

FLEX CONNECTOR SOLUTIONS INFORMATION

- Web links to product info including performance parameters, drawings, 3D models, etc.

- www.fciconnect.com/flex

- Documentation

- Connectors For Flexible Circuitry FFC/FPC/CIC catalog
 - Sample Booklet
 - Documentation available at www.fci.com or www.fciconnect.com/flex

勝特力材料 886-3-5753170
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0.2mm / 0.3mm PITCH SOLUTION

- LC Display to Board and Board to Board connections
- Consumer, Data and Medical
- Mobile Phone, Mobile Equipment, Optical Drive



0.5mm PITCH SOLUTION

- Display & Board to Board connections
- Consumer, Car Multimedia, I&I, Data and Comm
- Mobile equipment, IP phone, POS, Car audio & Navigation



1.0mm / 1.25mm / 2.54mm PITCH SOLUTION

- Cable to Board and Board to Board connections
- Car Multimedia, I&I, and Data
- Car audio, Drive, POS, Printer



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■ FCI's Highly reliable Gas Tight High pressure (GTH) contact with a wide variation of Zero Insertion Force (ZIF) and non-ZIF options for FFC & FPC connector solutions.

■ FCI provides a robust design providing high cable retention forces. The flipping actuator 0.5mm pitch type facilitates the secure cable assembly with click actuation for automotive multimedia and I&I applications.

KEY:

ZIF (SL): Slider action
 ZIF (FF): Front side flip
 ZIF (BF): Back side flip

Pitch	Family Name	Height (mm)	Contact Location	ZIF / LIF	Positions Available
0.2mm	XL-D	0,9	Bottom	ZIF (FF)	29
0.3mm	YLL-D	0,9	Bottom	ZIF (FF)	13,15,17,21,23,25,27,29,33,35,39,41,43,45,51
	YLL-U	0,9	Top	Non-ZIF	15,21,23,25,27,31,33,35,37,39,41
0.5mm	OPU-D	2,0	Bottom	ZIF (SL)	38,40,45,50,55,57
	OPU-U	2,0	Top	ZIF (SL)	32,34,36,40,45,50,55,57
	SFVE	1,2	Top	ZIF (FF)	18,20,24,28,30
	SFVL-D	0,9	Bottom	ZIF (BF)	4,5,6,7,8,9,12,13
	SFVL-U	0,9	Top	ZIF (BF)	4,5,6,8
	SFV-R	1,8	Top, Bottom	ZIF (SL)	4-35
	SFV-S	4,1	N/A	ZIF (SL)	8,12,16,20,21,22,23,24,25,26,30,32,33
	VHC	2,0	Bottom	ZIF (FF)	35,50,60,70
	VLK	1,3	Bottom	ZIF (FF)	35,45,60
	VLH	1,3	Bottom	ZIF	40,45,50
	VLL	1,2	Bottom	ZIF (BF)	8,10,11,12,14,15,16,18,20,22,24,26,28,30
	VLP	0,7	Bottom	ZIF (BF)	4,8,10
1.0mm	HFW-R	1,9	Top, Bottom	Non-ZIF	4-30
	HFW-S	5,3	N/A	Non-ZIF	4-30,32
	HLW-R	3,9	Top	Non-ZIF	4-32
	HLW-S	5,9	N/A	Non-ZIF	4-32
	SFW-R	2,7	Top, Bottom	ZIF (SL)	4-30
	SFW-S	5,3	N/A	ZIF (SL)	4,5,6,8,10,11,12,14,15,16,17,18,20,22,23,24,26,28,30
	SLW-R	4,0	Bottom	ZIF (SL)	4-30
	SLW-S	5,5	N/A	ZIF (SL)	4-30
1.25mm	HLEM-R	4.9/6.0	Side Entry	Non-ZIF	4-40
	HLEM-S		Top Entry	Non-ZIF	
2.54mm	Clincher	Standard receptacle			2-32
	Clincher	Receptacle with keying latch			2-16
	Clincher	Receptacle with keying feature			6-34
	Clincher	Receptacle with keying & active latch			6-34
	Clincher	Standard plug			3-14
	Duflex				Contact and housing


