

Warranty for hazardous substances
有害物質に関する保証書

We declare that the SVHC(Candidate list of REACH Regulation) contained in the below products are as follows.
下記機種に含まれる高懸念物質(REACH規則 認可対象候補物質) が以下の通りであることを宣言します。

Sharp Model No. / シャープ型番
See Attached Product List

<Hazardous Substances and Maximum content rate / 有害物質と最大含有率>

Hazardous substances / 有害物質	CAS RN	Maximum content in products (ppm) / 製品中の最大含有率(ppm)
Anthracene	120-12-7	1000
4,4'-diaminodiphenylmethane;	101-77-9	1000
Dibutyl phthalate	84-74-2	1000
Cobalt dichloride	7646-79-9	1000
Diarsenic pentaoxide	1303-28-2	1000
Diarsenic trioxide	1327-53-3	1000
Sodium dichromate and its dihydrate	—	—
Sodium dichromate	10588-01-9	1000
Sodium dichromate, dihydrate	7789-12-0	—
5-tert-butyl-2,4,6-trinitro-m-xylene(musk xylene)	81-15-2	1000
Bis(2-ethylhexyl) phthalate	117-81-7	1000
Hexabromocyclododecane and all major diastereoisomers identified	—	—
Hexabromocyclododecane	25637-99-4	—
1,2,5,6,9,10-hexabromocyclododecane	3194-55-6	1000
alpha-hexabromocyclododecane	134237-50-6	—
beta-hexabromocyclododecane	134237-51-7	—
gamma-hexabromocyclododecane	134237-52-8	—
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	1000
Bis(tributyltin)oxide	56-35-9	1000
Lead hydrogen arsenate	7784-40-9	1000
Triethyl arsenate	15606-95-8	1000
Benzyl butyl phthalate	85-68-7	1000
2,4-Dinitrotoluene	121-14-2	1000
Anthracene oil	90640-80-5	1000
Anthracene oil, anthracene paste, distn. Lights	91995-17-4	1000
Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	1000
Anthracene oil, anthracene-low	90640-82-7	1000
Anthracene oil, anthracene paste	90640-81-6	1000
Diisobutyl phthalate	84-69-5	1000
Aluminosilicate, Refractory Ceramic Fibres**	(JAMP-SN0055)	1000
Zirconia Aluminosilicate, Refractory Ceramic Fibres**	(JAMP-SN0007)	1000
Lead chromate	7758-97-6	1000
Lead chromate molybdate sulfate red (C.I. Pigment Red 104)	12656-85-8	1000
Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	1000
Acrylamide	79-06-1	1000
Tris(2-chloroethyl) phosphate	115-96-8	1000
Coal tar pitch, high temperature	65996-93-2	1000
Trichloroethylene	79-01-6	1000
Boric acid	10043-35-3,11113-50-1	1000
Disodium tetraborate,anhydrous	1330-43-4,12179-04-3,1303-96-4	1000
Tetaboron disodium heptaoxide,hydrate	12267-73-1	1000
Sodium chromate	7775-11-3	1000
Potassium chromate	7789-00-6	1000
Ammonium dichromate	7789-09-5	1000
Potassium dichromate	7778-50-9	1000
Cobalt(II) sulphate	10124-43-3	1000
Cobalt(II) dinitrate	10141-05-6	1000
Cobalt(II) carbonate	513-79-1	1000
Cobalt(II) diacetate	71-48-7	1000
2-Methoxyethanol	109-86-4	1000
2-Ethoxyethanol	110-80-5	1000
Chromium trioxide	1333-82-0	1000
Chromic acid	7738-94-5	—
Dichromic acid	13530-68-2	1000
Oligomers of chromic acid dichromic acid	—	—
2-Ethoxyethyl acetate	111-15-9	1000
Strontium chromate	7789-06-2	1000
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	1000
Hydrazine	302-01-2,7803-57-8	1000
1-Methyl-2-pyrrolidone	872-50-4	1000
1,2,3-Trichloropropane	96-18-4	1000
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	1000
Dichromium tris(chromate)	24613-89-6	1000
Potassium hydroxyoctaoxidizincatedi-chromate	11103-86-9	1000
Pentazine chromate octahydroxide	49663-84-5	1000
Formaldehyde, oligomeric reaction products with aniline [technical MDA]	25214-70-4	1000
Bis(2-methoxyethyl) phthalate	117-82-8	1000
2-Methoxyaniline; o-Anisidine	90-04-0	1000
4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol)	140-66-9	1000
1,2-Dichloroethane	107-06-2	1000
Bis(2-methoxyethyl) ether	111-96-6	1000
Arsenic acid	7778-39-4	1000
Calcium arsenate	7778-44-1	1000
Trilead diarsenate	3687-31-8	1000
N,N-dimethylacetamide [DMAC]	127-19-5	1000
2,2'-dichloro-4,4'-methylenedianiline [MOCA]	101-14-4	1000
Phenolphthalein	77-09-8	1000
Lead azide Lead diazide	13424-46-9	1000
Lead styphnate	15245-44-0	1000
Lead dipicrate	6477-64-1	1000
1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	1000
1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	1000

