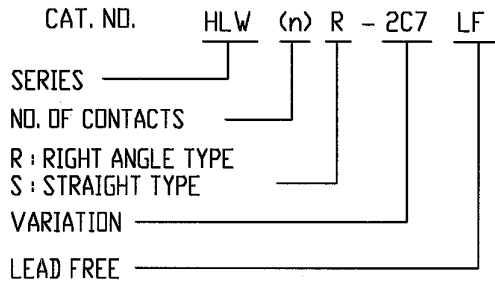


REVISIONS				
REV	DESCRIPTION	ECN	BY	DATE
A	RELEASED	J05-0270	H.T	5/10/05

CAT. NO. & DIMENSIONS

NO. OF CONTACTS (n)	CAT. NO.		DIMENSIONS (NOTE1)		
	RIGHT ANGLE TYPE	STRAIGHT TYPE	A ± 0.3	B ± 0.1	C
4	HLW 4R-2C7LF	HLW 4S-2C7LF	6.6	5.12	3.0
5	HLW 5R-2C7LF	HLW 5S-2C7LF	7.6	6.12	4.0
6	HLW 6R-2C7LF	HLW 6S-2C7LF	8.6	7.12	5.0
7	HLW 7R-2C7LF	HLW 7S-2C7LF	9.6	8.12	6.0
8	HLW 8R-2C7LF	HLW 8S-2C7LF	10.6	9.12	7.0
9	HLW 9R-2C7LF	HLW 9S-2C7LF	11.6	10.12	8.0
10	HLW 10R-2C7LF	HLW 10S-2C7LF	12.6	11.12	9.0
11	HLW 11R-2C7LF	HLW 11S-2C7LF	13.6	12.12	10.0
12	HLW 12R-2C7LF	HLW 12S-2C7LF	14.6	13.12	11.0
13	HLW 13R-2C7LF	HLW 13S-2C7LF	15.6	14.12	12.0
14	HLW 14R-2C7LF	HLW 14S-2C7LF	16.6	15.12	13.0
15	HLW 15R-2C7LF	HLW 15S-2C7LF	17.6	16.12	14.0
16	HLW 16R-2C7LF	HLW 16S-2C7LF	18.6	17.12	15.0
17	HLW 17R-2C7LF	HLW 17S-2C7LF	19.6	18.12	16.0
18	HLW 18R-2C7LF	HLW 18S-2C7LF	20.6	19.12	17.0
19	HLW 19R-2C7LF	HLW 19S-2C7LF	21.6	20.12	18.0
20	HLW 20R-2C7LF	HLW 20S-2C7LF	22.6	21.12	19.0
21	HLW 21R-2C7LF	HLW 21S-2C7LF	23.6	22.12	20.0
22	HLW 22R-2C7LF	HLW 22S-2C7LF	24.6	23.12	21.0
23	HLW 23R-2C7LF	HLW 23S-2C7LF	25.6	24.12	22.0
24	HLW 24R-2C7LF	HLW 24S-2C7LF	26.6	25.12	23.0
25	HLW 25R-2C7LF	HLW 25S-2C7LF	27.6	26.12	24.0
26	HLW 26R-2C7LF	HLW 26S-2C7LF	28.6	27.12	25.0
27	HLW 27R-2C7LF	HLW 27S-2C7LF	29.6	28.12	26.0
28	HLW 28R-2C7LF	HLW 28S-2C7LF	30.6	29.12	27.0
29	HLW 29R-2C7LF	HLW 29S-2C7LF	31.6	30.12	28.0
30	HLW 30R-2C7LF	HLW 30S-2C7LF	32.6	31.12	29.0
31	HLW 31R-2C7LF	HLW 31S-2C7LF	33.6	32.12	30.0
32	HLW 32R-2C7LF	HLW 32S-2C7LF	34.6	33.12	31.0

