

SFW4R-1STE1LF - FPC/FFC
: SFW-R series, 4 Pos, Down
Side Contact, Side Entry
Surface Mount ZIF Connector,
1 mm (0.039 in.), Lead Free



www.fci.com

Specifications

General	
Cable Insertion	ZIF
Cable Lock	No
Contact location	Lower
Number of contacts	4
Orientation	Right Angle
Product Series	SFW-R
Electrical	
Withstanding Voltage	500V AC for 1 minute
Current rating	1A AC/DC
Resistance (Contact)	30 milli ohms max.
Resistance (Insulation)	500 M-ohms min.
Voltage rating	100V AC/DC
Mechanical	
Durability (Mating cycles)	20 Cycles
Mounting	
Mounting style (Board)	Surface Mount
Physical	
Cable Type	FPC/FFC
Material (Contact)	Phosphor Bronze, Tin Plated
Material (Housing)	Glass Reinforced PPS, UL94 V-0
Material (Slider)	Glass Reinforced PPS, UL94 V-0
Temperature (Operating - range)	-55°C to +105°C
Approvals / Certifications	
Damp Heat per JIS C 0022	Contact Resistance 50 milli ohms max., Insulation Resistance 100 M-ohms min.
Salt Spray per JIS C 0023	Contact Resistance 50 milli ohms max.
Temperature Cycling per JIS C 0025	Contact Resistance 50 milli ohms max.
Vibration per JIS C 0040	No discontinuity > 1 µ second
Other Features	
Packaging (Type)	Embossed Tape on Reel



FCIconnect.com

Copyright FCI.

1

2

List of "SFW__R-1/2STE1LF" customer document

DOCUMENT NO.	LIST
SC-SFW10	SPEC.
JSA95854	CAT.NO.TABLE FOR 1mm SPACING SMT CONNECTOR (SFW__R-1/2ST__LF)
JSA95855	1mm SPACING SMT CONNECTOR (SFW__R-1ST__LF)
JSA95856	1mm SPACING SMT CONNECTOR (SFW__R-2ST__LF)
JSA95857	CAT.NO.TABLE FOR PLASTIC TAPE PACKAGED 1mm SPACING SMT CONNECTOR (SFW__R-1/2STE1LF)
JSA95858	PLASTIC TAPE PACKAGED 1mm SPACING SMT CONNECTOR (SFW__R-1STE1LF)
JSA95859	PLASTIC TAPE PACKAGED 1mm SPACING SMT CONNECTOR (SFW__R-2STE1LF)
JSA91605	RECOMMENDED CABLE (FPC) (SFW__R-1/2ST__)
JSA91604	RECOMMENDED CABLE (FFC) (SFW__R-1/2ST__)
GS-20-129	HANDLING PROCEDURES

mat'l. code -				surface ISO 1302 58/ tolerance ISO 406 ISO 1101		projection		product family 58RF		CODE JP	
ltr				ecn no		dr		date		title	
A				J05-0055		H.T		'05/2/4		1mm SPACING FPC/FFC CONNECTOR DOCUMENT LIST	
B				J06-0398		H.T		9/26/'06		(Cat. No. : SFW__R-1/2STE1LF)	
C				J09-0358		M.Y		2009-10-5			
D				J09-0380		M.Y		2009-10-27			
										dwg no sheet 1 of 1 size	
										JSA 96336 A4	
										type Product Customer Drawing	
sheet index				revision sheet		D 1				Rev. D	