<Hazardous Substances and Maximum content rate / 有害物質と最大含有率>

Hazardous substances / 有害物質	CAS RN	Maximum content in products (ppm) / 製品中の最大含有率(ppm)
Diboron trioxide	1303-86-2	1000
Formamide	75-12-7	1000
Lead(II) bis(methanesulfonate)	17570-76-2	1000
1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (TGIC)	2451-62-9	1000
1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β-TGIC)	59653-74-6	1000
4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	1000
N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	1000
[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Blue 26)	2580-56-5	1000
[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3)	548-62-9	1000
α,α-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4)	6786-83-0	1000
4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol	561-41-1	1000
Pyrochlore, antimony lead yellow	8012-00-8	1000
6-methoxy-m-toluidine (p-cresidine)	120-71-8	1000
Henicosafuoroundecanoic acid	2058-94-8	1000
Hexahydromethylphthalic anhydride [1], Hexahydro-4-methylphthalic anhydride [2], Hexahydro-1-methylphthalic anhydride [3], Hexahydro-3-methylphthalic anhydride [4] [The individual isomers [2], [3] and [4] (including their cis- and trans- stereo isomeric f	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9	1000
Cyclohexane-1,2-dicarboxylic anhydride [1], cis-cyclohexane-1,2-dicarboxylic anhydride [2], trans-cyclohexane-1,2-dicarboxylic anhydride [3] [The individual cis- [2] and trans- [3] isomer substances and all possible combinations of the cis- and trans-isom	85-42-7, 13149-00-3, 14166-21-3	1000
Dibutyltin dichloride (DBTC)	683-18-1	1000
Lead bis(tetrafluoroborate)	13814-96-5	1000
Lead dinitrate	10099-74-8	1000
Silicic acid, lead salt	11120-22-2	1000
4-Aminoazobenzene	60-09-3	1000
Lead titanium zirconium oxide	12626-81-2	1000
Lead monoxide (lead oxide)	1317-36-8	1000
o-Toluidine	95-53-4	1000
3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	1000
Silicic acid (H ₂ Si ₂ O ₅), barium salt (1:1), lead-doped		
[with lead (Pb) content above the applicable generic concentration limit for 'toxicity for reproduction' Repr. 1A (CLP) or category 1 (DSD); the substance is a member of the group entry of lead compounds, with index number 082-001-00-6 in Regulation (EC)	68784-75-8	1000
Trilead bis(carbonate)dihydroxide	1319-46-6	1000
Furan	110-00-9	1000
N,N-dimethylformamide	68-12-2	1000
4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	—	1000