NUMBER SC-SFW 10	TYPE PRODUCT SPECIFICATION		
TITLE FPC/FFC CONNECTOR (SFW__R-1/2STE_LF / SFW__R-1/2STZE_LF)		PAGE 1 of 11	REVISION E
		AUTHORIZED BY M.YAMASHITA	DATE 24 Nov 09
		CLASSIFICATION UNRESTRICTED	

Table of Contents:


勝特力材料 886-3-5753170
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1	SCOPE	3
2	APPLICABLE STANDARDS	3
3	CATALOG NO. STRUCTURE	3
4	CONNECTOR SHAPE, DIMENSIONS AND MARTERIALS	3
5	ACCOMMODATED CONDUCTORS (FPC/FFC).....	3
6	PACKAGING CONDITION	3
7	RECOMMENDED MOUNTING PATTERN DIMENSIONS	3
8	RATING	4
8-1	Voltage	4
8-2	Current	4
8-3	Operating Temperature	4
9	PERFORMANCE CHARACTERISTICS	4
9-1	Electrical Performance	4
9-1-1	Contact resistance	4
9-1-2	Insulation resistance	5
9-1-3	Dielectric withstanding voltage	5
9-2	Mechanical Performance	5
9-2-1	Durability (Slider operation)	5
9-2-2	Vibration (Sinusoidal)	5

NUMBER SC-SFW 10	TYPE PRODUCT SPECIFICATION		
TITLE FPC/FFC CONNECTOR (SFW__R-1/2STE_LF / SFW__R-1/2STZE_LF)		PAGE 2 of 11	REVISION E
		AUTHORIZED BY M.YAMASHITA	DATE 24 Nov 09
		CLASSIFICATION UNRESTRICTED	

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9-3	Environmental Performance	6
9-3-1	Damp heat (Steady state)	6
9-3-2	Salt spray	6
9-3-3	Change of temperature	7
9-4	Other performance	8
9-4-1	Soldering (Resistance to reflow soldering)	8
9-4-2	Soldering (Solderability) (Reflow)	9
9-4-3	Conductor retention force (Reference)	9
10	INDICATION AND PACKAGING	10
10-1	Indication	10
10-2	Packaging	10
11	REMARKS	10
12	RECOMMENDED REFLOW PROFILE	10
13	REVISION RECORD	11

NUMBER SC-SFW 10	TYPE PRODUCT SPECIFICATION		
TITLE FPC/FFC CONNECTOR (SFW__R-1/2STE_LF / SFW__R-1/2STZE_LF)		PAGE 3 of 11	REVISION E
		AUTHORIZED BY M.YAMASHITA	DATE 24 Nov 09
CLASSIFICATION UNRESTRICTED			

1. SCOPE

This specification covers the requirements for the connector (SFW__R-1/2ST_E_LF) with 1mm spacing to which the edge of FPC(Flexible Printed Circuit) and FFC(Flexible Flat Cable) can be connected by Zero-Insertion-Force method and which copes with automatic mounting and SMT.

2. APPLICABLE STANDARDS

JIS C 5402 Method for Test of Connectors for Electronic Equipment
JIS C 0806 Packaging of Electronic Components on Continuous Tapes
(Surface Mount Components)
UL - 94 TESTS FOR FLAMMABILITY OF PLASTIC MATERIALS FOR PARTS
IN DEVICES AND APPLIANCES

3. CATALOG NO. STRUCTURE

	SFW	20	R	-	1	ST	Z	E1	LF
Series	_____								
Number of Contacts	_____								
Right Angle	_____								
For FPC/FFC, Contact direction	_____								
1: Lower contact type									
2: Upper contact type									
Cope with automatic mounting & SMT	_____								
Plating Variation	_____								
Blank: Tin plating									
Z : Thin tin plating									
Plastic Tape Packaging	_____								
Lead Free	_____								

4. CONNECTOR SHAPE, DIMENSIONS AND MATERIALS

Refer product drawings.

5. ACCOMMODATED CONDUCTORS (FPC/FFC)

Refer product drawings.


6. PACKAGING CONDITION

Refer product drawings.

7. RECOMMENDED MOUNTING PATTERN DIMENSIONS

Refer product drawings.