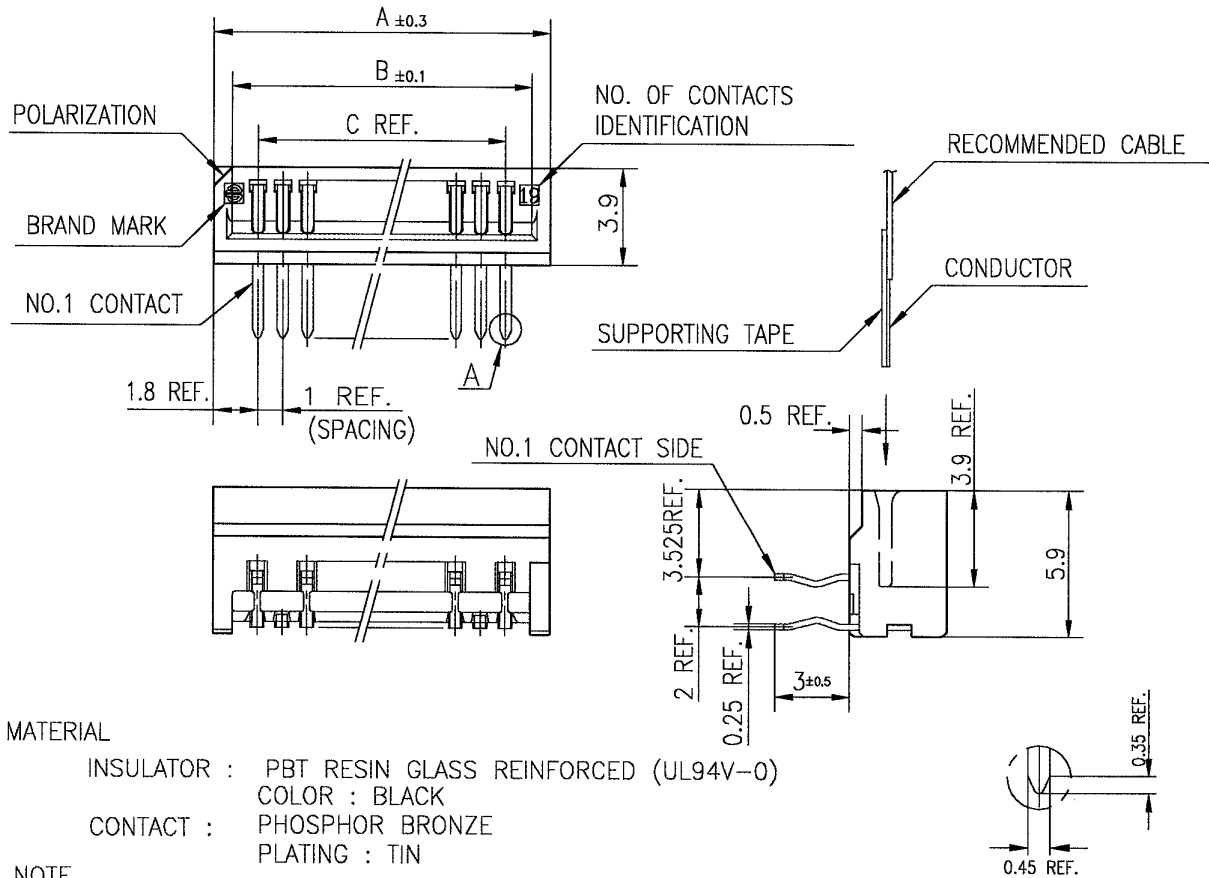


NOTES

1. SEE PART DRAWINGS FOR DIMENSIONS A~C.

SHEET INDEX	ISSUE	A														A FCI
	SH. NO.	1														
TOLERANCES UNLESS OTHERWISE SPECIFIED		DR <i>T. Sasaki</i>		DATE	5/11/05	CUSTOMER COPY		TITLE CAT NO. TABLE FOR 1mm SPACING CONNECTOR (Cat. No. : HLW__R/S-2C7LF)								
LINEAR	ENGR <i>H. Takahashi</i>		DATE	5/13/05	THIRD ANGLE PROJ											
	CHK <i>H. Takahashi</i>		DATE	5/13/05	UNIT $\frac{MM}{INCH}$											
ANGLES	APPD <i>M. Yamaguchi</i>		DATE	5/13/05	PRODUCT FAMILY		58JF	CODE JP								
DO NOT SCALE PRINT		THIS INFORMATION IS CONFIDENTIAL AND IS DISCLOSED TO YOU ON CONDITION THAT NO FURTHER DISCLOSURE IS MADE BY YOU TO OTHER THAN FCI PERSONNEL WITHOUT WRITTEN AUTHORIZATION FROM FCI JAPAN K.K.										SCALE	SIZE	DWG. NO.	REV	SHEET
DF-140A REV A												mm	X	JSA 96403	A	1 of 1

REVISIONS				
REV	DESCRIPTION	ECN	BY	DATE
A	RELEASED	J05-0270	H.T	5/10/05
B	Added heat resistance	J05-0735	H.T	10/28/05

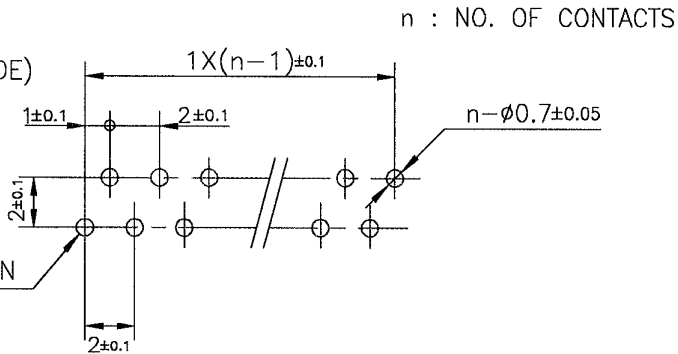


MATERIAL
 INSULATOR : PBT RESIN GLASS REINFORCED (UL94V-0)
 COLOR : BLACK
 CONTACT : PHOSPHOR BRONZE
 PLATING : TIN

- NOTE
- 1.THIS PRODUCT IS RIGHT ANGLE TYPE CONNECTOR.
 - 2.THIS PRODUCT MEETS EUROPEAN UNION DIRECTIVES AND OTHER COUNTRY REGULATIONS AS DESCRIBED IN GS-22-008.
 - 3.THE HOUSING WILL WITHSTAND EXPOSURE TO 260°C PEAK TEMPERATURE FOR 10 SECONDS IN A WAVE SOLDER APPLICATION WITH A 1.6mm THICK CIRCUIT BOARD.