4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a c	—	1000
4,4'-methylenedi-o-toluidine	838-88-0	1000
Diethyl sulphate	64-67-5	1000
Dimethyl sulphate	77-78-1	1000
Lead oxide sulfate	12036-76-9	1000
Lead titanium trioxide	12060-00-3	1000
Acetic acid, lead salt, basic	51404-69-4	1000
[Phthalato(2-)]dioxotrilead	69011-06-9	1000
Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	1000
N-methylacetamide	79-16-3	1000
Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	1000
1,2-Diethoxyethane	629-14-1	1000
Tetralead trioxide sulphate	12202-17-4	1000
N-pentyl-isopentylphthalate	776297-69-9	1000
Dioxobis(stearato)trilead	12578-12-0	1000
Tetraethyllead	78-00-2	1000
Pentalead tetraoxide sulphate	12065-90-6	1000
Pentacosafuorotridecanoic acid	72629-94-8	1000
Tricosafuorododecanoic acid	307-55-1	1000
Heptacosafuorotetradecanoic acid	376-06-7	1000
1-bromopropane (n-propyl bromide)	106-94-5	1000
Methoxyacetic acid	625-45-6	1000
4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	1000
Methyloxirane (Propylene oxide)	75-56-9	1000
Trilead dioxide phosphonate	12141-20-7	1000
o-aminoazotoluene	97-56-3	1000
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	1000
4,4'-oxydianiline and its salts	101-80-4	1000
Orange lead (lead tetroxide)	1314-41-6	1000
Biphenyl-4-ylamine	92-67-1	1000
Diisopentylphthalate	605-50-5	1000
Fatty acids, C16-18, lead salts	91031-62-8	1000
Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	1000
Sulfurous acid, lead salt, dibasic	62229-08-7	1000
Lead cyanamidate	20837-86-9	1000
Cadmium	7440-43-9	1000
Cadmium oxide	1306-19-0	1000
Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	1000
Pentadecafluorooctanoic acid (PFOA)	335-67-1	1000
Dipentyl phthalate (DPP)	131-18-0	1000
4-Nonylphenol, branched and linear, ethoxylated		
[substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and omologues, which include any of the individual isomers and/or combinations thereof]	—	1000
Dipentyl phthalate (DPP)	131-18-0	1000
4-Nonylphenol, branched and linear, ethoxylated		
[substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and omologues, which include any of the individual isomers and/or combinations thereof]	—	1000
Cadmium sulphide	1306-23-6	1000
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	1000
Dihexyl phthalate	84-75-3	1000
Imidazolidine-2-thione; (2-imidazoline-2-thiol)	96-45-7	1000
Trixylyl phosphate	25155-23-1	1000
Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	1000

