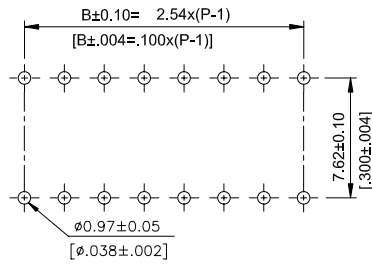
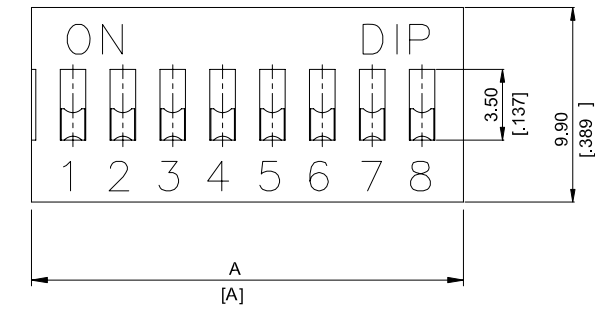


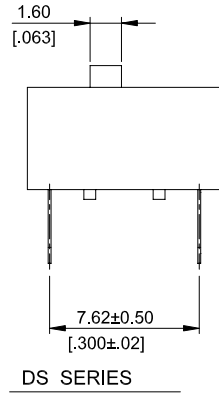
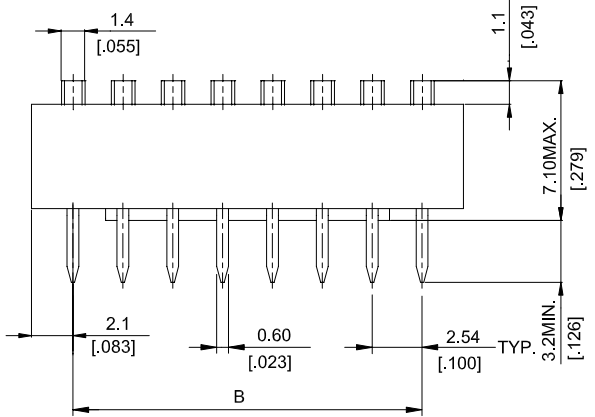
DS, DP, DA SERIES

DIMENSIONS

DS(R)

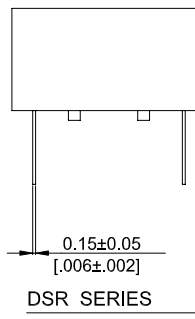
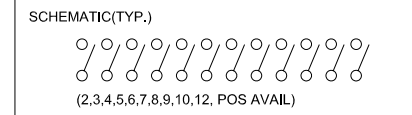


P.C.B. LAYOUT



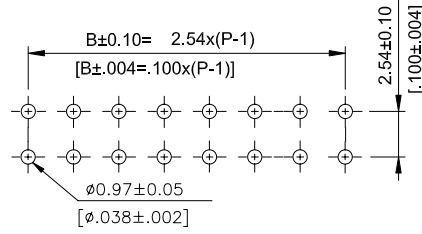
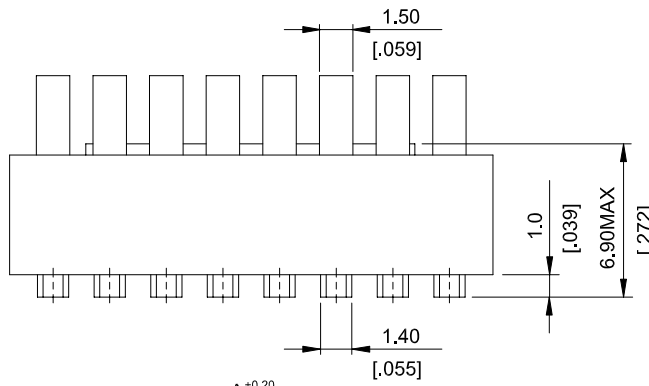
DS SERIES

