

CONFIGURATION OF CUSTOMER DOCUMENTS

P/N	DOCUMENTS	DWG. NO.	TITLE
HLW__R/S-2D7LF	SPEC	SC-HLW05	
	CONNECTOR	JSA96409	CAT NO.TABLE FOR 1mm SPACING CONNECTOR
		JSA96410	1mm SPACING CONNECTOR
		JSA96411	1mm SPACING CONNECTOR
	CABLE	JSA93382	RECOMMENDED CABLE(FPC)
		JSA93383	RECOMMENDED CABLE(FFC)
	MANUAL	BJM-HLW101	

P/N	DOCUMENTS	DWG. NO.	TITLE
HLW__S-6D7LF	SPEC	SC-HLW06	
	CONNECTOR	JSA96412	CAT NO.TABLE FOR 1mm SPACING CONNECTOR
		JSA96413	1mm SPACING CONNECTOR
		JSA97169	1mm SPACING CONNECTOR
	CABLE	JSA93626	RECOMMENDED CABLE(C/C)
	MANUAL	BJM-HLW102	

mat'l. code -				surface 58 / tolerance ISO 1302 ☒ ISO 406 ISO 1101		projection 		product family 58PF/58QF		CODE JP	
ltr	ecn no	dr	date	tolerances unless otherwise specified		mm 		title 1mm SPACING CONNECTOR DOCUMENT LIST			
A	J05-0270	H.T	5/11/'05	angles	linear						
B	J05-293	N.S	5/18/'05								
C	J05-0517	N.S	8/11/'05			scale $\times$		dwg no JSA 96417 sheet 1 of 1 size A4 type Product Customer Drawing			
D	J06-0238	M.M	6/8/'06	dr	H.YAMASHITA	2009-6-29					
E	J09-0255	M.Y	2009-6-29	enr	H.YAMASHITA	2009-6-29					
				chr	S. W. H. L. R.	2009-6-29					
				appd	S. Chidambaram	2009-6-29					
sheet index	revision sheet	E 1									Rev. E

CAT. NO. & DIMENSIONS

NO. OF CONTACTS (n)	CAT. NO.	CAT. NO.	DIMENSIONS (NOTE1)		
	RIGHT ANGLE TYPE	STRAIGHT TYPE	A ± 0.3	B ± 0.1	C
4	HLW 4R-2D7LF	HLW 4S-2D7LF	6.6	5.12	3.0
5	HLW 5R-2D7LF	HLW 5S-2D7LF	7.6	6.12	4.0
6	HLW 6R-2D7LF	HLW 6S-2D7LF	8.6	7.12	5.0
7	HLW 7R-2D7LF	HLW 7S-2D7LF	9.6	8.12	6.0
8	HLW 8R-2D7LF	HLW 8S-2D7LF	10.6	9.12	7.0
9	HLW 9R-2D7LF	HLW 9S-2D7LF	11.6	10.12	8.0
10	HLW10R-2D7LF	HLW10S-2D7LF	12.6	11.12	9.0
11	HLW11R-2D7LF	HLW11S-2D7LF	13.6	12.12	10.0
12	HLW12R-2D7LF	HLW12S-2D7LF	14.6	13.12	11.0
13	HLW13R-2D7LF	HLW13S-2D7LF	15.6	14.12	12.0
14	HLW14R-2D7LF	HLW14S-2D7LF	16.6	15.12	13.0
15	HLW15R-2D7LF	HLW15S-2D7LF	17.6	16.12	14.0
16	HLW16R-2D7LF	HLW16S-2D7LF	18.6	17.12	15.0
17	HLW17R-2D7LF	HLW17S-2D7LF	19.6	18.12	16.0
18	HLW18R-2D7LF	HLW18S-2D7LF	20.6	19.12	17.0
19	HLW19R-2D7LF	HLW19S-2D7LF	21.6	20.12	18.0
20	HLW20R-2D7LF	HLW20S-2D7LF	22.6	21.12	19.0
21	HLW21R-2D7LF	HLW21S-2D7LF	23.6	22.12	20.0
22	HLW22R-2D7LF	HLW22S-2D7LF	24.6	23.12	21.0
23	HLW23R-2D7LF	HLW23S-2D7LF	25.6	24.12	22.0
24	HLW24R-2D7LF	HLW24S-2D7LF	26.6	25.12	23.0
25	HLW25R-2D7LF	HLW25S-2D7LF	27.6	26.12	24.0
26	HLW26R-2D7LF	HLW26S-2D7LF	28.6	27.12	25.0
27	HLW27R-2D7LF	HLW27S-2D7LF	29.6	28.12	26.0
28	HLW28R-2D7LF	HLW28S-2D7LF	30.6	29.12	27.0
29	HLW29R-2D7LF	HLW29S-2D7LF	31.6	30.12	28.0
30	HLW30R-2D7LF	HLW30S-2D7LF	32.6	31.12	29.0
31	HLW31R-2D7LF	HLW31S-2D7LF	33.6	32.12	30.0
32	HLW32R-2D7LF	HLW32S-2D7LF	34.6	33.12	31.0