RECOMMENDED PC BOARD

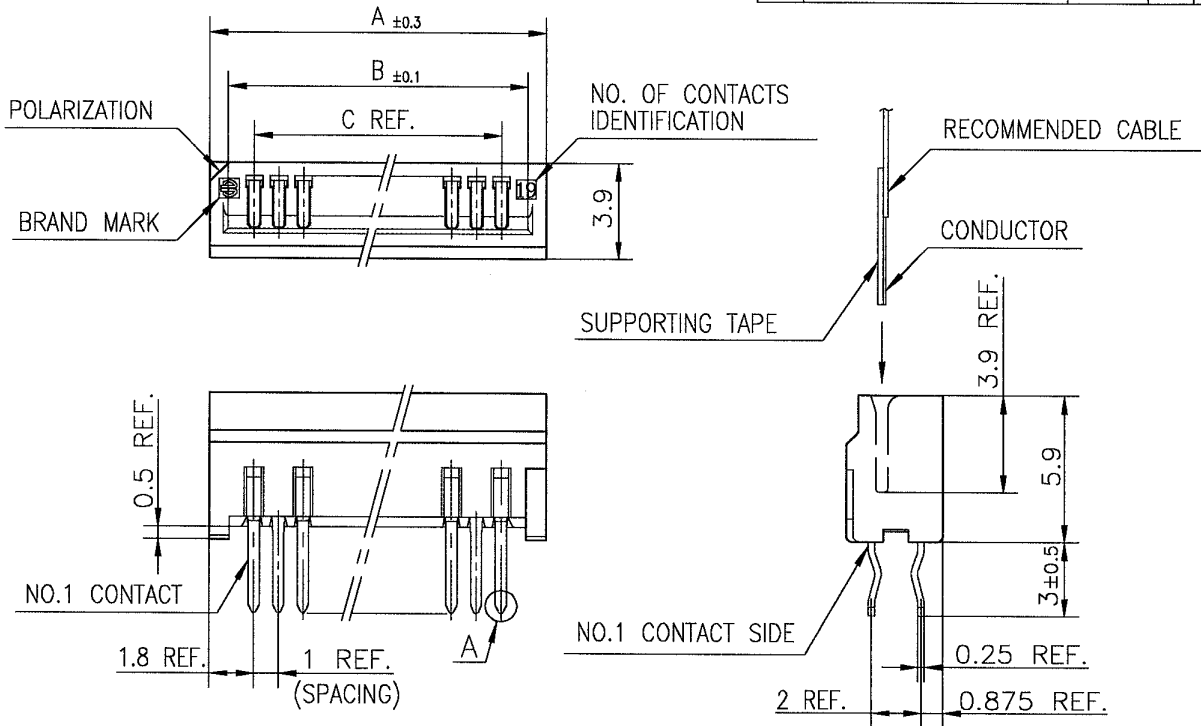
THICKNESS : 1.2~1.6
 HOLE PATTERN (COMPONENT SIDE)



SHEET INDEX	ISSUE	B					FCI	TITLE 1mm SPACING CONNECTOR FOR FPC/FFC (Cat. No. :HLW__R-2C7LF)				
	SH NO.	1										
LINEAR	TOLERANCES UNLESS OTHERWISE SPECIFIED	DR	ENGR	CHK	DATE	CUSTOMER COPY	PRODUCT FAMILY: 58JF				CODE JP	
	±0.2				10/31/05	THIRD ANGLE PROJ						
					10/31/05	UNIT						
ANGLES		APPD			11/1/05	MM	SCALE SIZE DWG. NO. REV SHEET					
DO NOT SCALE PRINT		THIS INFORMATION IS CONFIDENTIAL AND IS DISCLOSED TO YOU ON CONDITION THAT NO FURTHER DISCLOSURE IS MADE BY YOU TO OTHER THAN FCI PERSONNEL WITHOUT WRITTEN AUTHORIZATION FROM FCI JAPAN K.K.				X		A	JSA 96405	B	1 of 1	

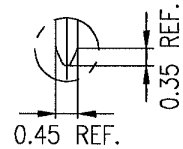
DF-140A REV A SC-HLW05 JSA96403

REVISIONS				
REV	DESCRIPTION	ECN	BY	DATE
A	RELEASED	J05-0270	H.T	5/10/05
B	Added heat resistance	J05-0735	H.T	10/28/05



MATERIAL

INSULATOR : PBT RESIN GLASS REINFORCED (UL94V-0)
 COLOR : BLACK
 CONTACT : PHOSPHOR BRONZE
 PLATING : TIN



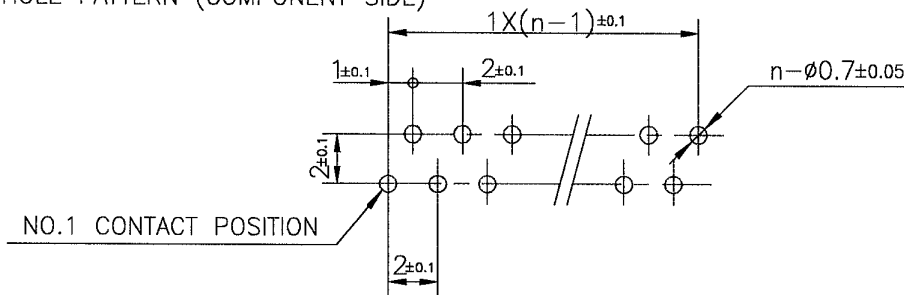
DETAIL A

- NOTE 1. THIS PRODUCT IS STRAIGHT TYPE CONNECTOR.
 2. THIS PRODUCT MEETS EUROPEAN UNION DIRECTIVES AND OTHER COUNTRY REGULATIONS AS DESCRIBED IN GS-22-008.
 3. THE HOUSING WILL WITHSTAND EXPOSURE TO 260°C PEAK TEMPERATURE FOR 10 SECONDS IN A WAVE SOLDER APPLICATION WITH A 1.6mm THICK CIRCUIT BOARD.

RECOMMENDED PC BOARD

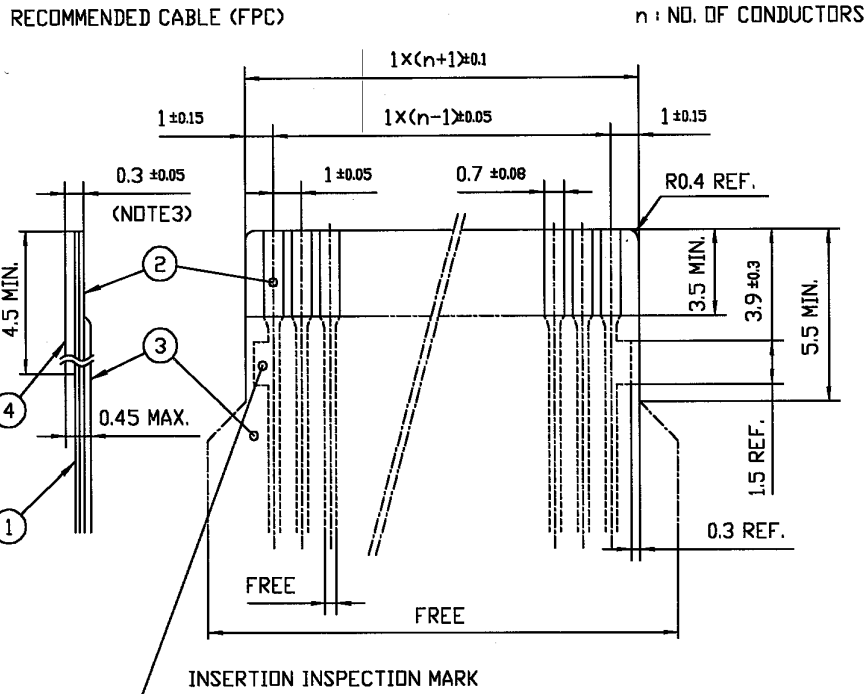
THICKNESS : 1.2~1.6
 HOLE PATTERN (COMPONENT SIDE)