DS -12 DSR-12	12	31.84[1.254]	27.94[1.100]
DS -10 DSR-10	10	26.76[1.054]	22.86[.900]
DS -09 DSR-09	9	24.22[.954]	20.32[.800]
DS -08 DSR-08	8	21.68[.854]	17.78[.700]
DS -07 DSR-07	7	19.14[.754]	15.24[.600]
DS -06 DSR-06	6	16.60[.654]	12.70[.500]
DS -05 DSR-05	5	14.06[.554]	10.16[.400]
DS -04 DSR-04	4	11.52[.454]	7.62[.300]
DS -03 DSR-03	3	8.98[.354]	5.08[.200]
DS -02 DSR-02	2	6.44[.254]	2.54[.100]
PROD. NO.	NO. OF POS.	DIM. A	DIM. B

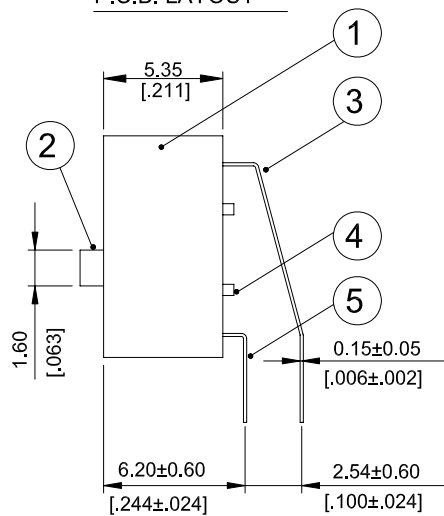
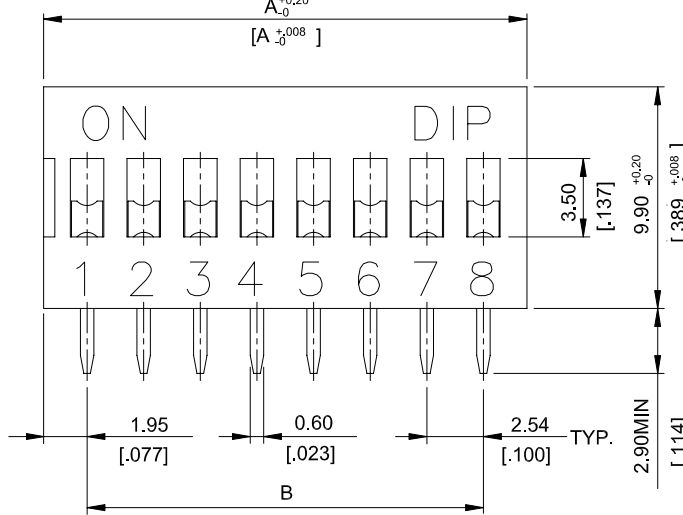