CAT. NO. HLW (n) R - 2D7 LF

SERIES

NO. OF CONTACTS

R : RIGHTANGLE TYPE

S : STRAIGHT TYPE

VARIATION

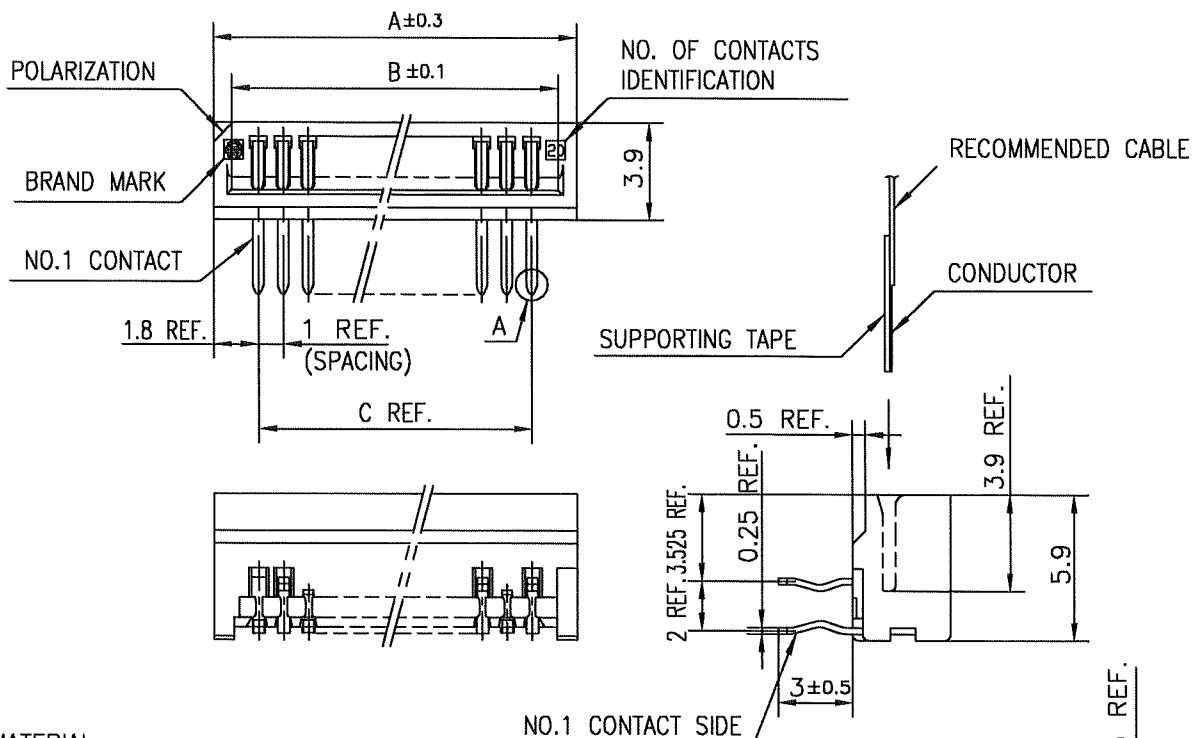
LEAD FREE

NOTES

1. SEE PART DRAWINGS FOR DIMENSIONS A~C.

mat'l. code				surface 58 / tolerance ISO 406 / ISO 1101		projection		product family 58PF/QF		CODE JP	
litr ecn no dr date				tolerances unless otherwise specified		 mm		title CAT NO. TABLE FOR 1mm SPACING CONNECTOR (CAT NO. HLW__R/S-2D7LF)			
A J05-0270 H.T 5/10/05				angles linear							
B J06-0449 H.T 11/2/06						scale X		dwg no sheet 1 of 1 size A4 JSA 96409			
dr				H. Hoshino 11/2/06				type Product Customer Drawing			
enrg				K. Shiohara 11/2/06							
chr				R. Shiohara 11/2/06							
appd				S. Andama 11/7/06							
sheet index		revision B								Rev. B	
		sheet 1									

SC-HLW05 JSA96410 96411 93382 93383 form: A4



MATERIAL

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

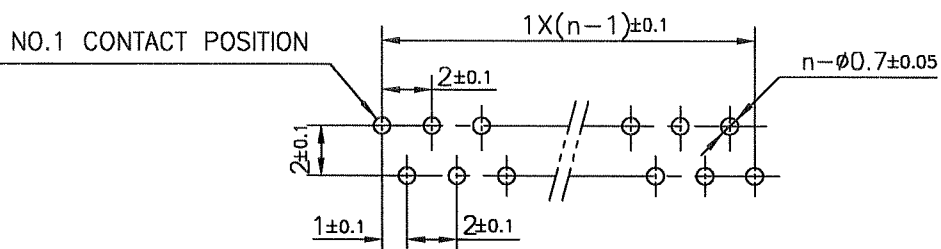
NOTE

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 BORAD

THICKNESS : 1.2~1.6
 HOLE PATTERN (COMPONENT SIDE)