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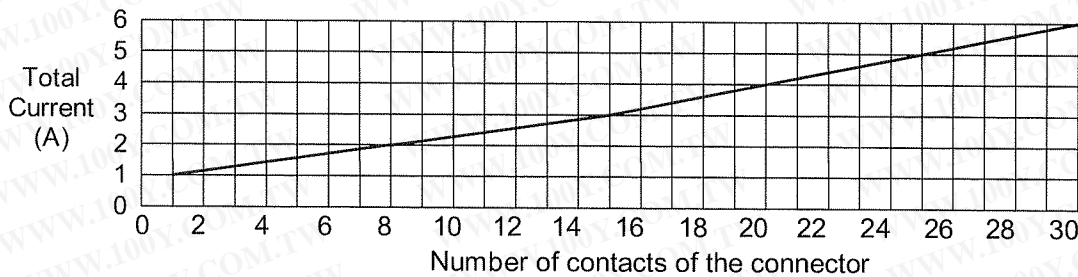
NUMBER	TYPE		
SC-SFW 10	PRODUCT SPECIFICATION		
TITLE FPC/FFC CONNECTOR (SFW__R-1/2STE_LF / SFW__R-1/2STZE_LF)		PAGE	REVISION
		4 of 11	E
		AUTHORIZED BY	DATE
		M.YAMASHITA	24 Nov 09
		CLASSIFICATION UNRESTRICTED	

8. RATING

- 8-1. Voltage : A.C. 100V D.C. 100V
 8-2. Current : A.C. 1A D.C. 1A (Refer to the following note.)
 8-3. Operating Temperature : -55°C ~ +105°C (Including terminal temperature rise)

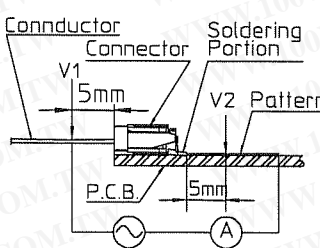
NOTE


Allowable maximum current for one contact is 1A. Total allowable current for a whole connector is the value which is shown in the following figure.



9. PERFORMANCE CHARACTERISTICS

9-1. Electrical Performance


No.	Test Item	Test Method	Requirements
9-1-1	Contact resistance	<p>1) Measure contact resistance between V₁-V₂ by voltage drop method by the following circuit by mating accommodated conductor stipulated in clause 5 after reflow soldering the connector on the P.C.B. and cleaning flux dregs.</p>  <p>2) Open circuit voltage : Less than A.C. 20mV</p> <p>3) Test current : Less than A.C. 20mA</p>	<p>1) Initial value : Less than 30mΩ</p> <p>2) Contact resistance after the test is in accordance with the value specified in each test item.</p>

NUMBER SC-SFW 10	TYPE PRODUCT SPECIFICATION		
TITLE FPC/FFC CONNECTOR (SFW__R-1/2STE_LF / SFW__R-1/2STZE_LF)		PAGE 5 of 11	REVISION E
		AUTHORIZED BY M.YAMASHITA	DATE 24 Nov 09
		CLASSIFICATION UNRESTRICTED	

No.	Test Item	Test Method	Requirements
9-1-2	Insulation resistance	1) Measure insulation resistance between adjacent contacts in a connector individual. 2) Test voltage : D.C. 500V 3) Read value one minute after applying test voltage.	1) More than 500MΩ
9-1-3	Dielectric withstanding voltage	1) For one minute, apply A.C. 500V between adjacent contacts in a connector individual. 2) Set current : A.C. 1mA	1) Free from any short circuit and insulation breakdown.


9-2. Mechanical Performance

No.	Test Item	Test Method	Requirements
9-2-1	Durability (Slider operation)	1) Measure contact resistance before and after the test by the method in clause 9-1-1 by mating the accommodated conductor specified in clause 5. 2) Number of slider open and close : 20 times (Insert and extract the conductor for each opening of the slider.)	1) Initial contact resistance : Less than 30mΩ 2) Contact resistance after the test : Less than 50mΩ 3) Free from any defect such as break etc. on the connector and the conductor.
9-2-2	Vibration (Sinusoidal)	JIS C 60068-2-6 (IEC60068-2-6) 1) Frequency range : 10 ~ 500Hz 2) Amplitude : 0.75mm or Acceleration : 100m/s ² 3) Sweep rate : 1 octave / minute 4) Kind of test : Sweep endurance test 5) Test time : 10 cycles	1) During the test, no circuit opening for more than 1μs 2) Free from any defect such as break, deformation, loosening and falling off etc. on each portion of the connector.