DSR SERIES

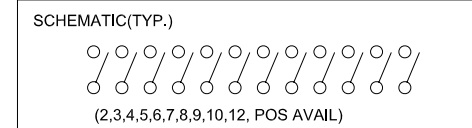
DA



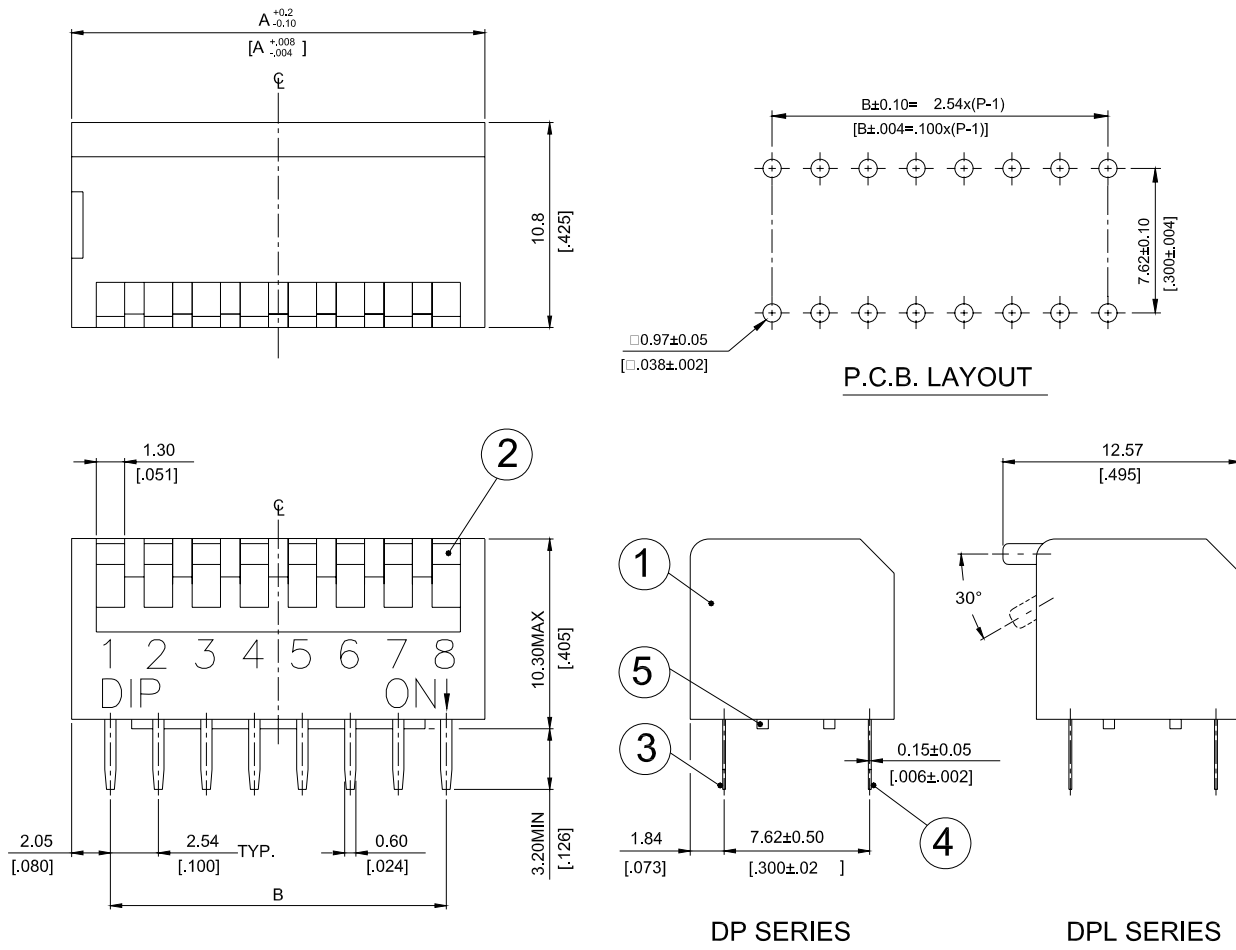
P.C.B. LAYOUT



DA-12	12	31.84[1.254]	27.94[1.100]
DA-10	10	26.76[1.054]	22.86[.900]
DA-09	9	24.22[.954]	20.32[.800]
DA-08	8	21.68[.854]	17.78[.700]
DA-07	7	19.14[.754]	15.24[.600]
DA-06	6	16.60[.654]	12.70[.500]
DA-05	5	14.06[.554]	10.16[.400]
DA-04	4	11.52[.454]	7.62[.300]
DA-03	3	8.98[.354]	5.08[.200]
DA-02	2	6.44[.254]	2.54[.100]
PROD. NO.	NO. OF POS.	DIM. A	DIM. B



DP(L)



DP -12 DPL-12	12	32.04[1.261]	27.94[1.100]
DP -10 DPL-10	10	26.96[1.061]	22.86[.900]
DP -09 DPL-09	9	24.42[.961]	20.32[.800]
DP -08 DPL-08	8	21.88[.861]	17.78[.700]
DP -07 DPL-07	7	19.34[.761]	15.24[.600]
DP -06 DPL-06	6	16.80[.661]	12.70[.500]
DP -05 DPL-05	5	14.26[.561]	10.16[.400]
DP -04 DPL-04	4	11.72[.461]	7.62[.300]
DP -03 DPL-03	3	9.18[.361]	5.08[.200]
DP -02 DPL-02	2	6.64[.261]	2.54[.100]

PROD. NO.	NO. OF POS.	DIM. A	DIM. B
SCHEMATIC(TYP.)			
(2,3,4,5,6,7,8,9,10,12, POS AVAIL)			

HOW TO ORDER



Package Style:
 = Tube

Soldering:
V = Lead Free Solderable

Seal:
 = Regular
T = Top Tape Sealed

▲ On/Off Position
 = Push Down On
U = Push Down Off
 <▲ U Only For DP(L) >

Color Of Cover
 = Red
▲B = Blue
▲K = Black
 <▲ Subject to our final confirmation >