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Lead di(acetate)	301-04-2	1000
Cadmium chloride	10108-64-2	1000
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	1000
Sodium peroxometaborate	7632-04-4	1000
Sodium perborate; perboric acid, sodium salt	—	1000
Cadmium fluoride	7790-79-6	1000
Cadmium sulphate	10124-36-4, 31119-53-6	1000
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	1000
2-[(2H-benzotriazol-2-yl)-4,6-di-tert-pentylphenol (UV-328)]	25973-55-1	1000
2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	1000
Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyloxy)-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-annatetradecanoate (reaction mass of DOTE and MOTE)	—	1000
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5)	—	1000
5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual isomers of [1] and [2] or any combination thereof]	—	1000
Perfluorononan-1-oiic-acid and its sodium and ammonium salts	375-95-1, 21049-39-8, 4149-60-4	1000
Nitrobenzene	98-95-3	1000
2-[(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)]	36437-37-3	1000
2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	1000
1,3-propanesultone	1120-71-4	1000
Benzo[de]chrysene (Benzo[a]pyrene)	50-32-8	1000
4,4'-isopropylidenediphenol (bisphenol A)	80-05-7	1000
4-Heptylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]	—	1000
Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	3108-42-7, 335-76-2, 3830-45-3	1000
p-(1,1-dimethylpropyl)phenol	80-46-6	1000
Perfluorohexane-1-sulfonic acid and its salts (PFHxS)	—	1000
Chrysene	218-01-9	1000
Benzo[a]anthracene	56-55-3	1000
Cadmium nitrate	10325-94-7	1000
Cadmium hydroxide	21041-95-2	1000
Cadmium carbonate	513-78-0	1000
1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo [12.2.1.16.9.02.13.05.10]octadeca-7,15-diene ("Dechlorane Plus"™) [covering any of its individual anti- and syn-isomers or any combination thereof]	—	1000
Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with ≥ 0.1% w/w 4-heptylphenol, branched and linear]	—	1000
Octamethylcyclotetrasiloxane (D4)	556-67-2	1000
Decamethylcyclopentasiloxane (D5)	541-02-6	1000
Dodecamethylcyclohexasiloxane (D6)	540-97-6	1000
Lead	7439-92-1	1000
Disodium octaborate	12008-41-2	1000
Benzo[ghi]perylene	191-24-2	1000
Terphenyl hydrogenated	61788-32-7	1000
Ethylenediamine	107-15-3	1000
Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride) (TMA)	552-30-7	1000
Dicyclohexyl phthalate (DCHP)	84-61-7	1000
2,2-bis(4-hydroxyphenyl)-4-methylpentane	6807-17-6	1000
Benzo[k]fluoranthene	207-08-9	1000
Fluoranthene	206-44-0	1000
Phenanthrene	85-01-8	1000
Pyrene	129-00-0	1000
1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one(3-benzylidene camphor)	15087-24-8	1000
2-methoxyethyl acetate	110-49-6	1000
Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP)	—	1000
2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)	—	1000
4-tert-butylphenol	98-54-4	1000
Diisohexyl phthalate	71850-09-4	1000
2-benzyl-2-dimethylamino-4'-morpholinobutylprophenone	119313-12-1	1000
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5	1000
Perfluorobutane sulfonic acid (PFBS) and its salts	—	1000
1-vinylimidazole	1072-63-5	1000
2-methylimidazole	693-98-1	1000
Butyl 4-hydroxybenzoate	94-26-8	1000
Dibutylbis(pentane-2,4-dionato-O,O')tin	22673-19-4	1000
bis(2-(2-methoxyethoxy)ethyl) ether	143-24-8	1000
Diocetyl tin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety	—	1000
Stannane, dioctyl-, bis(coco acyloxy) derivs	91648-39-4	
Diocetyl tin dilaurate	3648-18-8	
2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers	—	1000
Orthoboric acid, sodium salt	13840-56-7	1000
2,2-bis(bromomethyl)propane1,3-diol (BMP);	3296-90-0	
2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA);	36483-57-5, 1522-92-5	1000
2,3-dibromo-1-propanol (2,3-DBPA)	96-13-9	
Glutaral	111-30-8	1000
Medium-chain chlorinated paraffins (MCCP) [UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17]	—	1000
Phenol, alkylation products (mainly in para position) with C12-rich branched or linear alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP)	—	1000
1,4-dioxane	123-91-1	1000
4,4'-(1-methylpropylidene)bisphenol; (bisphenol B)	77-40-7	1000
(±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC)	—	1000
6,6'-di-tert-butyl-2,2'-methylene-di-p-cresol (DBMC)	119-47-1	1000
S-(tricyclo[5.2.1.0 ^{2,6}]deca-3-en-8-(or 9)-yl) O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate	255881-94-8	1000
Tris(2-methoxyethoxy)vinylsilane	1067-53-4	1000
* N-(hydroxymethyl)acrylamide	924-42-5	1000