n : NO. OF CONTACTS



SHEET INDEX	ISSUE	B																						
	SH NO.	1																						
LINEAR	TOLERANCES UNLESS OTHERWISE SPECIFIED	±0.2	DR	<i>M. Motomura</i>	DATE	10/28/05	CUSTOMER COPY		TITLE	1mm SPACING CONNECTOR FOR FPC/FFC (Cat. No. :HLW__S-2C7LF)														
			ENGR	<i>H. Takahashi</i>		10/21/05																		
			CHK	<i>H. Takahashi</i>		10/31/05	THIRD ANGLE PROJ																	
ANGLES			APPD	<i>S. Sudo</i>		11/1/05	UNIT	MM INCH	PRODUCT FAMILY	58JF										CODE JP				
DD NOT SCALE PRINT										THIS INFORMATION IS CONFIDENTIAL AND IS DISCLOSED TO YOU ON CONDITION THAT NO FURTHER DISCLOSURE IS MADE BY YOU TO OTHER THAN FCI PERSONNEL WITHOUT WRITTEN AUTHORIZATION FROM FCI JAPAN K.K.										SCALE	SIZE	DWG. NO.	REV	SHEET
DF-140A REV A										SC-HLW05 JSA96403										\times	A	JSA 96406	B	1 of 1

REVISIONS				
REV	DESCRIPTION	ECN	BY	DATE
AA	Changed form	J05-0270	H.T	5/11/05



PT. NO.	DESCRIPTION	MATERIAL	THICKNESS (μm)
1	BASE FILM	POLYIMIDE OR POLYESTER OR EQUIVALENT	25
2	CONDUCTOR	COPPER FOIL (PLATING : SOLDER 1μm MIN.)	35
3	OVERLAY	POLYIMIDE OR POLYESTER OR EQUIVALENT	—
4	SUPPORTING TAPE	POLYESTER OR POLYIMIDE OR EQUIVALENT	188

NOTES

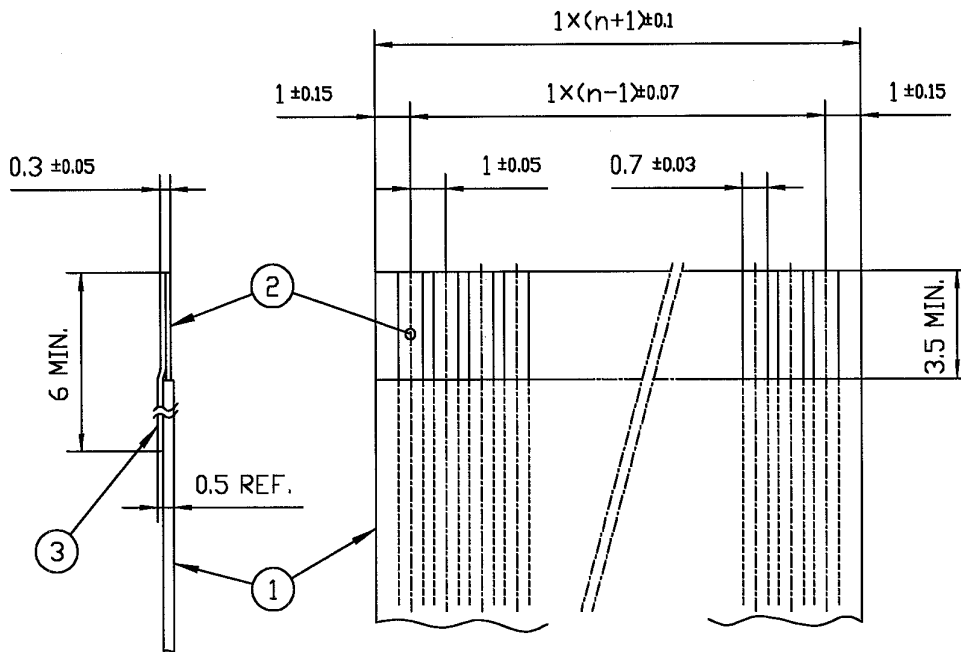
1. NO BURR AT EACH PORTION.
2. NO PEELING IN COMMON USE.
3. TOTAL THICKNESS LIMIT OF EACH MATERIAL (INCLUDING ADHESIVE AGENT) IS SPECIFIED.

SHEET INDEX	ISSUE	AA											A FCI			
	SH NO.	1														
LINEAR	TOLERANCES UNLESS OTHERWISE SPECIFIED		DR	<i>T. Sasaki</i>	DATE	5/11/05	CUSTOMER COPY	TITLE RECOMMENDED CABLE (FPC) (Cat. No. HLW__R/S-___)								
	ANGLES		ENGR	<i>H. Sasaki</i>	DATE	5/13/05	THIRD ANGLE PROJ									
			CHK	<i>H. Sasaki</i>	DATE	5/13/05	UNIT	MM								
			APPD	<i>M. Blazsana</i>	DATE	5/17/05	INCH									
DO NOT SCALE PRINT		THIS INFORMATION IS CONFIDENTIAL AND IS DISCLOSED TO YOU ON CONDITION THAT NO FURTHER DISCLOSURE IS MADE BY YOU TO OTHER THAN FCI PERSONNEL WITHOUT WRITTEN AUTHORIZATION FROM FCI JAPAN K.K.					SCALE	4/1	SIZE	A	DWG. NO.	JSA93382	REV	AA	SHEET	OF
DF-140A REV A																