Number Of Positions:
02 = 2 Positions **07** = 7 Positions
03 = 3 Positions **08** = 8 Positions
04 = 4 Positions **09** = 9 Positions
05 = 5 Positions **10** = 10 Positions
06 = 6 Positions **12** = 12 Positions

DS = Raised Actuator
 = Recessed Actuator

DA = Raised Actuator

DP = Short Key
 = Long Key

DS = Slide Type Dip Switch
DA = Right Angle Type Dip Switch
DP = Piano Type Dip Switch

SPECIFICATION

△MECHANICAL

Mechanical Life: 2,000 operations per switch.
Operation Force: 400gf max. (DP Series)
1,000gf max. (DS & DA Series)
Stroke: 2.0mm
Operation Temperature: -20°C to +70°C
Storage Temperature: -40°C to +85°C

△ELECTRICAL

Electrical Life: 2,000 operations per switch 24VDC,25mA
Non-Switching Rating: 100mA , 50VDC
Switching Rating: 25mA , 24VDC
Contact Resistance: 50mΩ max. at initial
Insulation Resistance:{at 500 VDC} 100MΩ min.
Dielectric Strength: 500VAC / 1 minute
Circuit: SPST

MATERIALS

△BASE: UL94V-0 PBT Thermoplastic
Color: Black
△COVER UL94V-0 PBT Thermoplastic
Color: Red, Black, Blue
△ACTUATOR: UL94V-0 PBT High Thermoplastic
Color: White
△CONTACT: Phosphor bronze with gold plating over nickel
△TOP SEAL: Polyester Film
△POTTING MATERIAL: Epoxy

SOLDERING PROCESS

△Keep all switch contacts in their “OFF” position for all operations.

△WAVE SOLDERING: Recommended temperature at 500°F (260°C) max. 5 seconds for through hole type.

△HAND SOLDERING: Use a soldering iron of 30 watts, controlled at 350°C approximately max 5 seconds.

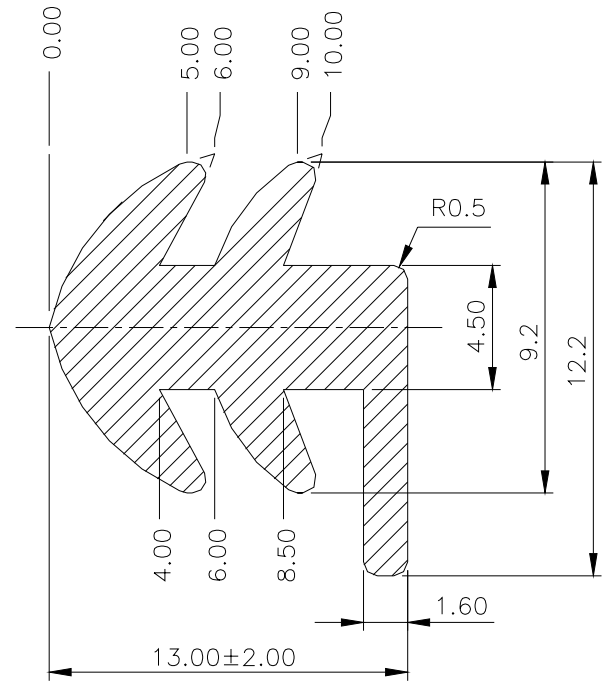
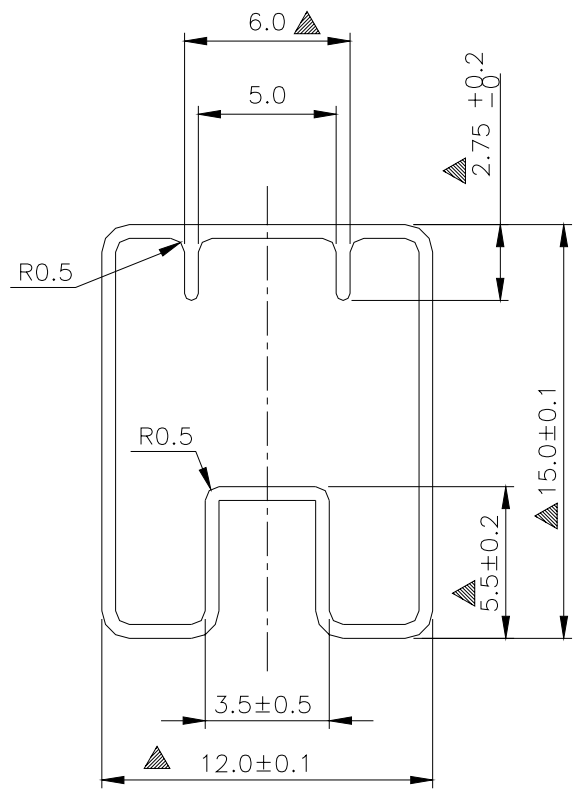
△Make sure switch is in “OFF” position during soldering process, or it will decrease the operating force and meanwhile increase the contact resistance.