* 27th new substances / 第27次追加物質

September 28, 2022

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Sharp Semiconductor Innovation Corporation.

シャープ セミコンダクター イノベーション株式会社

Signature :



Division Manager 部長 Isao Watanabe 渡部 功

Quality and Reliability Engineering Division.

品質信頼性技術部

Product List

September 28, 2022

Sharp Semiconductor Innovation Corporation.

Quality and Reliability Engineering Division.

No	Model No. External Model Name	Model No. In-house Model name	REACH SVHC (224) Maximum content in products (ppm)	Product Name
1	GL100MN0MP1	GL100MN0T16	1,000	Infrared Emission Diodes
2	GL100MN1MP	GL100MN1T06	1,000	Infrared Emission Diodes
3	GL100MN1MP1	GL100MN1T16	1,000	Infrared Emission Diodes
4	GL480E00000F	GL480E0000F6	1,000	Infrared Emission Diodes
5	GP1A173LCS5F	GP1A173LCS54	1,000	Photo Interrupter
6	GP1A30R1J00F	GP1A30R1J004	1,000	Photo Interrupter
7	GP1A50HRJ00F	GP1A50HRJ004	1,000	Photo Interrupter
8	GP1A51HRJ00F	GP1A51HRJ004	1,000	Photo Interrupter
9	GP1A52HRJ00F	GP7A52HRJ00F	1,000	Photo Interrupter
10	GP1A52LRJ00F	GP7A52LRJ00F	1,000	Photo Interrupter
11	GP1A57HRJ00F	GP1A57HRJ004	1,000	Photo Interrupter
12	GP1A58HRJ00F	GP7A58HRJ00F	1,000	Photo Interrupter
13	GP1S092HCPIF	GP1S092HCPI4	1,000	Photo Interrupter
14	GP1S093HCZ0F	GP1S093HCZ04	1,000	Photo Interrupter
15	GP1S094HCZ0F	GP1S094HCZ04	1,000	Photo Interrupter
16	GP1S097HCZ0F	GP1S097HCZ04	1,000	Photo Interrupter
17	GP1S173LCS2F	GP1S173LCS24	1,000	Photo Interrupter
18	GP1S194HCZ0F	GP1S194HCZ04	1,000	Photo Interrupter
19	GP1S196HCPSF	GP1S196HCPS4	1,000	Photo Interrupter
20	GP1S196HCZ0F	GP1S196HCZ04	1,000	Photo Interrupter
21	GP1S296HCPSF	GP1S296HCPSB	1,000	Photo Interrupter
22	GP1S396HCP0F	GP1S396HCP0B	1,000	Photo Interrupter
23	GP1S396HCPSF	GP1S396HCPSB	1,000	Photo Interrupter
24	GP1S51VJ000F	GP7S51VJ000F	1,000	Photo Interrupter
25	GP1S52VJ000F	GP7S52VJ000F	1,000	Photo Interrupter
26	GP1S53VJ000F	GP7S53VJ000F	1,000	Photo Interrupter
27	GP1S58VJ000F	GP7S58VJ000F	1,000	Photo Interrupter
28	GP1UM261RKVF	GP7UM261RKVF	1,000	R/C Light Receiving Unit
29	GP1UM271RMVF	GP7UM271RMVF	1,000	R/C Light Receiving Unit
30	GP1UM272RKVF	GP7UM272RKVF	1,000	R/C Light Receiving Unit
31	GP1UM281QKVF	GP7UM281QKVF	1,000	R/C Light Receiving Unit
32	GP1UX511QS	GP6UX511QS	1,000	R/C Light Receiving Unit
33	GP1UX511RK	GP6UX511RK	1,000	R/C Light Receiving Unit
34	GP2A200LCS0F	GP2A200LCS04	1,000	Photo Interrupter
35	GP2A210LCSJF	GP2A210LCSJ6	1,000	Photo Interrupter
36	GP2A230LRS0F	GP2A230LRS06	1,000	Photo Interrupter
37	GP2A230LRSAF	GP2A230LRSA6	1,000	Photo Interrupter
38	GP2A231LRSAF	GP2A231LRSA6	1,000	Photo Interrupter
39	GP2A240LCS0F	GP2A240LCS06	1,000	Photo Interrupter
40	GP2A250LCS0F	GP2A250LCS06	1,000	Photo Interrupter
41	GP2A25J0000F	GP2A25J00006	1,000	Photo Interrupter
42	GP2A431LCSAF	GP2A431LCSA6	1,000	Photo Interrupter
43	GP2AP01VT10F	GP2AP01VT10F	1,000	TOF Sensor
44	GP2AP02VT00F	GP2AP02VT0F6	1,000	TOF Sensor
45	GP2AP02VT20F	GP2AP02VT2F6	1,000	TOF Sensor
46	GP2AP03VT00F	GP2AP03VT0F6	1,000	TOF Sensor
47	GP2S60	GP2S60J00004	1,000	Photo Interrupter
48	GP2S60A	GP2S60AJ0004	1,000	Photo Interrupter
49	GP2S60B	GP2S60BJ0004	1,000	Photo Interrupter
50	GP2S700HCP	GP2S700HCP04	1,000	Photo Interrupter