form: A4

1

2

PDM: Rev:D

STATUS: Released

Printed: Nov 01, 2009

CAT. NO. & DIMENSIONS

NO. OF CONTACTS (n)	CAT. NO.	DIMENSIONS (NOTE2)			
		A ± 0.2	B ± 0.2	C ± 0.2	D ± 0.1
4	SFW4R-1/2ST__LF	9.8	8.6	3.0	5.3
5	SFW5R-1/2ST__LF	10.8	9.6	4.0	6.3
6	SFW6R-1/2ST__LF	11.8	10.6	5.0	7.3
7	SFW7R-1/2ST__LF	12.8	11.6	6.0	8.3
8	SFW8R-1/2ST__LF	13.8	12.6	7.0	9.3
9	SFW9R-1/2ST__LF	14.8	13.6	8.0	10.3
10	SFW10R-1/2ST__LF	15.8	14.6	9.0	11.3
11	SFW11R-1/2ST__LF	16.8	15.6	10.0	12.3
12	SFW12R-1/2ST__LF	17.8	16.6	11.0	13.3
13	SFW13R-1/2ST__LF	18.8	17.6	12.0	14.3
14	SFW14R-1/2ST__LF	19.8	18.6	13.0	15.3
15	SFW15R-1/2ST__LF	20.8	19.6	14.0	16.3
16	SFW16R-1/2ST__LF	21.8	20.6	15.0	17.3
17	SFW17R-1/2ST__LF	22.8	21.6	16.0	18.3
18	SFW18R-1/2ST__LF	23.8	22.6	17.0	19.3
19	SFW19R-1/2ST__LF	24.8	23.6	18.0	20.3
20	SFW20R-1/2ST__LF	25.8	24.6	19.0	21.3
21	SFW21R-1/2ST__LF	26.8	25.6	20.0	22.3
22	SFW22R-1/2ST__LF	27.8	26.6	21.0	23.3
23	SFW23R-1/2ST__LF	28.8	27.6	22.0	24.3
24	SFW24R-1/2ST__LF	29.8	28.6	23.0	25.3
25	SFW25R-1/2ST__LF	30.8	29.6	24.0	26.3
26	SFW26R-1/2ST__LF	31.8	30.6	25.0	27.3
27	SFW27R-1/2ST__LF	32.8	31.6	26.0	28.3
28	SFW28R-1/2ST__LF	33.8	32.6	27.0	29.3
29	SFW29R-1/2ST__LF	34.8	33.6	28.0	30.3
30	SFW30R-1/2ST__LF	35.8	34.6	29.0	31.3

CAT. NO.

SFW (n) R - 1 ST __ LF

SERIES NAME

NO. OF CONTACTS

RIGHT ANGLE TYPE

FOR FPC/FFC, CONTACT DIRECTION

1. LOWER CONTACT TYPE
2. UPPER CONTACT TYPE

FOR AUTOMATIC MOUNTING (SMT)

PACKAGE STYLE

LEAD FREE

NOTES

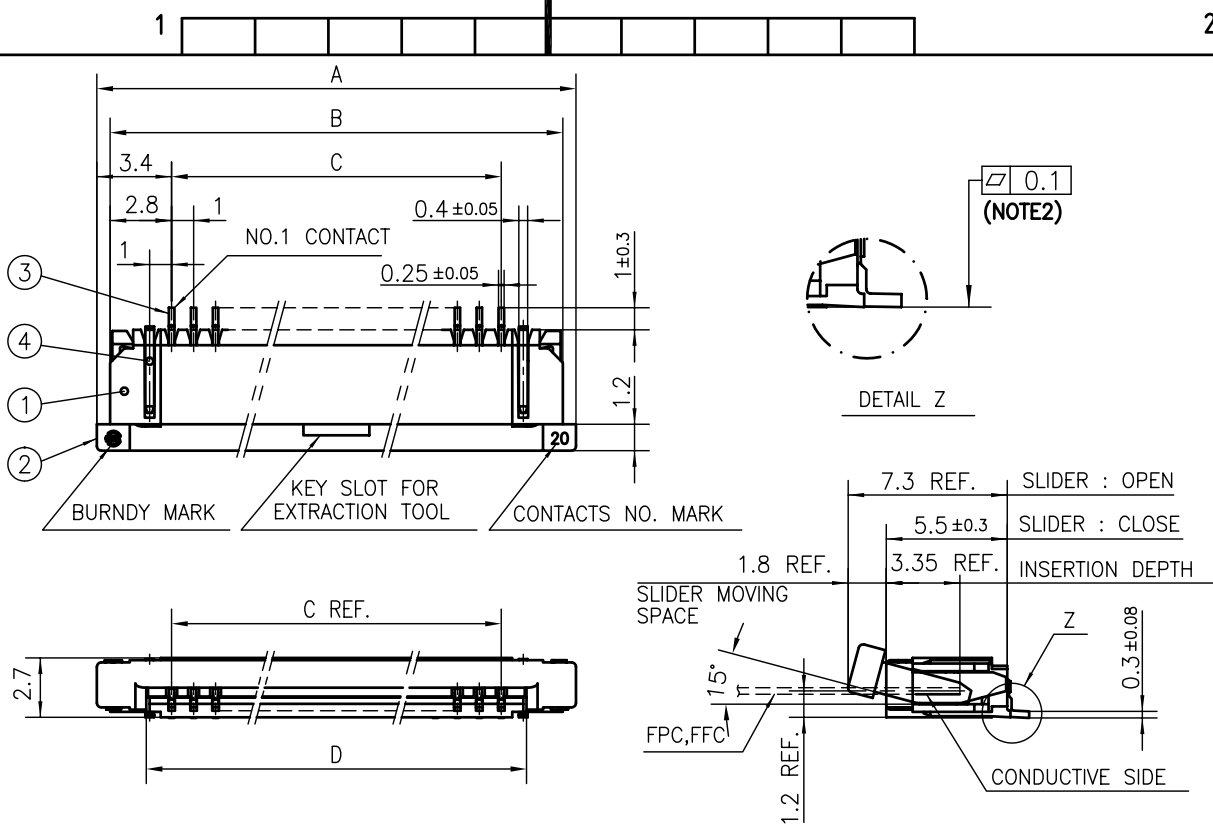
1. THIS PRODUCT IS THE CONNECTOR USED FOR FPC/FFC AND COPS WITH AUTOMATIC MOUNTING (SMT).