n: NO. OF CONTACTS

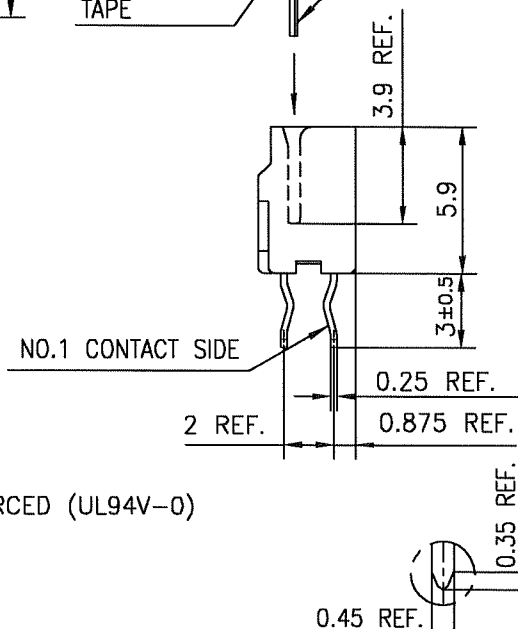
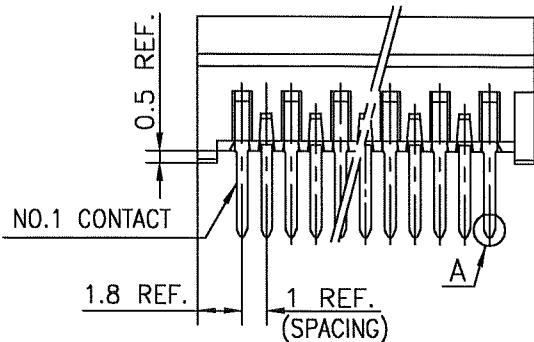
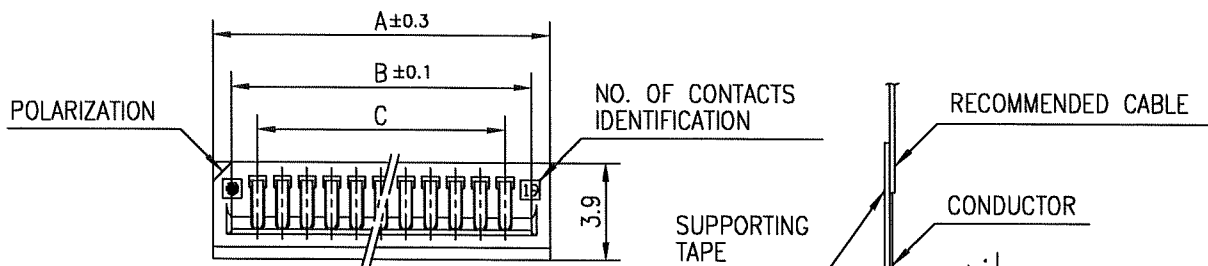


mat'l. code				surface 58 ISO 1302	tolerance ISO 406 ISO 1101	projection	product family	58PF	CODE JP
ltr	ecn no	dr	date	tolerances unless otherwise specified		mm	title 1mm SPACING CONNECTOR FOR FPC/FFC (CAT NO. HLW__R-2D7LF)		
A	J05-0270	H.T	5/10/'05	angles	linear				
B	J05-0735	H.T	10/28/'05						
C	J06-0449	H.T	11/2/'06			scale			
				dr	11/2/06	FCI	dwg no sheet 1 of 1 size JSA 96410 A4		
				enr	11/2/06				
				chr	11/2/06				
				appd	11/7/06				
sheet index	revision	C					type Product Customer Drawing		
	sheet	1							

SC-HLW05 JSA96409
 form: A4

1

2



MATERIAL

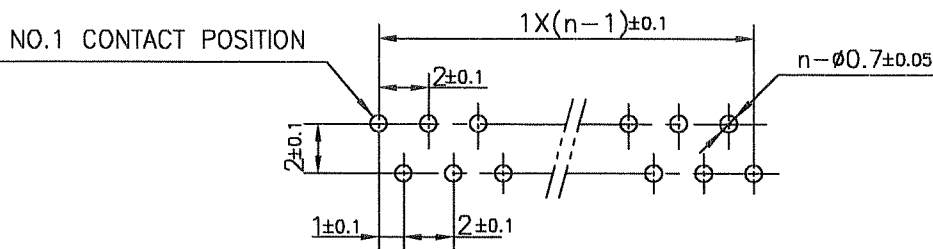
INSULATOR : PBT RESIN GLASS REINFORCED (UL94V-0)
 COLOR : BLACK
 CONTACT : PHOSPHOR BRONZE
 PLATING : TIN

NOTE

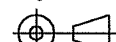
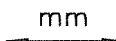
- 1.THIS PRODUCT IS STRAIGHT TYPE CONNECTOR.
- 2.THIS PRODUCT MEETS EUROPEAN UNION DIRECTIVES AND OTHER COUNTRY REGULATIONS AS DESCRIBED IN GS-22-008.
- 3.THE HOUSING WILL WITHSTAND EXPOSURE TO 260°C PEAK TEMPERATURE FOR 10 SECONDS IN A WAVE SOLDER APPLICATION WITH A 1.6mm THICK CIRCUIT BOARD.