△Do not wash the switch body except top tape sealed type, which suitable for spray cleaning method from top of the s/w.

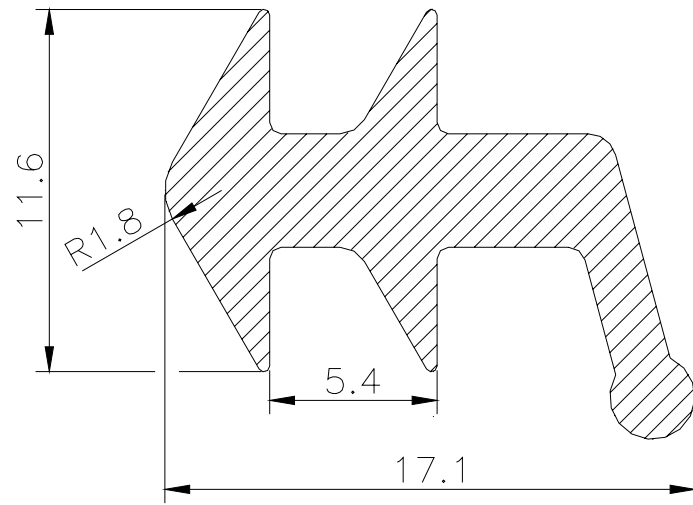
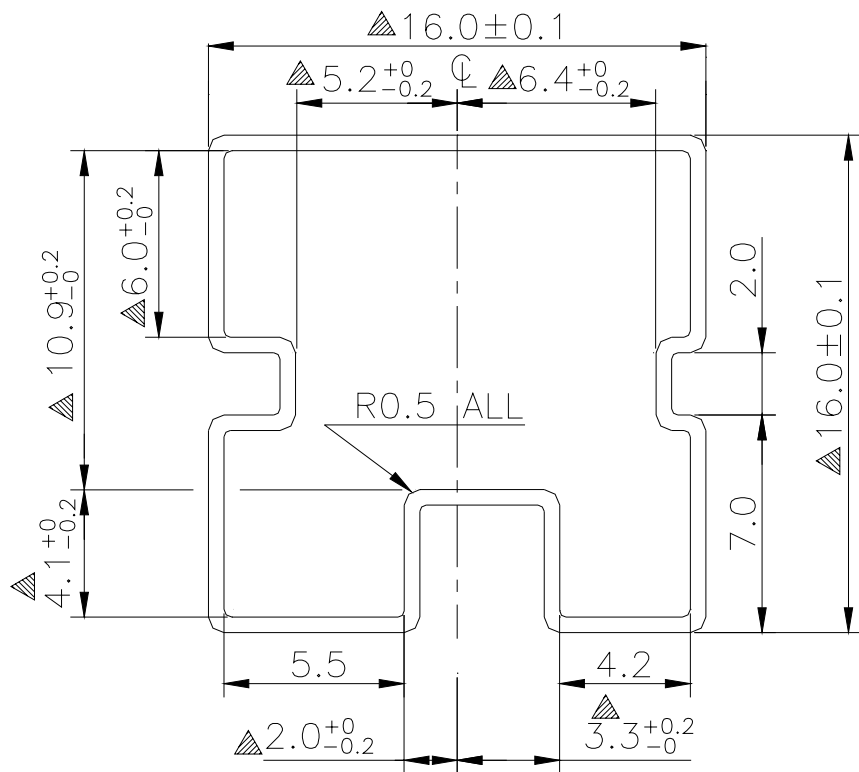
PACKING