51	GP2Y0A02SKDF	GP2Y0A02SKD4	1,000	Ranging Sensor
52	GP2Y0A02YK0F	GP2Y0A02YKF4	1,000	Ranging Sensor
53	GP2Y0A21YK0F	GP2Y0A21YKF4	1,000	Ranging Sensor
54	GP2Y0A41SK0F	GP2Y0A41SKF4	1,000	Ranging Sensor
55	GP2Y0A51SK0F	GP2Y0A51SK04	1,000	Ranging Sensor
56	GP2Y0A60SZLF	GP2Y0A60SZL6	1,000	Ranging Sensor
57	GP2Y0A710K0F	GP2Y0A710KF4	1,000	Ranging Sensor
58	GP2Y0AF15X	GP2Y0AF15X04	1,000	Ranging Sensor
59	GP2Y0D02YK0F	GP2Y0D02YKF4	1,000	Ranging Sensor
60	GP2Y0D21YK0F	GP2Y0D21YKF4	1,000	Ranging Sensor
61	GP2Y0D413K0F	GP2Y0D413KF4	1,000	Ranging Sensor
62	GP2Y0D805Z0F	GP2Y0D805ZF6	1,000	Ranging Sensor
63	GP2Y0D810Z0F	GP2Y0D810ZF6	1,000	Ranging Sensor
64	GP2Y0D815Z0F	GP2Y0D815ZF6	1,000	Ranging Sensor
65	GP2Y0E02A	GP2Y0E02A004	1,000	Ranging Sensor
66	GP2Y0E02B	GP2Y0E02B004	1,000	Ranging Sensor
67	GP2Y0E03	GP2Y0E030004	1,000	Ranging Sensor
68	GP2Y1023AU0F	GP2Y1023AUF4	1,000	Dust Sensor
69	GP2Y1026AU0F	GP2Y1026AUF6	1,000	Dust Sensor
70	GP2Y1030AU0F	GP2Y1030AUF6	1,000	Dust Sensor
71	GP2Y1040AU0F	GP2Y1040AUF4	1,000	Dust Sensor
72	IS471FE	IS471FE6	1,000	OPIC Light Detector
73	IS485E	IS485E6	1,000	OPIC Light Detector
74	IS486E	IS486E6	1,000	OPIC Light Detector
75	PC12310NSZ1B	PC12310NSZ1B	1,000	Photo Coupler
76	PC12311NSZ1B	PC12311NSZ1B	1,000	Photo Coupler
77	PC123X1YIP1B	PC123X1YIP1B	1,000	Photo Coupler
78	PC123X1YUP1B	PC123X1YUP1B	1,000	Photo Coupler
79	PC123X2YFZ1B	PC123X2YFZ1B	1,000	Photo Coupler
80	PC123X2YIP1B	PC123X2YIP1B	1,000	Photo Coupler
81	PC123X2YSZ1B	PC123X2YSZ1B	1,000	Photo Coupler
82	PC123X2YUP1B	PC123X2YUP1B	1,000	Photo Coupler
83	PC123X5YFZ1B	PC123X5YFZ1B	1,000	Photo Coupler
84	PC123X5YUP1B	PC123X5YUP1B	1,000	Photo Coupler
85	PC123XNYIP1B	PC123XNYIP1B	1,000	Photo Coupler
86	PC123XNYSZ1B	PC123XNYSZ1B	1,000	Photo Coupler
87	PC354N1J000F	PC354N1J0002	1,000	Photo Coupler
88	PC354NJ0000F	PC354NJ00002	1,000	Photo Coupler
89	PC355NJ0000F	PC355NJ00002	1,000	Photo Coupler
90	PC357N1J000F	PC357N1J0002	1,000	Photo Coupler
91	PC357N2J000F	PC357N2J0002	1,000	Photo Coupler
92	PC357N3J000F	PC357N3J0002	1,000	Photo Coupler
93	PC357N4J000F	PC357N4J0002	1,000	Photo Coupler
94	PC357N6J000F	PC357N6J0007	1,000	Photo Coupler
95	PC357N7J000F	PC357N7J0002	1,000	Photo Coupler
96	PC357NJ0000F	PC357NJ00002	1,000	Photo Coupler
97	PC364NJ0000F	PC364NJ00002	1,000	Photo Coupler
98	PC365NJ0000F	PC365NJ00002	1,000	Photo Coupler
99	PC367N2J000F	PC367N2J0002	1,000	Photo Coupler
100	PC367NJ0000F	PC367NJ00002	1,000	Photo Coupler
101	PC3H4J00001H	PC3H4J00001H	1,000	Photo Coupler
102	PC3H710NIP1H	PC3H710NIP1H	1,000	Photo Coupler
103	PC3H712NIP1H	PC3H712NIP1H	1,000	Photo Coupler