RECOMMENDED PC BOARD

THICKNESS : 1.2~1.6
 HOLE PATTERN (COMPONENT SIDE)



n:NO.OF CONTACTS

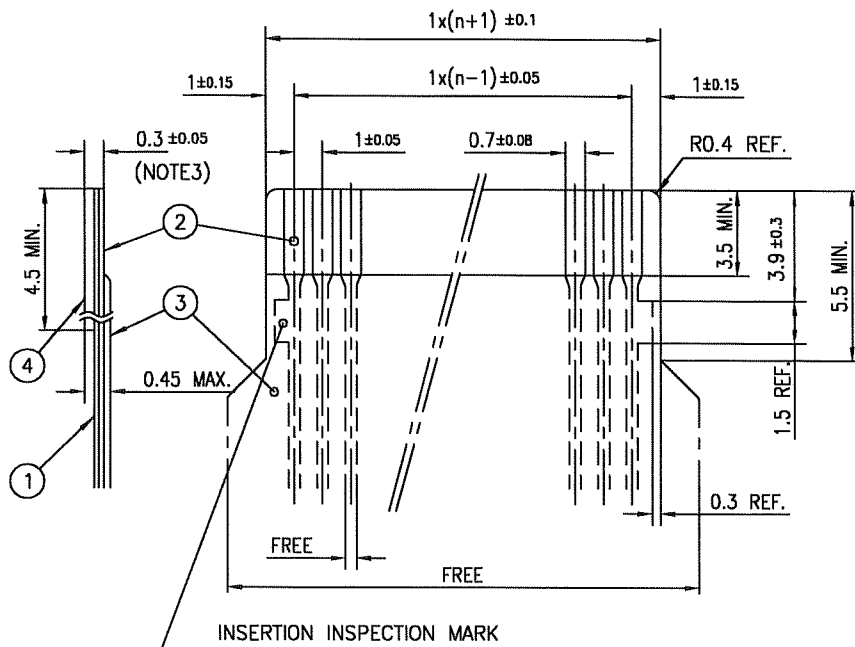
mat'l. code				surface 58 ✓ ISO 1302		tolerance ISO 406 ISO 1101		projection 		product family 58QF				CODE JP			
ltr	ecn no	dr	date	tolerances unless otherwise specified							title 1mm SPACING CONNECTOR FOR FPC/FFC (CAT NO. HLW__S-2D7LF)						
A	J05-0270	H.T	5/10/'05	angles	linear		±0.2										
B	J05-0735	H.T	10/28/'05														
C	J06-0449	H.T	11/2/'06														
				dr		 11/2/'06				dwg no				sheet 1 of 1		size	
				enrg		 11/2/'06				JSA 96411				A4			
				chr		 11/2/'06											
				appd		 11/2/'06											
sheet index		revision		C												Rev. C	
		sheet		1													

SC-HLW05
 form: A4

JSA96409

RECOMMENDED CABLE (FPC)

n : NO. OF CONDUCTORS



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

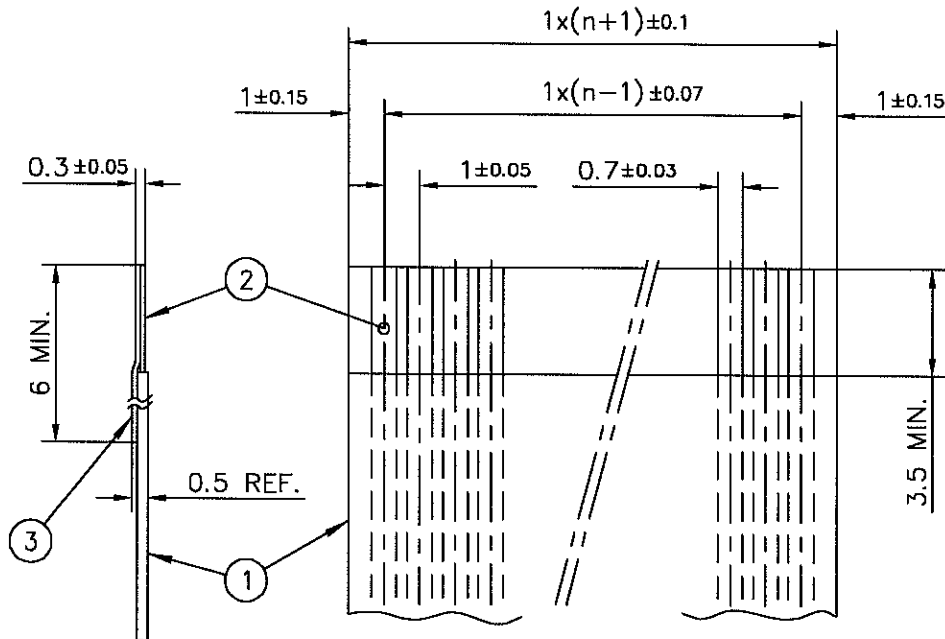
NOTES

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

mat'l. code				surface 58 / tolerance ISO 1302 ✓ ISO 406 ISO 1101		projection		product family 58PF/QF		CODE JP	
ltr	ecn no	dr	date	tolerances unless otherwise specified				title RECOMMENDED CABLE (FPC) (Cat. No. HLW__R/S-__)			
AA	J05-0270	H.T	5/11/05	angles	linear	mm					
AB	J06-0449	H.T	11/2/06			scale X		dwg no JSA 93382 sheet 1 of 1 size A4			
				dr	engr	chr	appd				
								type Product Customer Drawing			
sheet index	revision sheet	AB	1								