Part Number	Number Per Tube	Part Number	Number Per Tube
DS(R)-02	72	DS(R)-02-T	70
DS(R) -03	51	DS(R)-03-T	50
DS(R)-04	40	DS(R)-04-T	39
DS(R)-05	32	DS(R)-05-T	32
DS(R)-06	27	DS(R)-06-T	28
DS(R)-07	24	DS(R)-07-T	24
DS(R)-08	21	DS(R)-08-T	21
DS(R)-09	19	DS(R)-09-T	19
DS(R)-10	17	DS(R)-10-T	17
DS(R)-12	14	DS(R)-12-T	14
DP(L)-02	70	DP(L)-02/T	65
DP(L)-03	50	DP(L)-03-T	49
DP(L)-04	39	DP(L)-04-T	39
DP(L)-05	32	DP(L)-05-T	32
DP(L)-06	27	DP(L)-06-T	27
DP(L)-07	24	DP(L)-07-T	24
DP(L)-08	21	DP(L)-08-T	21
DP(L)-09	19	DP(L)-09-T	19
DP(L)-10	17	DP(L)-10-T	17
DP(L)-12	14	DP(L)-12-T	14
DA-02	73	DA-02-T	70
DA-03	52	DA-03-T	50
DA-04	40	DA-04-T	39
DA-05	33	DA-05-T	32
DA-06	28	DA-06-T	28
DA-07	24	DA-07-T	24
DA-08	21	DA-08-T	21
DA-09	19	DA-09-T	19
DA-10	17	DA-10-T	17
DA-12	14	DA-12-T	14

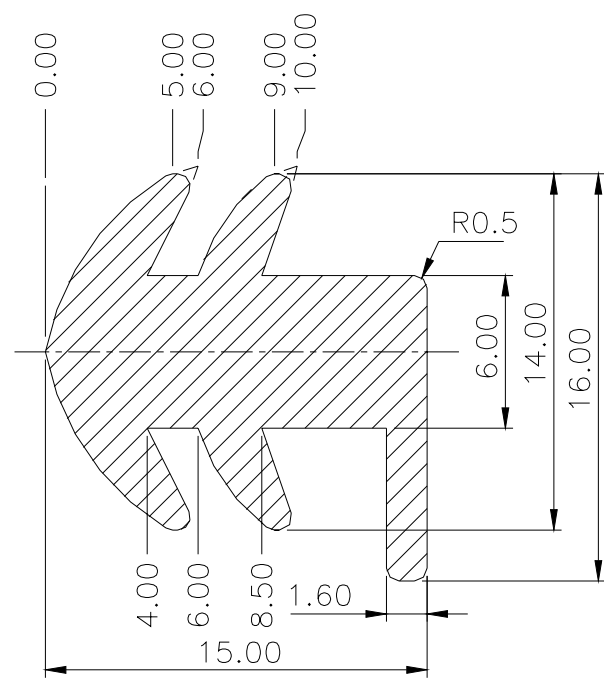
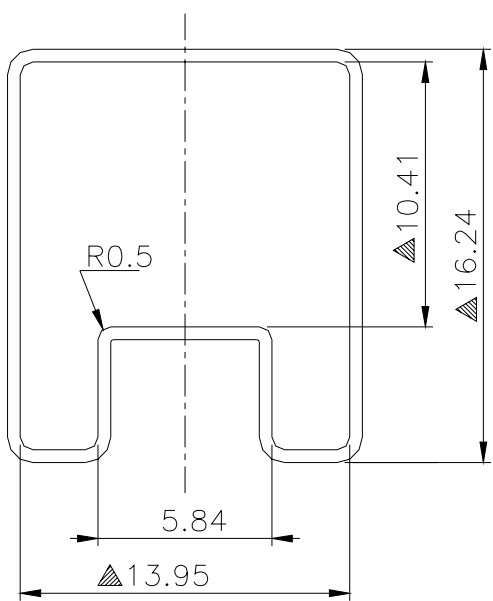
DS(R)



DP(L)



DA





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MULTICOMP PRODUCTS MANUFACTURED BY
DIPTRONICS MANUFACTURING INC
NO.110, WUGONG 3RD RD., WUGU SHIANG,
TAIPEI COUNTRY 248, TAIWAN

Report on the submitted sample said to be SPST SLIDE / PIANO / RIGHT ANGLE DIL TYPE SWITCH.