2. SEE PART DRAWINGS FOR DIMENSIONS A~D.

3. A  SYMBOL WILL BE NEXT TO ANY DIMENSION, VIEW, OR NOTE WHICH HAS BEEN MODIFIED WITH THE CURRENT DRAWING REVISION.

mat'l. code				surface 58 ✓ ISO 1302			tolerance ISO 406 ISO 1101			projection 			product family 58RF						CODE JP			
ltr	ecn no	dr	date	tolerances unless otherwise specified									title CAT. NO. TABLE FOR 1mm SPACING SMT CONNECTOR (Cat. No. SFW__R-1/2ST__LF)									
AA	J05-0055	H.T	05-02-04	angles		linear																
AB	J06-0398	H.T	06-09-26																			
AC	S08-0276	DGOH	08-08-22																			
				dr		H. TAKAKURA		06-09-26					dwg no						sheet 1 of 1		size	
				engr		H. TAKAKURA		06-09-26					JSA 95854						A4			
				chr		DENNIS GOH		08-08-22														
				appd		JOEY NG		08-08-22														
sheet index		revision		AC															Rev. AC			
		sheet		1																		

SC-SFW10 JSA95855 95856 95857 95858 95859 91605 91604 1



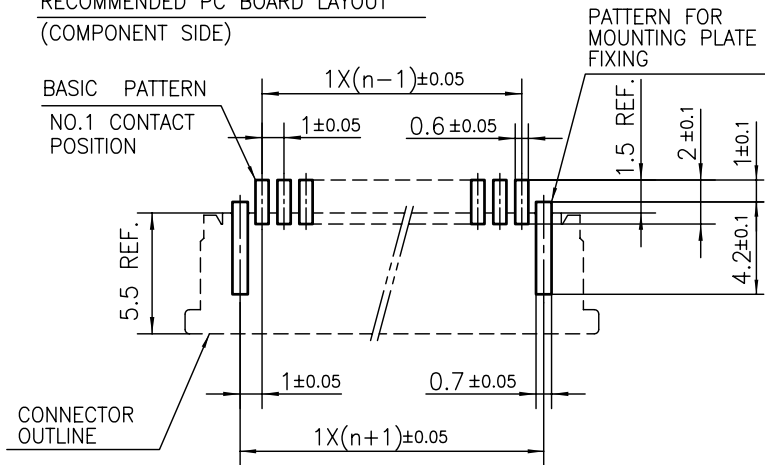
PT. NO.	PARTS NAME	MATERIAL	Q'TY	NOTE
1	HOUSING	PPS RESIN GLASS REINFORCED (UL94V-0)	1	COLOR : BROWN
2	SLIDER	PPS RESIN GLASS REINFORCED (UL94V-0)	1	COLOR : BLACK
3	CONTACT	PHOSPHOR BRONZE	n	PLATING : TIN
4	MOUNTING PLATE		2	