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.

mat'l. code				surface 58/ISO 1302		tolerance ISO 406 ISO 1101		projection		product family 58PF/QF		CODE JP	
litr	ecn no	dr	date	tolerances unless otherwise specified				mm		title			
AA	J05-0270	H.T	5/11/05							RECOMMENDED CABLE (FFC)			
AB	J06-0449	H.T	11/2/06	angles linear						(Cat. No. HLW_R/S-___)			
				dr		11/2/06		scale X		dwg no sheet 1 of 1 size			
				enrg		11/2/06		FCI		JSA 93383 A4			
				chr		11/2/06				type Product Customer Drawing			
				appd		11/2/06							
sheet index		revision sheet		AB		1						Rev. AB	

form: A4

1

2



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CAT. NO. & DIMENSIONS

NO. OF CONTACTS (n)	CAT. NO.		DIMENSIONS (NOTE1)		
	STRAIGHT TYPE	RIGHT ANGLE TYPE	A ± 0.3	B ± 0.1	C
4	HLW 4S-6D7LF	HLW 4R-6D7LF	6.6	5.12	3.0
5	HLW 5S-6D7LF	HLW 5R-6D7LF	7.6	6.12	4.0
6	HLW 6S-6D7LF	HLW 6R-6D7LF	8.6	7.12	5.0
7	HLW 7S-6D7LF	HLW 7R-6D7LF	9.6	8.12	6.0
8	HLW 8S-6D7LF	HLW 8R-6D7LF	10.6	9.12	7.0
9	HLW 9S-6D7LF	HLW 9R-6D7LF	11.6	10.12	8.0
10	HLW 10S-6D7LF	HLW 10R-6D7LF	12.6	11.12	9.0
11	HLW 11S-6D7LF	HLW 11R-6D7LF	13.6	12.12	10.0
12	HLW 12S-6D7LF	HLW 12R-6D7LF	14.6	13.12	11.0
13	HLW 13S-6D7LF	HLW 13R-6D7LF	15.6	14.12	12.0
14	HLW 14S-6D7LF	HLW 14R-6D7LF	16.6	15.12	13.0
15	HLW 15S-6D7LF	HLW 15R-6D7LF	17.6	16.12	14.0
16	HLW 16S-6D7LF	HLW 16R-6D7LF	18.6	17.12	15.0
17	HLW 17S-6D7LF	HLW 17R-6D7LF	19.6	18.12	16.0
18	HLW 18S-6D7LF	HLW 18R-6D7LF	20.6	19.12	17.0
19	HLW 19S-6D7LF	HLW 19R-6D7LF	21.6	20.12	18.0
20	HLW 20S-6D7LF	HLW 20R-6D7LF	22.6	21.12	19.0
21	HLW 21S-6D7LF	HLW 21R-6D7LF	23.6	22.12	20.0
22	HLW 22S-6D7LF	HLW 22R-6D7LF	24.6	23.12	21.0
23	HLW 23S-6D7LF	HLW 23R-6D7LF	25.6	24.12	22.0
24	HLW 24S-6D7LF	HLW 24R-6D7LF	26.6	25.12	23.0
25	HLW 25S-6D7LF	HLW 25R-6D7LF	27.6	26.12	24.0
26	HLW 26S-6D7LF	HLW 26R-6D7LF	28.6	27.12	25.0
27	HLW 27S-6D7LF	HLW 27R-6D7LF	29.6	28.12	26.0
28	HLW 28S-6D7LF	HLW 28R-6D7LF	30.6	29.12	27.0
29	HLW 29S-6D7LF	HLW 29R-6D7LF	31.6	30.12	28.0
30	HLW 30S-6D7LF	HLW 30R-6D7LF	32.6	31.12	29.0
31	HLW 31S-6D7LF	HLW 31R-6D7LF	33.6	32.12	30.0
32	HLW 32S-6D7LF	HLW 32R-6D7LF	34.6	33.12	31.0