104	PC3H7AJ0001H	PC3H7AJ0001H	1,000	Photo Coupler
105	PC3H7BJ0001H	PC3H7BJ0001H	1,000	Photo Coupler
106	PC3H7CJ0001H	PC3H7CJ0001H	1,000	Photo Coupler
107	PC3H7DJ0001H	PC3H7DJ0001H	1,000	Photo Coupler
108	PC3H7J00001H	PC3H7J00001H	1,000	Photo Coupler
109	PC3HU72YIP1B	PC3HU72YIP1B	1,000	Photo Coupler
110	PC3SD11NTZBH	PC3SD11NTZBH	1,000	Photo Triac Coupler
111	PC3SD11NTZCH	PC3SD11NTZCH	1,000	Photo Triac Coupler
112	PC3SD11YTZAH	PC3SD11YTZAH	1,000	Photo Triac Coupler
113	PC3SD11YTZCH	PC3SD11YTZCH	1,000	Photo Triac Coupler
114	PC3SD11YXPCH	PC3SD11YXPCH	1,000	Photo Triac Coupler
115	PC3SD12NTZAH	PC3SD12NTZAH	1,000	Photo Triac Coupler
116	PC3SD21NTZBH	PC3SD21NTZBH	1,000	Photo Triac Coupler
117	PC3SD21NTZDH	PC3SD21NTZDH	1,000	Photo Triac Coupler
118	PC3SD21YXPDH	PC3SD21YXPDH	1,000	Photo Triac Coupler
119	PC3SF11YTZBH	PC3SF11YTZBH	1,000	Photo Triac Coupler
120	PC3SF11YVZBH	PC3SF11YVZBH	1,000	Photo Triac Coupler
121	PC3SF21YVZAH	PC3SF21YVZAH	1,000	Photo Triac Coupler
122	PC400J00000F	PC400J000002	1,000	Photo Coupler
123	PC451J00000F	PC451J000002	1,000	Photo Coupler
124	PC452J00000F	PC452J000002	1,000	Photo Coupler
125	PC457L0NIP0F	PC457L0NIP02	1,000	Photo Coupler
126	PC457L0YIP0F	PC457L0YIP02	1,000	Photo Coupler
127	PC4SD11YXPCH	PC4SD11YXPCH	1,000	Photo Triac Coupler
128	PC4SD21YXPCH	PC4SD21YXPCH	1,000	Photo Triac Coupler
129	PC4SD21YXPDH	PC4SD21YXPDH	1,000	Photo Triac Coupler
130	PC4SF21YVZBH	PC4SF21YVZBH	1,000	Photo Triac Coupler
131	PC81710NIP1B	PC81710NIP1B	1,000	Photo Coupler
132	PC81710NSZ1B	PC81710NSZ1B	1,000	Photo Coupler
133	PC81712NSZ1B	PC81712NSZ1B	1,000	Photo Coupler
134	PC81713NIP1B	PC81713NIP1B	1,000	Photo Coupler