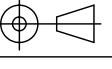
n : NO. OF CONTACTS

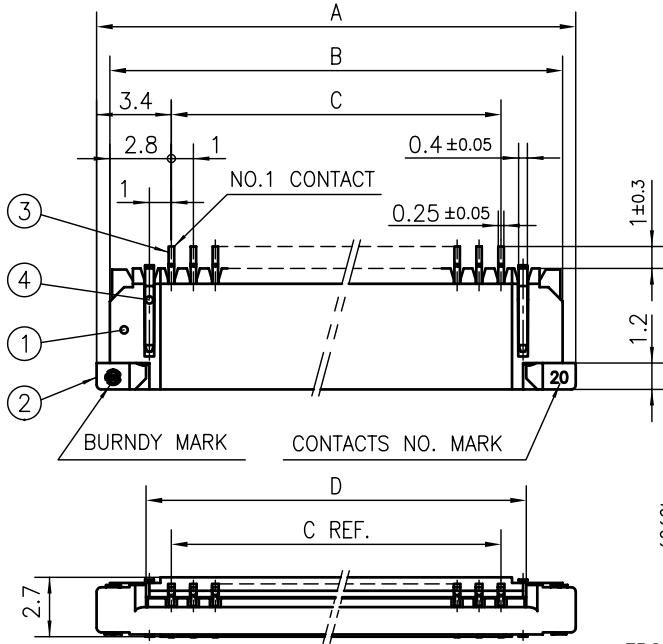
NOTES

1. THIS PRODUCT IS THE CONNECTOR USED FOR FPC/FFC AND CYPES WITH AUTOMATIC MOUNTING (SMT).
2. FLATNESS FOR CONTACT TERMINAL HOUSING MUST BE WITHIN TOLERANCE IN Z PORTION DETAILED DRAWING.
3. THIS PRODUCT IS LOWER CONTACT TYPE CONNECTOR.
4. THIS PRODUCT MEETS EUROPEAN UNION DIRECTIVES AND OTHER COUNTRY REGULATIONS AS DESCRIBED IN GS-22-008
5. THE HOUSING WILL WITHSTAND EXPOSURE TO 260°C PEAK TEMPERATURE FOR 10 SECONDS IN A REFLOW SOLDERING OVEN.
3. A  SYMBOL WILL BE NEXT TO ANY DIMENSION, VIEW, OR NOTE WHICH HAS BEEN MODIFIED WITH THE CURRENT DRAWING. REVISION.

RECOMMENDED PC BOARD LAYOUT (COMPONENT SIDE)



mat'l. code				surface 58	tolerance ISO 1302	projection	product family 58RF	CODE JP
ltr	ecn no	dr	date	tolerances unless otherwise specified	ISO 406		title 1mm SPACING SMT CONNECTOR (Cat. No. SFW__R-1ST__LF)	
AA	J04-0180	H.T	04-07-02	angles	ISO 1101			
AB	J05-0055	H.T	05-02-04	linear	±0.2	mm	dwg no sheet 1 of 1 size JSA 95855 A4	
AC	J05-0736	H.T	05-10-28			scale		
AD	J06-0398	H.T	06-09-26	dr	H. TAKAKURA	06-09-26	type Product Customer Drawing	
AE	S08-0276	DGOH	08-08-22	enr	H. TAKAKURA	06-09-26		
				chr	DENNIS GOH	08-08-22	Rev. AE	
				appd	JOEY NG	08-08-22		
sheet index	revision	AE	1					



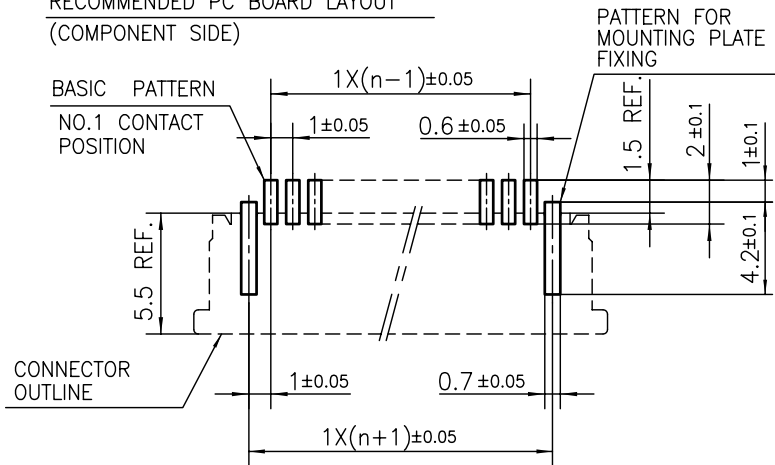
PT. NO.	PARTS NAME	MATERIAL	Q'TY	NOTE
1	HOUSING	PPS RESIN GLASS REINFORCED (UL94V-0)	1	COLOR : BROWN
2	SLIDER	PPS RESIN GLASS REINFORCED (UL94V-0)	1	COLOR : BLACK
3	CONTACT	PHOSPHOR BRONZE	n	PLATING : TIN
4	MOUNTING PLATE		2	

n : NO. OF CONTACTS

NOTES

1. THIS PRODUCT IS THE CONNECTOR USED FOR FPC/FFC AND COPEs WITH AUTOMATIC MOUNTING (SMT).
2. FLATNESS FOR CONTACT TERMINAL HOUSING MUST BE WITHIN TOLERANCE IN Z PORTION DETAILED DRAWING.
3. THIS PRODUCT IS UPPER CONTACT TYPE CONNECTOR.
4. THIS PRODUCT MEETS EUROPEAN UNION DIRECTIVES AND OTHER?COUNTRY REGULATIONS AS DESCRIBED IN GS-22-008
5. THE HOUSING WILL WITHSTAND EXPOSURE TO 260°C PEAK TEMPERATURE FOR 10 SECONDS IN A REFLOW SOLDERING OVEN.
6. A SYMBOL WILL BE NEXT TO ANY DIMENSION, VIEW, OR NOTE WHICH HAS BEEN MODIFIED WITH THE CURRENT DRAWING REVISION.