CAT. NO. HLW (n) S - 6D7 LF

SERIES

NO. OF CONTACTS

S : STRAIGHT TYPE
R : RIGHT ANGLE TYPE

VARIATION

LEAD FREE

NOTES

1. SEE PART DRAWINGS FOR DIMENSIONS A~C.

mat'l. code				surface 58 / tolerance ISO 1302 / ISO 406 / ISO 1101		projection		product family		CODE	
-								58PF/58QF		JP	
ltr ecn no dr date				tolerances unless otherwise specified		mm		title			
A J05-0270 H.T 5/10/'05				angles linear				CAT NO. TABLE FOR 1mm SPACING CONNECTOR (CAT NO. HLW__R/S-6D7LF)			
B J06-0238 M.M 6/8/'06								dwg no sheet 1 of 1 size			
C J09-0255 M.Y 2009-6-29						scale X		JSA 96412 A4			
				dr		FCI		type Product Customer Drawing			
				enr							
				chr							
				appd							
sheet index		revision sheet		C 1						Rev. C	

form: A4

1

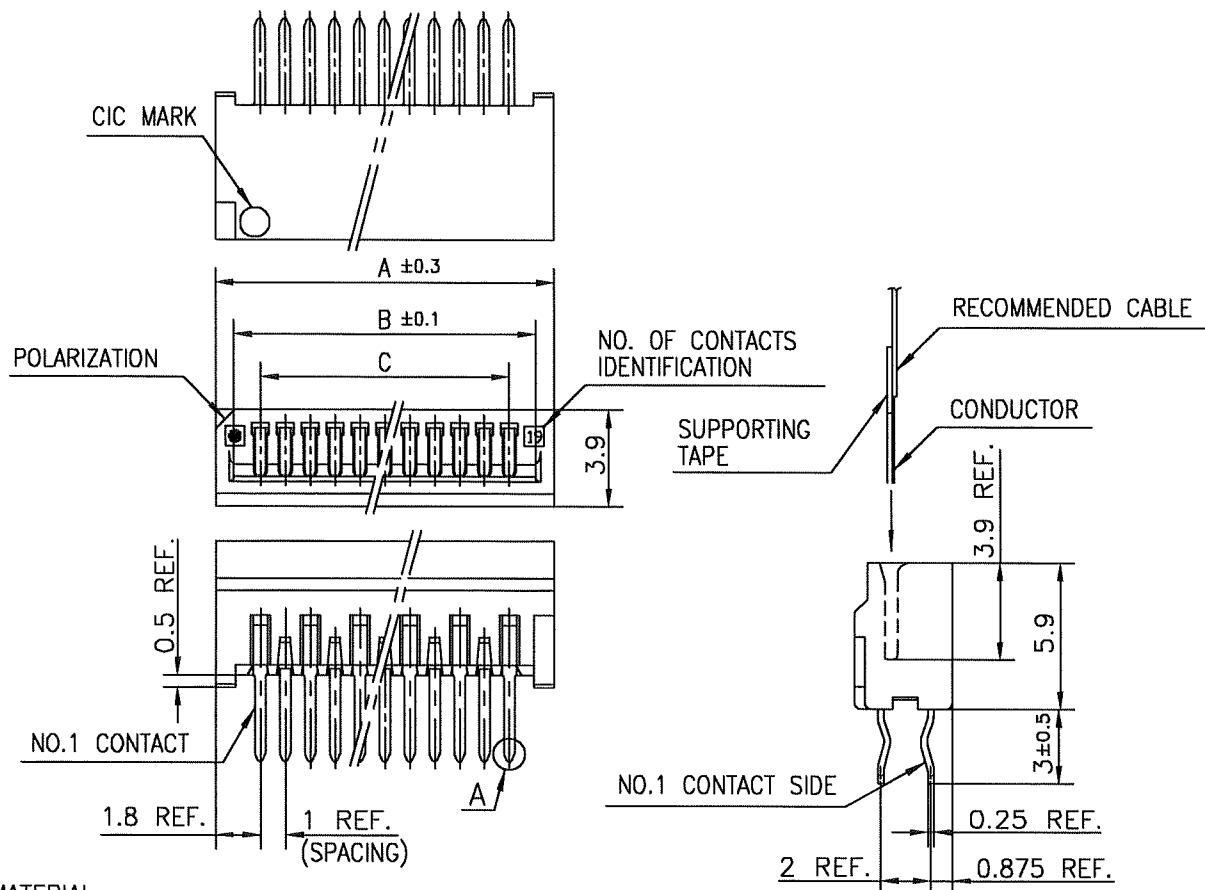
SC-HLW06 JSA96413 93626

2

PDM: Rev:C

STATUS: Released

Printed: Jun 29, 2009



MATERIAL

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

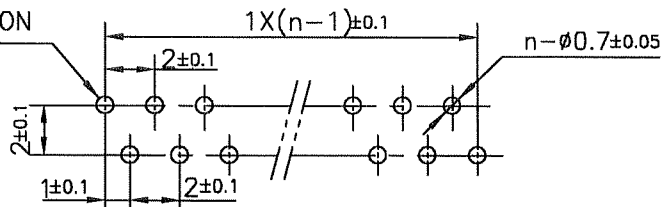
NOTE

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 BOARD

THICKNESS : 1.2~1.6
 HOLE PATTERN (COMPONENT SIDE)