REVISIONS				
REV	DESCRIPTION	ECN	BY	DATE
AA	Changed form	J05-0274	H.T	5/11/05

RECOMMENDED CABLE (FFC)



n : NO. OF CONDUCTORS



PT. NO.	DESCRIPTION	MATERIAL	NOTE
1	INSULATOR	FLAME RESISTING POLYESTER OR EQUIVALENT	_____
2	CONDUCTOR	COPPER FOIL	PLATING : TIN OR SOLDER 1μm MIN.
3	SUPPORTING TAPE	FLAME RESISTING POLYESTER OR EQUIVALENT	_____

NOTES

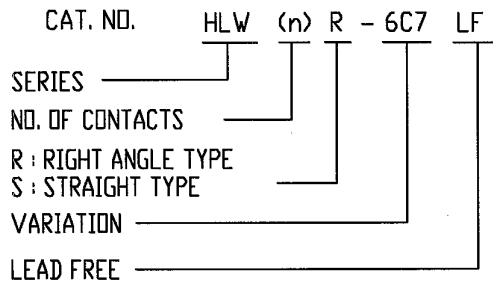
1. NO BURR AT EACH PORTION.
2. NO PEELING IN COMMON USE.

SHEET INDEX	ISSUE	AA										
	SH NO.	1										
LINEAR	TOLERANCES UNLESS OTHERWISE SPECIFIED		DR	<i>J. Sasaki</i>	DATE	5/11/05	CUSTOMER COPY		TITLE			RECOMMENDED CABLE(FFC) (Cat. No. HLW__R/S-__)
			ENGR	<i>H. Takahashi</i>	5/12/05			PRODUCT FAMILY			CODE JP	
			CHK	<i>H. Takahashi</i>	5/12/05	UNIT	MM				SHEET OF	
ANGLES			APPD	<i>M. Hasegawa</i>	5/17/05	UNIT	MM					
DO NOT SCALE PRINT		THIS INFORMATION IS CONFIDENTIAL AND IS DISCLOSED TO YOU ON CONDITION THAT NO FURTHER DISCLOSURE IS MADE BY YOU TO OTHER THAN FCI PERSONNEL WITHOUT WRITTEN AUTHORIZATION FROM FCI JAPAN K.K.						SCALE	SIZE	DWG. NO.	REV	SHEET
DF-140A REV A								-	A	JSA 93383	AA	OF

REVISIONS				
REV	DESCRIPTION	ECN	BY	DATE
A	RELEASED	J05-0270	H.T	5/10/05

CAT. NO. & DIMENSIONS

NO. OF CONTACTS (n)	CAT. NO.		DIMENSIONS (NOTE1)		
	RIGHT ANGLE TYPE	STRAIGHT TYPE	A ± 0.3	B ± 0.1	C
4	HLW 4R-6C7LF	HLW 4S-6C7LF	6.6	5.12	3.0
5	HLW 5R-6C7LF	HLW 5S-6C7LF	7.6	6.12	4.0
6	HLW 6R-6C7LF	HLW 6S-6C7LF	8.6	7.12	5.0
7	HLW 7R-6C7LF	HLW 7S-6C7LF	9.6	8.12	6.0
8	HLW 8R-6C7LF	HLW 8S-6C7LF	10.6	9.12	7.0
9	HLW 9R-6C7LF	HLW 9S-6C7LF	11.6	10.12	8.0
10	HLW 10R-6C7LF	HLW 10S-6C7LF	12.6	11.12	9.0
11	HLW 11R-6C7LF	HLW 11S-6C7LF	13.6	12.12	10.0
12	HLW12R-6C7LF	HLW12S-6C7LF	14.6	13.12	11.0
13	HLW13R-6C7LF	HLW13S-6C7LF	15.6	14.12	12.0
14	HLW14R-6C7LF	HLW14S-6C7LF	16.6	15.12	13.0
15	HLW15R-6C7LF	HLW15S-6C7LF	17.6	16.12	14.0
16	HLW16R-6C7LF	HLW16S-6C7LF	18.6	17.12	15.0
17	HLW17R-6C7LF	HLW17S-6C7LF	19.6	18.12	16.0
18	HLW18R-6C7LF	HLW18S-6C7LF	20.6	19.12	17.0
19	HLW19R-6C7LF	HLW19S-6C7LF	21.6	20.12	18.0
20	HLW20R-6C7LF	HLW20S-6C7LF	22.6	21.12	19.0
21	HLW21R-6C7LF	HLW21S-6C7LF	23.6	22.12	20.0
22	HLW22R-6C7LF	HLW22S-6C7LF	24.6	23.12	21.0
23	HLW23R-6C7LF	HLW23S-6C7LF	25.6	24.12	22.0
24	HLW24R-6C7LF	HLW24S-6C7LF	26.6	25.12	23.0
25	HLW25R-6C7LF	HLW25S-6C7LF	27.6	26.12	24.0
26	HLW26R-6C7LF	HLW26S-6C7LF	28.6	27.12	25.0
27	HLW27R-6C7LF	HLW27S-6C7LF	29.6	28.12	26.0
28	HLW28R-6C7LF	HLW28S-6C7LF	30.6	29.12	27.0
29	HLW29R-6C7LF	HLW29S-6C7LF	31.6	30.12	28.0
30	HLW30R-6C7LF	HLW30S-6C7LF	32.6	31.12	29.0
31	HLW31R-6C7LF	HLW31S-6C7LF	33.6	32.12	30.0
32	HLW32R-6C7LF	HLW32S-6C7LF	34.6	33.12	31.0