RECOMMENDED PC BOARD LAYOUT (COMPONENT SIDE)



mat'l. code				surface 58	tolerance ISO 1302	projection	product family 58RF	CODE JP
ltr	ecn no	dr	date	tolerances unless otherwise specified			title 1mm SPACING SMT CONNECTOR (Cat. No. SFW__R-2ST__LF)	
AA	J04-0180	H.T	04-07-02	angles	linear ±0.2			
AB	J05-0055	H.T	05-02-04			mm	dwg no sheet 1 of 1 size JSA 95856 A4	
AC	J05-0736	H.T	05-10-28			scale X		
AD	J06-0398	H.T	06-09-26	dr	H. TAKAKURA	06-09-26	type Product Customer Drawing	
AE	S08-0276	DGOH	08-08-22	enr	H. TAKAKURA	06-09-26		
				chr	DENNIS GOH	08-08-22	Rev. AE	
				appd	JOEY NG	08-08-22		
sheet index	revision sheet	AE	1					

SC_SFW10 JSA95854
form: A4

CAT. NO. & DIMENSIONS

NO. OF CONTACTS (n)	CAT. NO. (NOTE2)	DIMENSIONS (NOTE3)		
		E ± 5	F ± 0.3	G ± 0.1
4	SFW4R-1/2STE1 LF	20.4	16	—
5	SFW5R-1/2STE1 LF	28.4	24	—
6	SFW6R-1/2STE1 LF	28.4	24	—
7	SFW7R-1/2STE1 LF	28.4	24	—
8	SFW8R-1/2STE1 LF	28.4	24	—
9	SFW9R-1/2STE1 LF	28.4	24	—
10	SFW10R-1/2STE1 LF	28.4	24	—
11	SFW11R-1/2STE1 LF	28.4	24	—
12	SFW12R-1/2STE1 LF	28.4	24	—
13	SFW13R-1/2STE1 LF	36.4	32	28.4
14	SFW14R-1/2STE1 LF	36.4	32	28.4
15	SFW15R-1/2STE1 LF	36.4	32	28.4
16	SFW16R-1/2STE1 LF	36.4	32	28.4
17	SFW17R-1/2STE1 LF	48.4	44	40.4
18	SFW18R-1/2STE1 LF	48.4	44	40.4
19	SFW19R-1/2STE1 LF	48.4	44	40.4
20	SFW20R-1/2STE1 LF	48.4	44	40.4
21	SFW21R-1/2STE1 LF	48.4	44	40.4
22	SFW22R-1/2STE1 LF	48.4	44	40.4
23	SFW23R-1/2STE1 LF	48.4	44	40.4
24	SFW24R-1/2STE1 LF	48.4	44	40.4
25	SFW25R-1/2STE1 LF	48.4	44	40.4
26	SFW26R-1/2STE1 LF	48.4	44	40.4
27	SFW27R-1/2STE1 LF	48.4	44	40.4
28	SFW28R-1/2STE1 LF	60.4	56	52.4
29	SFW29R-1/2STE1 LF	60.4	56	52.4
30	SFW30R-1/2STE1 LF	60.4	56	52.4

CAT. NO.

SFW (n) R - 1 ST E1 LF

SERIES NAME

NO. OF CONTACTS

RIGHT ANGLE TYPE

FOR FPC/FFC, CONTACT DIRECTION

1. LOWER CONTACT TYPE
2. UPPER CONTACT TYPE

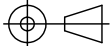
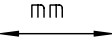
FOR AUTOMATIC MOUNTING (SMT)

TAPE PACKAGING

LEAD FREE

NOTES

1. THIS PRODUCT IS THE CONNECTOR USED FOR FPC/FFC AND COPELS WITH AUTOMATIC MOUNTING (SMT).
2. THIS CATALOG NO. INDICATES PLASTIC TAPE PACKAGED CONNECTOR.
3. SEE PART DRAWINGS FOR DIMENSIONS E~G.
4. A  SYMBOL WILL BE NEXT TO ANY DIMENSION, VIEW, OR NOTE WHICH HAS BEEN MODIFIED WITH THE CURRENT DRAWING REVISION.