135	PC817X1NIP1B	PC817X1NIP1B	1,000	Photo Coupler
136	PC817X1NSZ1B	PC817X1NSZ1B	1,000	Photo Coupler
137	PC817X1NSZ1B	PC817X1NSZ1B	1,000	Photo Coupler
138	PC817X2NIP1B	PC817X2NIP1B	1,000	Photo Coupler
139	PC817X2NSZ1B	PC817X2NSZ1B	1,000	Photo Coupler
140	PC817X2NSZ1B	PC817X2NSZ1B	1,000	Photo Coupler
141	PC817X3NIP1B	PC817X3NIP1B	1,000	Photo Coupler
142	PC817X3NSZ1B	PC817X3NSZ1B	1,000	Photo Coupler
143	PC817X3NSZ2B	PC817X3NSZ2B	1,000	Photo Coupler
144	PC817X4NIP1B	PC817X4NIP1B	1,000	Photo Coupler
145	PC817X4NSZ1B	PC817X4NSZ1B	1,000	Photo Coupler
146	PC817X6NSZ1B	PC817X6NSZ1B	1,000	Photo Coupler
147	PC817X7NSZ1B	PC817X7NSZ1B	1,000	Photo Coupler
148	PC817XNNIP1B	PC817XNNIP1B	1,000	Photo Coupler
149	PC817XNNSZ1B	PC817XNNSZ1B	1,000	Photo Coupler
150	PC851XNNIP1H	PC851XNNIP1H	1,000	Photo Coupler
151	PC851XNNSZ1H	PC851XNNSZ1H	1,000	Photo Coupler
152	PC852XNNIP1H	PC852XNNIP1H	1,000	Photo Coupler
153	PC925LENIP0F	PC925LENIP02	1,000	Photo Coupler
154	PD410PI2E00F	PD410PI2E0F6	1,000	Photo Diodes

155	PT100MF0MP	PT100MF0T06	1,000	Photo Transistor
156	PT100MF0MP1	PT100MF0T16	1,000	Photo Transistor
157	RJ32S3AA0DT	RJ32S3AA3DE	1,000	Charge Coupled Device
158	RJ32S4AA0DT	RJ32S4AA3DE	1,000	Charge Coupled Device
159	RJ33J3CA0DT	RJ33J3CA3DE	1,000	Charge Coupled Device
160	RJ33J4CA0DT	RJ33J4CA3DE	1,000	Charge Coupled Device
161	S2S3A00F	S2S3A002	1,000	Photo Triac Coupler
162	S2S3LA0F	S2S3LA02	1,000	Photo Triac Coupler
163	S2S3Y00F	S2S3Y007	1,000	Photo Triac Coupler
164	S2S4A00F	S2S4A002	1,000	Photo Triac Coupler
165	S2S4BY0F	S2S4BY07	1,000	Photo Triac Coupler
166	S2S5A00F	S2S5A002	1,000	Photo Triac Coupler
167	S2S5FA0F	S2S5FA07	1,000	Photo Triac Coupler