NUMBER SC-SFW 10	TYPE PRODUCT SPECIFICATION		
TITLE FPC/FFC CONNECTOR (SFW__R-1/2STE_LF / SFW__R-1/2STZE_LF)		PAGE 6 of 11	REVISION E
		AUTHORIZED BY M.YAMASHITA	DATE 24 Nov 09
		CLASSIFICATION UNRESTRICTED	


9-3. Environmental Performance

No.	Test Item	Test Method	Requirements
9-3-1	Damp heat (Steady state)	<p>JIS C 60068-2-78 (IEC60068-2-78)</p> <ol style="list-style-type: none"> 1) Measure contact resistance before and after the test by the method in clause 9-1-1 by using the accommodated conductor specified in clause 5. 2) Measure insulation resistance after the test by the method in clause 9-1-2. 3) Bath temperature : 40°C 4) Bath humidity: 90~95% (Relative humidity) 5) Period of exposure : 48 hours 6) Expose conductor and connector in mated condition and leave them under normal temperature. (Without insertion and separation) 	<ol style="list-style-type: none"> 1) Initial contact resistance : Less than 30mΩ 2) Contact resistance after the test : Less than 50mΩ 3) Insulation resistance after the test : More than 100MΩ
9-3-2	Salt spray	<p>JIS C 60068-2-11 (IEC60068-2-11)</p> <ol style="list-style-type: none"> 1) Measure contact resistance before and after the test according to the method in clause 9-1-1 by using accommodated conductor specified in clause 5. 2) Salt solution concentration : 5% 3) Period of exposure : 48 hours 4) Expose conductor and connector in mated condition and leave them under normal temperature after post treatment. 	<ol style="list-style-type: none"> 1) Initial contact resistance : Less than 30mΩ 2) Contact resistance after the test : Less than 50mΩ

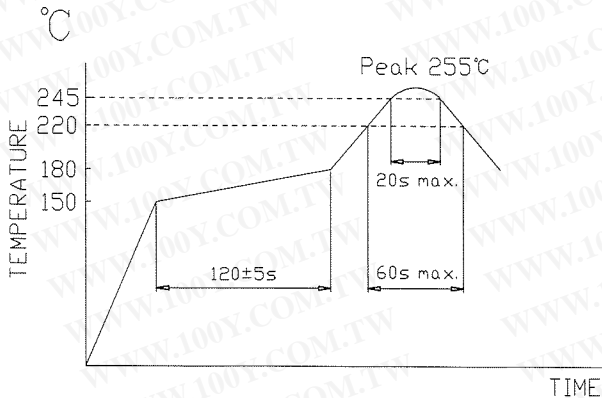
NUMBER SC-SFW 10	TYPE PRODUCT SPECIFICATION		
TITLE FPC/FFC CONNECTOR (SFW__R-1/2STE_LF / SFW__R-1/2STZE_LF)		PAGE 7 of 11	REVISION E
		AUTHORIZED BY M.YAMASHITA	DATE 24 Nov 09
		CLASSIFICATION UNRESTRICTED	

No.	Test Item	Test Method	Requirements															
9-3-3	Change of temperature	<p>JIS C 0025 (IEC60068-2-14)</p> <p>1) Measure contact resistance before and after the test according to the method in clause 9-1-1 by using accommodated conductor in clause 5.</p> <p>2) One cycle of temperature is as follow and test 5 cycles.</p> <table><tr><th>Step</th><th>Temp.(°C)</th><th>Time (min.)</th></tr><tr><td>1</td><td>-55±3</td><td>30</td></tr><tr><td>2</td><td>25±2</td><td>2 ~ 3</td></tr><tr><td>3</td><td>85±2</td><td>30</td></tr><tr><td>4</td><td>25±2</td><td>2 ~ 3</td></tr></table> <p>3) Expose conductor and connector in mated condition and leave them under normal temperature.</p>	Step	Temp.(°C)	Time (min.)	1	-55±3	30	2	25±2	2 ~ 3	3	85±2	30	4	25±2	2 ~ 3	<p>1) Initial contact resistance : Less than 30mΩ</p> <p>2) Contact resistance after the test : Less than 50mΩ</p> <p>3) Free from any defect such as crack, warping and deformation etc. on each portion of the connector.</p>
Step	Temp.(°C)	Time (min.)																
1	-55±3	30																
2	25±2	2 ~ 3																
3	85±2	30																
4	25±2	2 ~ 3																