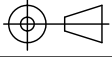
mat'l. code				surface 58/ISO 1302	tolerance ISO 406/ISO 1101	projection 	product family 58RF	CODE JP
ltr	ecn no	dr	date	tolerances unless otherwise specified			title CAT. NO. TABLE FOR PLASTIC TAPE PACKAGED 1mm SPACING SMT CONNECTOR (Cat. No. SFW__R-1/2STE1 LF)	
AA	J05-0055	H.T	05-02-04	angles	linear			
AB	J06-0398	H.T	06-09-26			scale 	dwg no JSA 95857 sheet 1 of 1 size A4	
AC	S08-0276	DGOH	08-08-22					
				dr	H. TAKAKURA	06-09-26	type Product Customer Drawing	
				enr	H. TAKAKURA	06-09-26		
				chr	DENNIS GOH	08-08-22		
				appd	JOEY NG	08-08-22		
sheet index	revision	AC						Rev. AC

SC_SFW10 JSA95854 95858 95859
form: A4

PT. NO.	PARTS NAME	CAT. NO.	MATERIAL	Q'TY	NOTE
1	REEL	_____	CARDBOARD	1	COLOR:WHITE/GREY
2	PLASTIC (EMBOSS) TAPE	_____	PET	_____	COLOR:TRANSPARENCY
3	COVER	_____	POLYESTER	_____	COLOR:TRANSPARENCY
4	CONNECTOR	SFW__R-1ST__LF	SEE ATTACHED DWG.	2000	LOWER CONTACT TYPE

NOTES

1. THIS IS PLASTIC TAPE PACKAGED CONNECTOR USED FOR FPC/FFC AND COPEs WITH AUTOMATIC MOUNTING (SMT).
2. SEE JIS C 0806 (PACKING OF ELECTRONIC COMPONENTS ON CONTINUOUS TAPES (SURFACE MOUNTING DEVICES)) FOR SHAPE AND DIMENSIONS OF PLASTIC (EMBOSS) TAPE AND REEL.
3. E DIMENSION IS PORTION OF THE CORE.
4. A  SYMBOL WILL BE NEXT TO ANY DIMENSION, VIEW, OR NOTE WHICH HAS BEEN MODIFIED WITH THE CURRENT DRAWING REVISION.

mat'l. code				surface 58 / tolerance ISO 1302 58 / ISO 406 1101		projection		product family 58RF		CODE JP	
ltr	ecn no	dr	date	tolerances unless otherwise specified				title		dwg no	
AA	J05-0055	H.T	05/02/04	angles	linear	mm		PLASTIC TAPE PACKAGED 1mm SPACING SMT CONNECTOR (Cat. No. SFW__R-1STE1 LF)		sheet 1 of 1	
AB	J06-0398	H.T	06/09/26							size A4	
AC	S08-0276	DGOH	08-08-22	±5°		scale 					
				dr	H. TAKAKURA	06-09-26			type Product Customer Drawing		Rev. AC
				enr	H. TAKAKURA	06-09-26					
				chr	DENNIS GOH	08-08-22					
				appd	JOEY NG	08-08-22					
sheet index		revision sheet 1		AC							

SC_SFW10 JSA95857 form: A4

PT. NO.	PARTS NAME	CAT. NO.	MATERIAL	Q'TY	NOTE
1	REEL	_____	CARDBOARD	1	COLOR:WHITE/GREY
2	PLASTIC (EMBOSS) TAPE	_____	PET	_____	COLOR:TRANSPARENCY
3	COVER	_____	POLYESTER	_____	COLOR:TRANSPARENCY
4	CONNECTOR	SFW__R-2ST__LF	SEE ATTACHED DWG.	2000	UPPER CONTACT TYPE

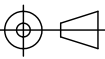
NOTES

1. THIS IS PLASTIC TAPE PACKAGED CONNECTOR USED FOR FPC/FFC AND CYPES WITH AUTOMATIC MOUNTING (SMT).

2. SEE JIS C 0806 (PACKING OF ELECTRONIC COMPONENTS ON CONTINUOUS TAPES (SURFACE MOUNTING DEVICES)) FOR SHAPE AND DIMENSIONS OF PLASTIC (EMBOSS) TAPE AND REEL.