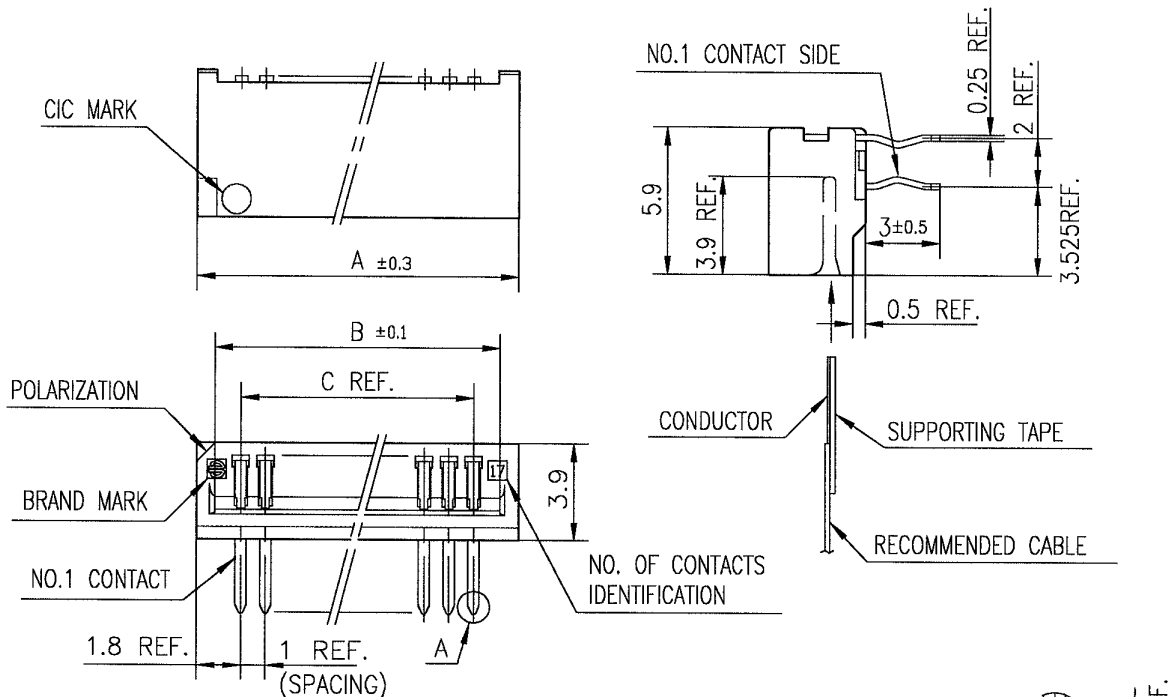


NOTES

1. SEE PART DRAWINGS FOR DIMENSIONS A~C.

SHEET INDEX	ISSUE	A									
	SH NO.	1									
TOLERANCES UNLESS OTHERWISE SPECIFIED			DR	<i>T. Sasaki</i>	DATE	5/11/05	CUSTOMER COPY	TITLE			
LINEAR	ENGR			<i>H. Takahara</i>	DATE	5/13/05		CAT NO. TABLE FOR 1mm SPACING CONNECTOR			
	CHK			<i>H. Takahara</i>	DATE	5/13/05		(Cat. No. : HLW__R/S-6C7LF)			
	APPD			<i>M. Hasegawa</i>	DATE	5/13/05		PRODUCT FAMILY 58JF			
ANGLES							UNIT	MM	CODE JP		
DO NOT SCALE PRINT		THIS INFORMATION IS CONFIDENTIAL AND IS DISCLOSED TO YOU ON CONDITION THAT NO FURTHER DISCLOSURE IS MADE BY YOU TO OTHER THAN FCI PERSONNEL WITHOUT WRITTEN AUTHORIZATION FROM FCI JAPAN K.K.					SCALE	SIZE	DWG. NO.	REV	SHEET
DF-140A REV A							mm	X	JSA 96404	A	1 of 1

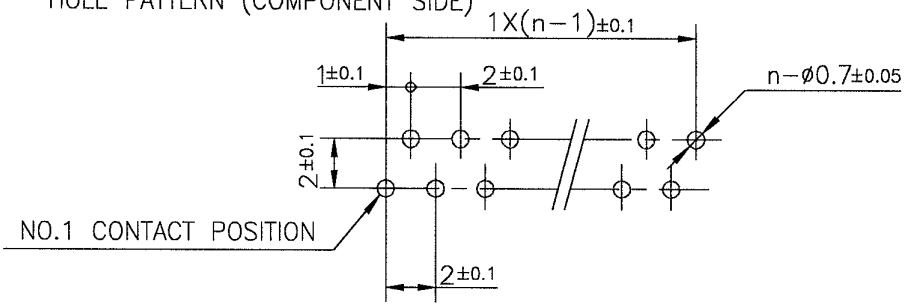
REVISIONS				
REV	DESCRIPTION	ECN	BY	DATE
A	RELEASED	J05-0270	H.T	5/10/05
B	Added heat resistance	J05-0735	H.T	10/28/05



MATERIAL
 INSULATOR : PBT RESIN GLASS REINFORCED (UL94V-0)
 COLOR : BLACK
 CONTACT : PHOSPHOR BRONZE
 PLATING : TIN

NOTE
 1. THIS PRODUCT IS RIGHT ANGLE TYPE CONNECTOR.
 2. THIS PRODUCT MEETS EUROPEAN UNION DIRECTIVES AND OTHER COUNTRY REGULATIONS AS DESCRIBED IN GS-22-008.
 3. THE HOUSING WILL WITHSTAND EXPOSURE TO 260°C PEAK TEMPERATURE FOR 10 SECONDS IN A WAVE SOLDER APPLICATION WITH A 1.6mm THICK CIRCUIT BOARD.