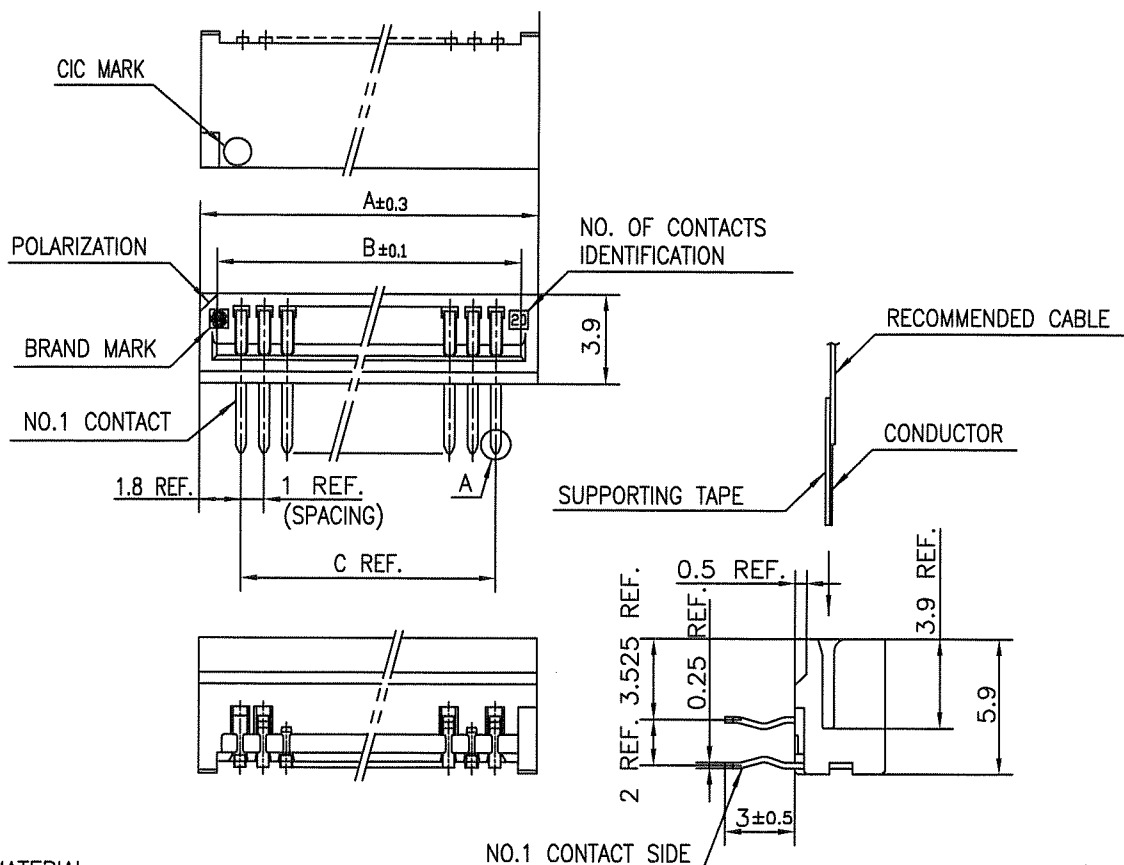
NO.1 CONTACT POSITION



n: NO. OF CONTACTS

mat'l. code				surface 58 ✓ ISO 1302		tolerance ISO 406 ISO 1101		projection 		product family 58QF				CODE JP				
ltr	ecn no	dr	date	tolerances unless otherwise specified							title 1mm SPACING CONNECTOR FOR CIC (CAT NO. HLW__S-6D7LF)							
A	J05-0270	H.T	5/10/05	angles	linear	±0.2											mm 	
B	J05-0735	H.T	10/28/05															
C	J06-0449	H.T	11/2/06															
				dr			11/2/06			dwg no				sheet 1 of 1		size		
				enr			11/2/06			JSA 96413				A4				
				chr			11/2/06			type Product Customer Drawing								
				appd			11/2/06											
sheet index	revision sheet	C	1													Rev. c		

SC-HLW06 JSA96412
 form: A4



MATERIAL

INSULATOR : PBT RESIN GLASS REINFORCED (UL94V-0)

COLOR : BLACK
 CONTACT : PHOSPHOR BRONZE
 PLATING : TIN

NOTE

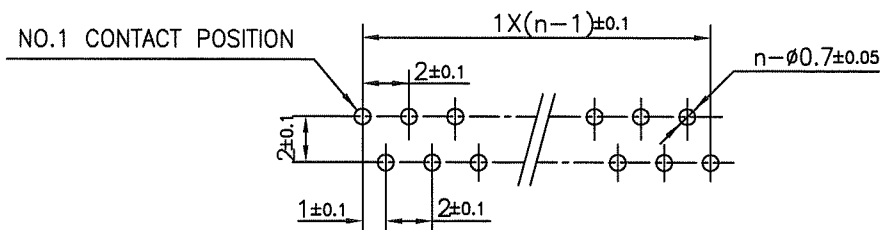
1. THIS PRODUCT IS RIGHT ANGLE TYPE CONNECTOR.
2. THIS PRODUCT MEETS EUROPEAN UNION DIRECTIVES AND OTHER COUNTRY REGULATIONS AS DESCRIBED IN GS-22-008.
3. THE HOUSING WILL WITHSTAND EXPOSURE TO 260°C PEAK TEMPERATURE FOR 10 SECONDS IN A WAVE SOLDER APPLICATION WITH A 1.6mm THICK CIRCUIT BOARD.