3. E DIMENSION IS PORTION OF THE CORE.

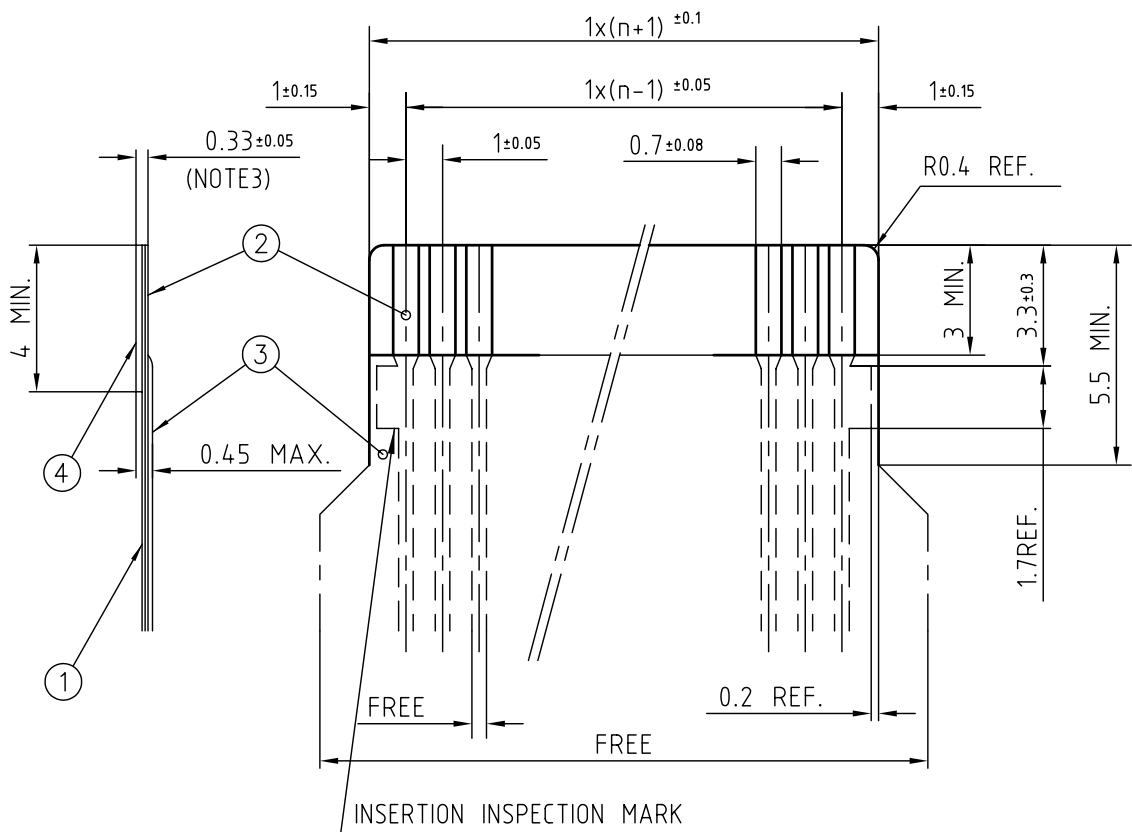
4. A  SYMBOL WILL BE NEXT TO ANY DIMENSION, VIEW, OR NOTE WHICH HAS BEEN MODIFIED WITH THE CURRENT DRAWING REVISION.

mat'l. code				surface 58 / tolerance ISO 1302 58 / ISO 406 / ISO 1101		projection		product family 58RF		CODE JP	
ltr	ecn no	dr	date	tolerances unless otherwise specified				title		dwg no	
AA	J05-0055	H.T	05-02-04	angles	linear	mm		PLASTIC TAPE PACKAGED 1mm SPACING SMT CONNECTOR (Cat. No. SFW__R-2STE1 LF)		sheet 1 of 1	
AB	J06-0398	H.T	06-09-26	±5°						size A4	
AC	S08-0276	DGOH	08-08-22	±5°		scale 				type Product Customer Drawing	
				dr	H. TAKAKURA	06-09-26			JSA 95859		
				enr	H. TAKAKURA	06-09-26					
				chr	DENNIS GOH	08-08-22					
				appd	JOEY NG	08-08-22					
sheet index		revision sheet 1		AC							Rev. AC

SC_SFW10 form: A4 JSA95857

RECOMMENDED CABLE (FPC)