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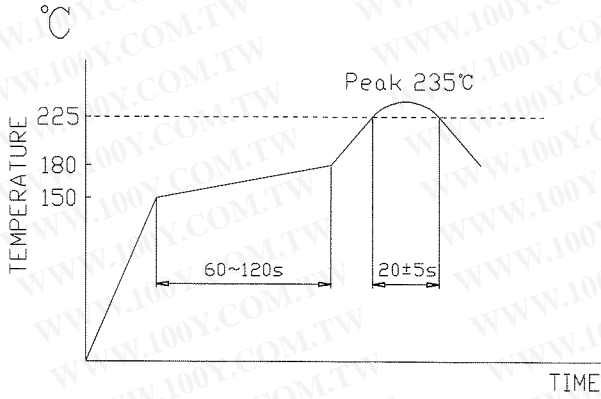
NUMBER SC-SFW 10	TYPE PRODUCT SPECIFICATION		
TITLE FPC/FFC CONNECTOR (SFW__R-1/2STE_LF / SFW__R-1/2STZE_LF)		PAGE 8 of 11	REVISION E
		AUTHORIZED BY M.YAMASHITA	DATE 24 Nov 09
		CLASSIFICATION UNRESTRICTED	

9-4. Other performance


No.	Test Item	Test Method	Requirements
9-4-1	Soldering (Resistance to reflow soldering)	<p>JIS C 60068-2-58 (IEC60068-2-58)</p> <p>1) Solder by setting reflow bath on the following condition.</p> <p>2) Preheating : 150~180°C, 120±5s</p> <p>3) Soldering : 220°C min. 60s max.</p> <p>4) Peak : 245°C min. 20s max. (Peak 255°C max.) (See Diagram A)</p> <p>Note: Temperature must be measured at contact terminal portion and peak temperature on the upper surface of P.C.B must be less than 260°C.</p> <p>5) Solder paste to be used is JIS Z 3282 Sn96.5Ag3.0Cu0.5</p>	<p>1) Contact resistance after the test : Less than 50mΩ</p> <p>2) Insulation resistance after the test : More than 100MΩ</p> <p>3) No short circuit and insulation Breakdown for dielectric withstanding voltage test after this test.</p> <p>4) Free from any damage on performance and contact performance after soldering.</p>
		<p><u>Diagram A</u></p>  <p>Resistance to reflow soldering profile</p>	

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NUMBER SC-SFW 10	TYPE PRODUCT SPECIFICATION		
TITLE FPC/FFC CONNECTOR (SFW__R-1/2STE_LF / SFW__R-1/2STZE_LF)		PAGE 9 of 11	REVISION E
		AUTHORIZED BY M.YAMASHITA	DATE 24 Nov 09
		CLASSIFICATION UNRESTRICTED	

No.	Test Item	Test Method	Requirements
9-4-2	Soldering (Solderability) (Reflow)	<p>JIS C 60068-2-58 (IEC60068-2-58)</p> <p>1) Solder by setting reflow bath on the following condition.</p> <p>2) Preheating : 150~180°C, 60~120s</p> <p>3) Soldering : 225°C min., 20±5s (Peak 235°C max.) (See Diagram B)</p> <p>Note: Temperature must be measured at contact terminal portion and peak temperature on the upper surface of P.C.B must be less than 260°C.</p> <p>4) Solder paste to be used is JIS Z 3282 Sn96.5Ag3.0Cu0.5</p>	<p>1) Actual soldered area must be more than 95% of the dipped area intended to be soldered.</p>
<p><u>Diagram B</u></p>  <p style="text-align: center;">Solderability profile</p>			
9-4-3	Conductor retention force (Reference)	<p>1) Measure initial retention force after inserted and locked by using accommodated conductor specified in clause 5.</p>	<p>1) More than 0.88N/contact for FPC (More than 90gf/contact for FPC)</p> <p>2) More than 0.68N/contact for FFC (More than 70gf/contact for FFC)</p>