RECOMMENDED PC BOARD

THICKNESS : 1.2~1.6

HOLE PATTERN (COMPONENT SIDE)

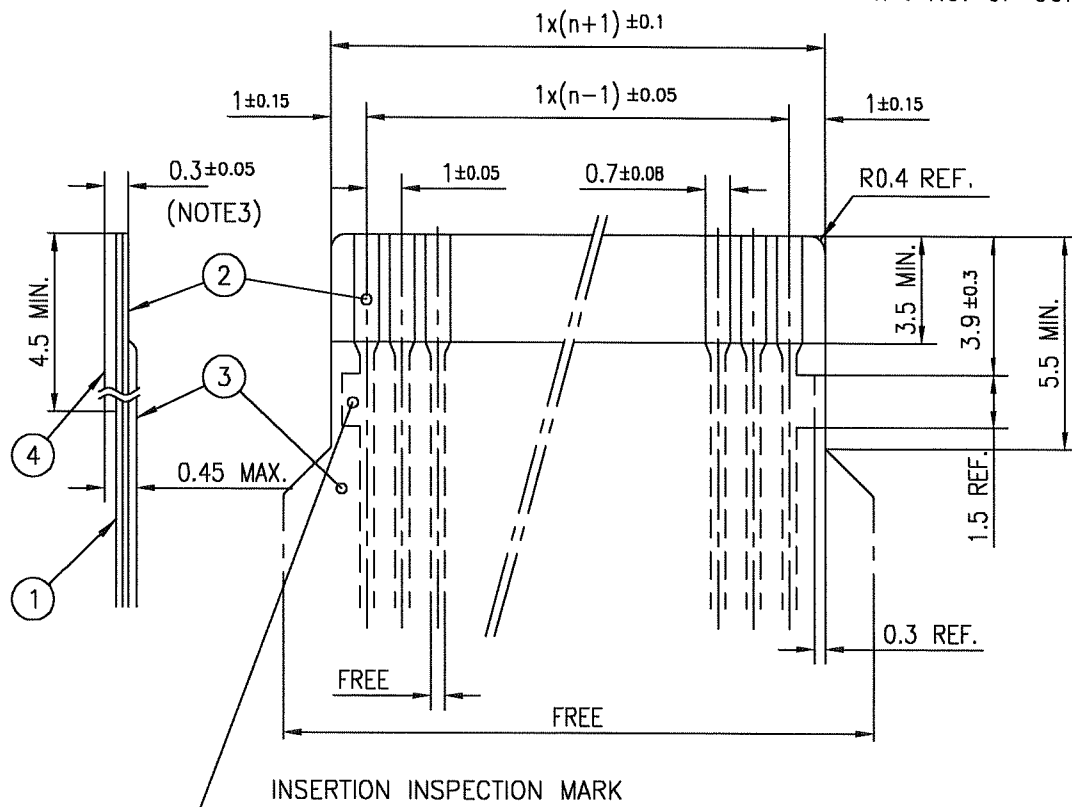
n: NO. OF CONTACTS



mat'l. code				surface 58	tolerance	projection	product family	CODE
-				ISO 1302	ISO 406		58PF	JP
ltr	ecn no	dr	date	tolerances unless otherwise specified			title	
A	J06-0238	M.M	6/8/'06	angles	linear			
B	J09-0255	M.Y	2009-6-29			mm	1mm SPACING CONNECTOR FOR CIC (CAT NO. HLW__R-6D7LF)	
						scale %		
		dr	M. YAMASHITA	2009-6-29			dwg no	sheet 1 of 1
		enr	M. YAMASHITA	2009-6-29			JSA 97169	A4
		chr	S. W. H. L.	2009-6-29			type Product Customer Drawing	
		appd	S. W. H. L.	2009-6-29				
sheet index	revision	B						Rev. B
	sheet	1						

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.

mat'l. code				surface ☒ ISO 1302 ☒ tolerance ☒ ISO 406 ☒ ISO 1101		projection		product family 58PF/QF		CODE JP		
ltr	ecn no	dr	date	tolerances unless otherwise specified				title				
AA	J05-0270	H.T	5/11/05					RECOMMENDED CABLE (CIC)				
AB	J06-0449	H.T	11/2/06	angles	linear	mm		(Cat. No. HLW__R/S-__)				
				scale $\times$								
				dr <i>H. Shoyu</i> 11/2/06				FCI		dwg no		
				enr <i>H. Shoyu</i> 11/2/06						sheet 1 of 1		size
				chr <i>K. Shoyu</i> 11/2/06						JSA 93626		A4
				appd <i>S. Melaw</i> 11/2/06						type Product Customer Drawing		
sheet index	revision sheet	AB	1									Rev. AB

form: A4

1

2