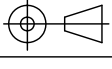
n : NO. OF CONDUCTOR



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

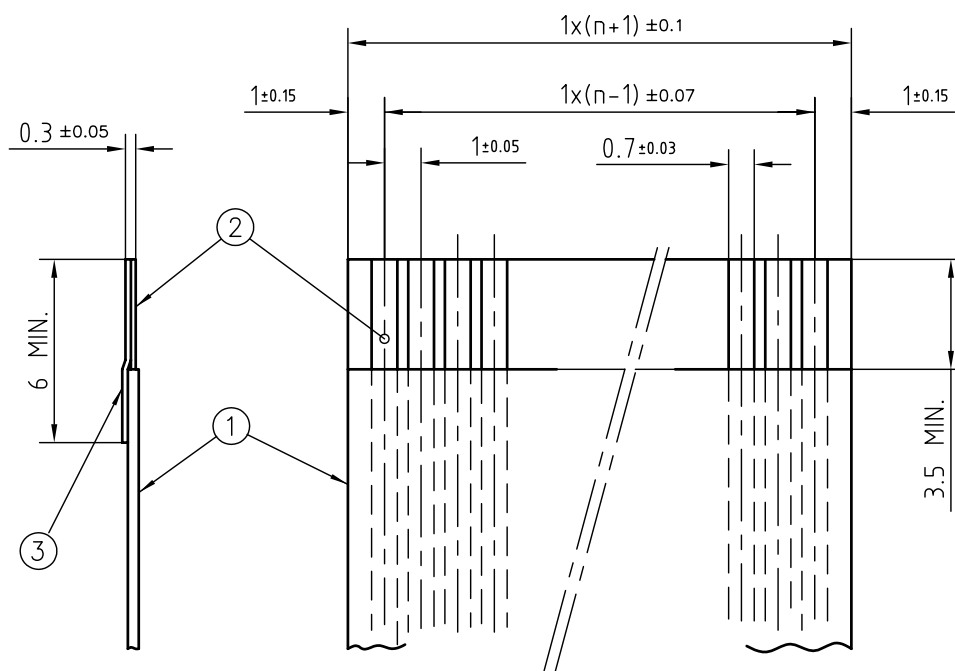
NOTES

1. NO BURR AT EACH PORTION.
2. NO PEELING IN COMMON USE.
3. TOTAL THICKNESS LIMIT OF EACH MATERIAL (INCLUDING ADHESIVE AGENT) IS SPECIFIED.
4. A  SYMBOL WILL BE NEXT TO ANY DIMENSION, VIEW, OR NOTE WHICH HAS BEEN MODIFIED WITH THE CURRENT DRAWING REVISION.

mat'l. code				surface 58/ISO 1302		tolerance ISO 406 ISO 1101		projection		product family 58RF		CODE JP		
ltr	ecn no	dr	date	tolerances unless otherwise specified						title				
AA	J05-0055	H.T	05-02-04	angles				mm		RECOMMENDED CABLE				
AB	J06-0398	H.T	06-09-26	linear						(Cat. No. SFW__R-1/2__)				
AC	S08-0276	DGOH	08-08-22					scale						
				dr	H. TAKAKURA		06-09-26				dwg no		sheet 1 of 1	size
				enr	H. TAKAKURA		06-09-26				JSA 91605		A4	
				chr	DENNIS GOH		08-08-22				type		Product Customer Drawing	
				appd	JOEY NG		08-08-22							
sheet index		revision sheet		AC									Rev. AC	

RECOMMENDED CABLE (FFC)

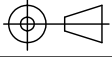
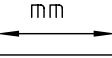
n : NO. OF CONDUCTOR



PT. NO.	PARTS NAME	MATERIAL	NOTE
1	INSULATOR	FLAME RESISTING POLYESTER OR EQUAL	_____
2	CONDUCTOR	COPPER FOIL	PLATING:TIN OR SOLDER 1um MIN.
3	SUPPORTING TAPE	FLAME RESISTING POLYESTER OR EQUAL	_____

NOTES

1. NO BURR AT EACH PORTION.
2. NO PEELING IN COMMON USE.
3. A  SYMBOL WILL BE NEXT TO ANY DIMENSION, VIEW, OR NOTE WHICH HAS BEEN MODIFIED WITH THE CURRENT DRAWING REVISION.

mat'l. code				surface 58/ISO 1302	tolerance ISO 406 ISO 1101	projection 	product family 58RF	CODE JP
ltr	ecn no	dr	date	tolerances unless otherwise specified			title RECOMMENDED CABLE (Cat. No. SFW__R-1/2__)	
AA	J05-0055	H.T	05-02-04	angles	linear			
AB	J06-0398	H.T	06-09-26			mm	dwg no sheet 1 of 1 size	
AC	S08-0276	DGOH	08-08-22			scale 		
				dr	H. TAKAKURA	06-09-26	JSA 91604	
				enr	H. TAKAKURA	06-09-26		
				chr	DENNIS GOH	08-08-22	type Product Customer Drawing	
				appd	JOEY NG	08-08-22		
sheet index	revision sheet	AC	1					Rev. AC