SGS Job No. : 1797722
Part Description : DA, DS & DP series
Buyer : PREMIER FARNELL ASIA PTE LTD
Supplier : DIPTRONICS MANUFACTURING INC
Sample Receiving Date : JUN 21 2005
Testing Period : JUN 22 – JUL 02 2005

Test Requested : With reference to RoHS Directive 2002/95/EC
1) To determine the Cadmium Content in the submitted sample.
2) To determine the Lead Content on the submitted sample.
3) To determine the Mercury Content on the submitted sample.
4) To determine the Hexavalent Chromium Content on the submitted sample.
5) To determine the Cadmium, Lead and Mercury content in the submitted metal sample.
6) Determination of PBBs (Polybrominated biphenyls), PBDEs (Polybrominated diphenylethers) of the submitted sample.

Test Method : 1) As specified in BS EN 1122:2001, Method B, analysis was performed by Inductively Coupled Argon Plasma – Atomic Emission Spectrometry (ICP-AES).
2) As specified in EPA Method 3050B. Analysis was performed by Inductively Coupled Argon Plasma – Atomic Emission Spectrometry (ICP-AES).
3) As specified in EPA Method 3052. Analysis was performed by Inductively Coupled Argon Plasma – Atomic Emission Spectrometry (ICP-AES).
4) As specified in EPA Method 3060A & 7196A. The sample was alkaline digested by using EPA Method 3060A, and then analyzed by using Colorimetric method 7196A.
5) In house method. The sample was digested by acid. Analysis was performed by Atomic Absorption or Inductively Coupled Argon Plasma – Atomic Emission Spectrometry (ICP-AES).
6) With reference to SGS in-house method. Analysis was performed by GC/MS.

Test Results : 1-6) Please refer to next page.

Conclusion : 1-6) When tested as specified, the submitted samples comply with the requirements of RoHS Directive Consultation document on 2002/95/EC.

Signed for and on behalf of
SGS Hong Kong Ltd


Ho Ka Ting, Family
Laboratory Executive



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Test Results :

1-5)

Element	1	2	3	4	Limit of RoHS Consultant Document
Cadmium (Cd)	< 2 ppm	< 2 ppm	< 2 ppm	< 2 ppm	100 ppm
Lead (Pb)	< 2 ppm	< 2 ppm	< 2 ppm	13 ppm	1000 ppm
Mercury (Hg)	< 2 ppm	< 2 ppm	< 2 ppm	< 2 ppm	1000 ppm
Hexavalent Chromium (Cr ⁶⁺)	< 2 ppm	< 2 ppm	< 2 ppm	< 2 ppm	1000 ppm

(Results shown are of the total weight of samples)

Note: < = Less than
ppm = mg/kg

6)

Flame Retardants	1	2	Detection Limit	Limit of RoHS Consultant Document
Polybrominated Biphenyls (PBBs)	---	---	---	1000 ppm
Monobromobiphenyl	ND	ND	5 ppm	--
Dibromobiphenyl	ND	ND	5 ppm	--
Tribromobiphenyl	ND	ND	5 ppm	--
Tetrabromobiphenyl	ND	ND	5 ppm	--
Pentabromobiphenyl	ND	ND	5 ppm	--
Hexabromobiphenyl	ND	ND	5 ppm	--
Heptabromobiphenyl	ND	ND	5 ppm	--
Octabromobiphenyl	ND	ND	5 ppm	--
Nonabromobiphenyl	ND	ND	5 ppm	--
Decabromobiphenyl	ND	ND	5 ppm	--
Polybrominated Diphenylethers (PBDEs)	---	---	---	1000 ppm
Monobromodiphenyl ether	ND	ND	5 ppm	--
Dibromodiphenyl ether	ND	ND	5 ppm	--
Tribromodiphenyl ether	ND	ND	5 ppm	--
Tetrabromodiphenyl ether	ND	ND	5 ppm	--
Pentabromodiphenyl ether	ND	ND	5 ppm	--
Hexabromodiphenyl ether	ND	ND	5 ppm	--
Heptabromodiphenyl ether	ND	ND	5 ppm	--
Octabromodiphenyl ether	ND	ND	5 ppm	--
Nonabromodiphenyl ether	ND	ND	5 ppm	--
Decabromodiphenyl ether	ND	23 ppm	5 ppm	--

Note: ND = Not Detected
Non-detected is lower than detection limit value.