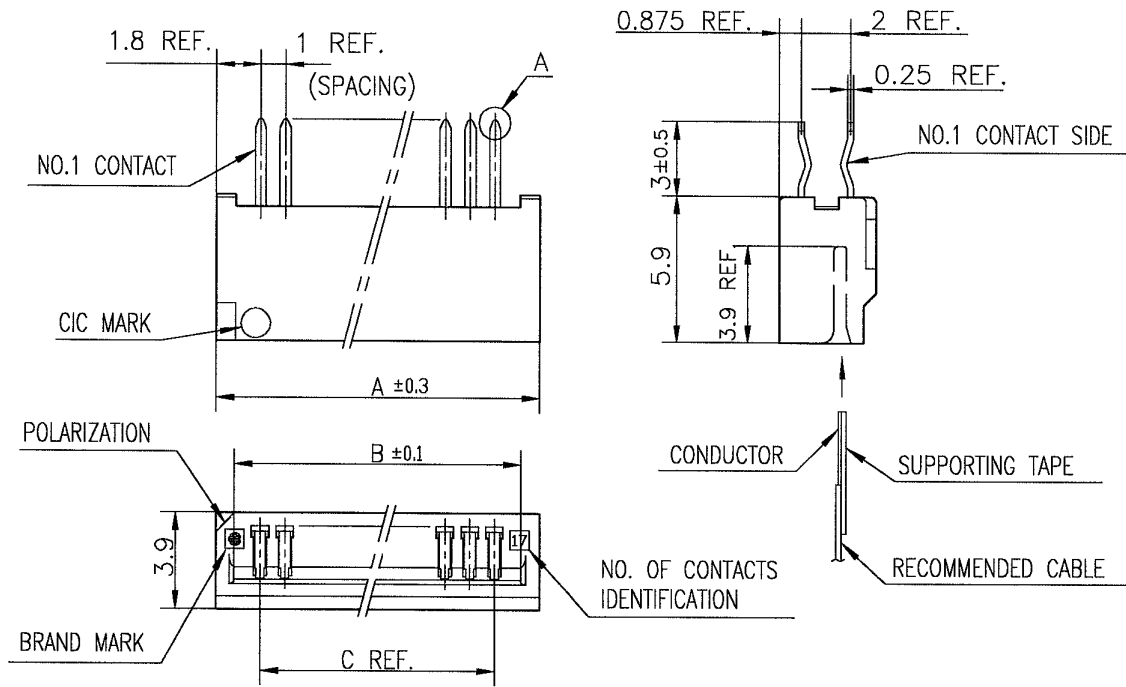
RECOMMENDED PC BOARD
 THICKNESS : 1.2~1.6
 HOLE PATTERN (COMPONENT SIDE)
 n : NO. OF CONTACTS



SHEET INDEX	ISSUE	B										
	SH NO.	1										
LINEAR	TOLERANCES UNLESS OTHERWISE SPECIFIED	DR	<i>M. Matsuyama</i>	DATE	10/28/05	CUSTOMER COPY		TITLE	1mm SPACING CONNECTOR FOR CIC (Cat. No. :HLW__R-6C7LF)			
	±0.2	ENGR	<i>H. Hatanaka</i>		10/21/05	THIRD ANGLE PROJ		PRODUCT FAMILY	58JF		CODE JP	
		CHK	<i>H. Hatanaka</i>		10/31/05	UNIT	MM					
ANGLES		APPD	<i>S. Ochiai</i>		11/1/05	INCH						
DO NOT SCALE PRINT		THIS INFORMATION IS CONFIDENTIAL AND IS DISCLOSED TO YOU ON CONDITION THAT NO FURTHER DISCLOSURE IS MADE BY YOU TO OTHER THAN FCI PERSONNEL WITHOUT WRITTEN AUTHORIZATION FROM FCI JAPAN K.K.					SCALE	SIZE	DWG. NO.	REV	SHEET	
DF-140A REV A							∞	A	JSA 96407	B	1 of 1	

SC-HLW06 JSA96404

REVISIONS				
REV	DESCRIPTION	ECN	BY	DATE
A	RELEASED	J05-0270	H.T	5/10/05
B	Added heat resistance	J05-0735	H.T	10/28/05

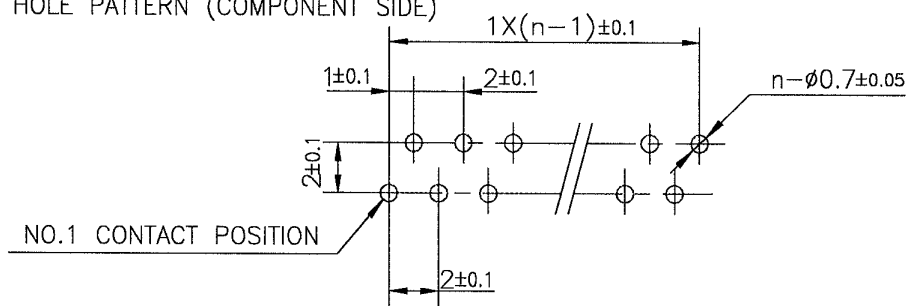


MATERIAL
 INSULATOR : PBT RESIN GLASS REINFORCED (UL94V-0)
 COLOR : BLACK
 CONTACT : PHOSPHOR BRONZE
 PLATING : TIN

NOTE
 1. THIS PRODUCT IS STRAIGHT TYPE CONNECTOR.
 2. THIS PRODUCT MEETS EUROPEAN UNION DIRECTIVES AND OTHER COUNTRY REGULATIONS AS DESCRIBED IN GS-22-008.
 3. THE HOUSING WILL WITHSTAND EXPOSURE TO 260°C PEAK TEMPERATURE FOR 10 SECONDS IN A WAVE SOLDER APPLICATION WITH A 1.6mm THICK CIRCUIT BOARD.

