12578-12-0	0.005	001
VIII	108	Fatty acids, C16-18, lead salts*	91031-62-8	0.005	001
VIII	109	Furan	110-00-9	0.050	001
VIII	110	Henicosafluoroundecanoic acid	2058-94-8	0.050	001
VIII	111	Heptacosafluorotetradecanoic acid	376-06-7	0.050	001
VIII	112	Hexahydromethylphthalic anhydride, Hexahydro-4-methylphthalic anhydride, Hexahydro-1- methylphthalic anhydride, Hexahydro- 3-methylphthalic anhydride	☆	0.050	001
VIII	113	Lead bis(tetrafluoroborate)*	13814-96-5	0.005	001
VIII	114	Lead cyanamidate*	20837-86-9	0.005	001
VIII	115	Lead dinitrate*	10099-74-8	0.005	001
VIII	116	Lead monoxide*	1317-36-8	0.005	001
VIII	117	Lead oxide sulfate*	12036-76-9	0.005	001
VIII	118	Lead tetroxide (orange lead)*	1314-41-6	0.005	001
VIII	119	Lead titanium trioxide*	12060-00-3	0.005	001
VIII	120	Lead titanium zirconium oxide*	12626-81-2	0.005	001
VIII	121	Methoxyacetic acid	625-45-6	0.050	001
VIII	122	Methyloxirane (Propylene oxide)	75-56-9	0.050	001
VIII	123	N,N-Dimethylformamide	68-12-2	0.050	001
VIII	124	N-Methylacetamide	79-16-3	0.050	001





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VIII	125	N-Pentyl-isopentylphthalate	776297-69-9	0.050	001
VIII	126	o-Aminoazotoluene	97-56-3	0.050	001
VIII	127	o-Toluidine	95-53-4	0.050	001
VIII	128	Pentacosafluorotridecanoic acid	72629-94-8	0.050	001
VIII	129	Pentalead tetraoxide sulphate*	12065-90-6	0.005	001
VIII	130	Pyrochlore, antimony lead yellow*	8012-00-8	0.005	001
VIII	131	Silicic acid, barium salt, lead-doped*	68784-75-8	0.005	001
VIII	132	Silicic acid, lead salt*	11120-22-2	0.005	001
VIII	133	Sulfurous acid, lead salt, dibasic*	62229-08-7	0.005	001
VIII	134	Tetraethyllead*	78-00-2	0.005	001
VIII	135	Tetralead trioxide sulphate*	12202-17-4	0.005	001
VIII	136	Tricosafluorododecanoic acid	307-55-1	0.050	001
VIII	137	Trilead bis(carbonate)dihydroxide (basic lead carbonate)*	1319-46-6	0.005	001
VIII	138	Trilead dioxide phosphonate*	12141-20-7	0.005	001
IX	139	4-Nonylphenol, branched and linear, ethoxylated	-	0.050	001
IX	140	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	0.050	001
IX	141	Cadmium oxide*	1306-19-0	0.005	001
IX	142	Cadmium*	7440-43-9	0.005	001
IX	143	Dipentyl phthalate (DPP)	131-18-0	0.050	001
IX	144	Pentadecafluorooctanoic acid (PFOA)	335-67-1	0.050	001





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Х	145	Cadmium sulphide*	1306-23-6	0.005	002
Х	146	Dihexyl phthalate	84-75-3	0.050	002
Х	147	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	0.050	002
X	148	Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38)	1937-37-7	0.050	002
Х	149	Imidazolidine-2-thione; (2-imidazoline-2-thiol)	96-45-7	0.050	002
Х	150	Lead di(acetate)*	301-04-2	0.005	002
Х	151	Trixylyl phosphate	25155-23-1	0.050	002



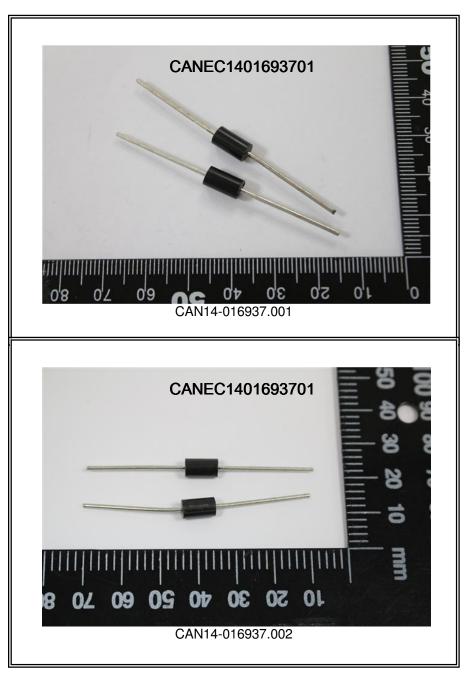


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Sample photo:



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