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Test Results (Cont'd) :

Flame Retardants	3	4	Detection Limit	Limit of RoHS Consultant Document
Polybrominated Biphenyls (PBBs)	---	---	---	1000 ppm
Monobromobiphenyl	ND	ND	5 ppm	--
Dibromobiphenyl	ND	ND	5 ppm	--
Tribromobiphenyl	ND	ND	5 ppm	--
Tetrabromobiphenyl	ND	ND	5 ppm	--
Pentabromobiphenyl	ND	ND	5 ppm	--
Hexabromobiphenyl	ND	ND	5 ppm	--
Heptabromobiphenyl	ND	ND	5 ppm	--
Octabromobiphenyl	ND	ND	5 ppm	--
Nonabromobiphenyl	ND	ND	5 ppm	--
Decabromobiphenyl	ND	ND	5 ppm	--
Polybrominated Diphenylethers (PBDEs)	---	---	---	1000 ppm
Monobromodiphenyl ether	ND	ND	5 ppm	--
Dibromodiphenyl ether	ND	ND	5 ppm	--
Tribromodiphenyl ether	ND	ND	5 ppm	--
Tetrabromodiphenyl ether	ND	ND	5 ppm	--
Pentabromodiphenyl ether	ND	ND	5 ppm	--
Hexabromodiphenyl ether	ND	ND	5 ppm	--
Heptabromodiphenyl ether	ND	ND	5 ppm	--
Octabromodiphenyl ether	ND	ND	5 ppm	--
Nonabromodiphenyl ether	ND	ND	5 ppm	--
Decabromodiphenyl ether	ND	ND	5 ppm	--

Note: ND = Not Detected

Non-detected is lower than detection limit value.

Sample Description:

1. Red Plastic w/ White Printing (Dip Switch Case)
2. Black Plastic (Pin Holder) w/ Glue
3. White Plastic (Switch)
4. Golden Metal (Pin)

Remark: Photo appendix is included

*** End of Report ***

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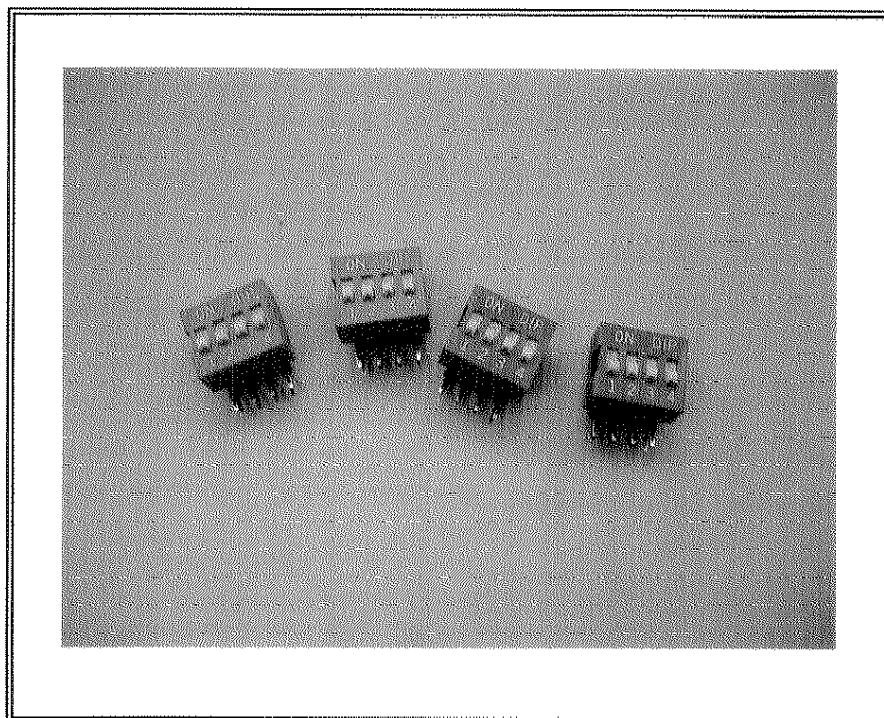
H12072377



Test Report No. : 2027702/EC


Sample Receiving Date : JUN 21 2005

PHOTO APPENDIX



SGS authenticate the photo on original report only

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Authorized Signature
Ho Ka Ting, Family
Laboratory Executive

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