RECOMMENDED PC BORAD n : NO. OF CONTACTS

THICKNESS : 1.2~1.6
 HOLE PATTERN (COMPONENT SIDE)



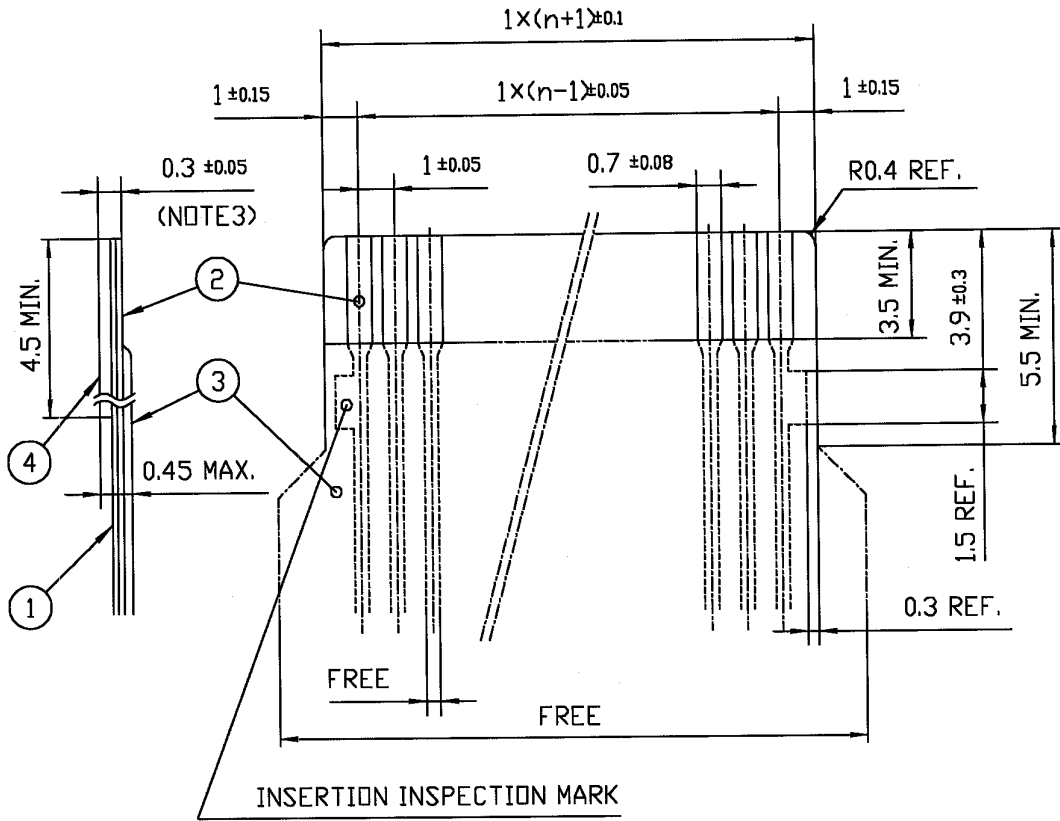
SHEET INDEX	ISSUE	B																FCI							
	SH NO.	1																							
LINEAR	TOLERANCES UNLESS OTHERWISE SPECIFIED	DR	<i>[Signature]</i>	DATE	10/28/05	CUSTOMER COPY		TITLE	1mm SPACING CONNECTOR FOR CIC (Cat. No. :HLW__S-6C7LF)																
	±0.2	ENGR	<i>[Signature]</i>		10/21/05	THIRD ANGLE PROJ		PRODUCT FAMILY	58JF																
		CHK	<i>[Signature]</i>		10/21/05	UNIT	MM INCH	CODE JP																	
ANGLES		APPD	<i>[Signature]</i>		11/1/05			SCALE	SIZE	DWG. NO.	REV	SHEET													
DO NOT SCALE PRINT													SCALE	A	JSA 96408	B	1 of 1								
DF-140A REV A													THIS INFORMATION IS CONFIDENTIAL AND IS DISCLOSED TO YOU ON CONDITION THAT NO FURTHER DISCLOSURE IS MADE BY YOU TO OTHER THAN FCI PERSONNEL WITHOUT WRITTEN AUTHORIZATION FROM FCI JAPAN K.K.												

SC-HLW 06 JSA96404

REVISIONS				
REV	DESCRIPTION	ECN	BY	DATE
AA	Changed form	J05-0270	H.T	5/11/05

RECOMMENDED CABLE (CIC)

n : NO. OF CONDUCTORS



PT. NO.	DESCRIPTION	MATERIAL	THICKNESS (μm)	
1	BASE FILM	POLYESTER OR EQUIVALENT	75	25
2	CONDUCTOR	CARBON PASTE OVER SILVER PASTE	10 MIN.	
3	OVERLAY	POLYIMIDE OR POLYESTER OR EQUIVALENT	—	
4	SUPPORTING TAPE	POLYESTER OR POLYIMIDE OR EQUIVALENT	188	250

NOTES

1. NO BURR AT EACH PORTION.
2. NO PEELING IN COMMON USE.
3. TOTAL THICKNESS LIMIT OF EACH MATERIAL (INCLUDING ADHESIVE AGENT) IS SPECIFIED.

SHEET INDEX	ISSUE	AA									
	SH NO.	1									
TOLERANCES UNLESS OTHERWISE SPECIFIED		DR	<i>J. Sasaki</i>		DATE	5/11/05	CUSTOMER COPY	TITLE			
LINEAR		ENGR	<i>H. Sasaki</i>		5/13/05			RECOMMENDED CABLE(CIC)			
		CHK	<i>H. Sasaki</i>		5/13/05			(Cat. No. HLW__R/S-__)			
ANGLES		APPD	<i>M. Hasegawa</i>		5/13/05			PRODUCT FAMILY		CODE JP	
								58JF			
DO NOT SCALE PRINT		THIS INFORMATION IS CONFIDENTIAL AND IS DISCLOSED TO YOU ON CONDITION THAT NO FURTHER DISCLOSURE IS MADE BY YOU TO OTHER THAN FCI PERSONNEL WITHOUT WRITTEN AUTHORIZATION FROM FCI JAPAN K.K.					SCALE	SIZE	DWG. NO.	REV	SHEET
DF-140A REV A							5/1	A	JSA93626	AA	OF