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NUMBER SC-SFW 10	TYPE PRODUCT SPECIFICATION		
TITLE FPC/FFC CONNECTOR (SFW__R-1/2STE_LF / SFW__R-1/2STZE_LF)		PAGE 10 of 11	REVISION E
		AUTHORIZED BY M.YAMASHITA	DATE 24 Nov 09
		CLASSIFICATION UNRESTRICTED	

10. INDICATION AND PACKAGING

10-1. Indication

- 1) Catalog number and lot number are not indicated on the connector.
- 2) Catalog number and quantity shall be indicated on the surface of the package box.

10-2. Packaging

- 1) The connector individuals are packed by tapes with specified quantity in accordance with [JIS C 0806 "Packaging of Electronic Components on Continuous Tapes (Surface Mount components)"] and put into package box in accordance with FCI packaging specification.

11. REMARKS

11-1. Please refer to the "Handling procedures and remarks" before use.

11-2. Retention force for accommodated conductor specified in clause 9-4-3 differs due to its kind, structure and surface treatment of conductor. Therefore, the value of retention force specified in the clause for performance is reference value.

11-3. Since this connector can not be used for CIC (Conductor such as sliver paste, carbon etc.) as accommodated conductor, please consult us separately.

12. RECOMMENDED REFLOW PROFILE

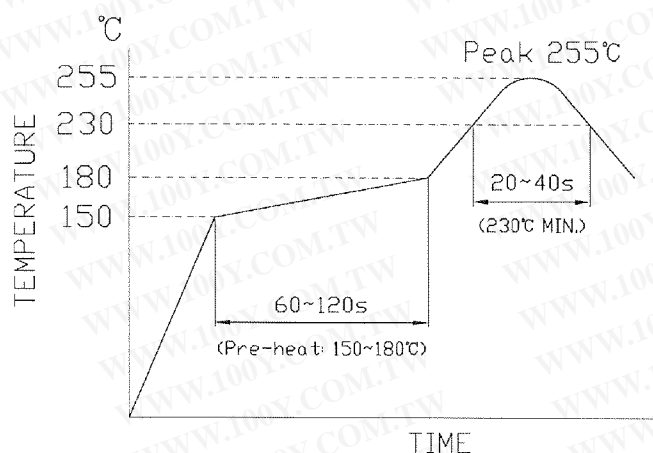



Diagram C. Recommended reflow temperature profile

Note: Please check the reflow soldering condition for your own application beforehand due to different conditions with soldering devices, P.C. Boards, etc.
No moisture treatment before reflow process.

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NUMBER SC-SFW 10	TYPE PRODUCT SPECIFICATION		
TITLE FPC/FFC CONNECTOR (SFW__R-1/2STE_LF / SFW__R-1/2STZE_LF)		PAGE 11 of 11	REVISION E
		AUTHORIZED BY M.YAMASHITA	DATE 24 Nov 09
		CLASSIFICATION UNRESTRICTED	

13. REVISION RECORD

REV.	PAGE	DESCRIPTION	ECR #	DATE
	All	New release	J03-0327	04 Sep 03
A	All	Spec update	J05-0055	07 Feb 05
B	5	Correct solder operation to slider operation	J06-0080	01 Mar 06
C	All 3	Revise format of product spec. Operating Temperature change from -55°C ~ +85°C to -55°C ~ +105°C	S07-0192	21 Mar 07
D	All	Revise spec for lead-free solder Add "Diagram A" Resistance to Reflow Soldering Profile. Add "Diagram B" Solderability Profile. Add "Diagram C" Recommended Reflow Profile.	J09-0371	16 Oct 09
E	11	Corrected paragraph Number.	J09-0410	24 Nov 09

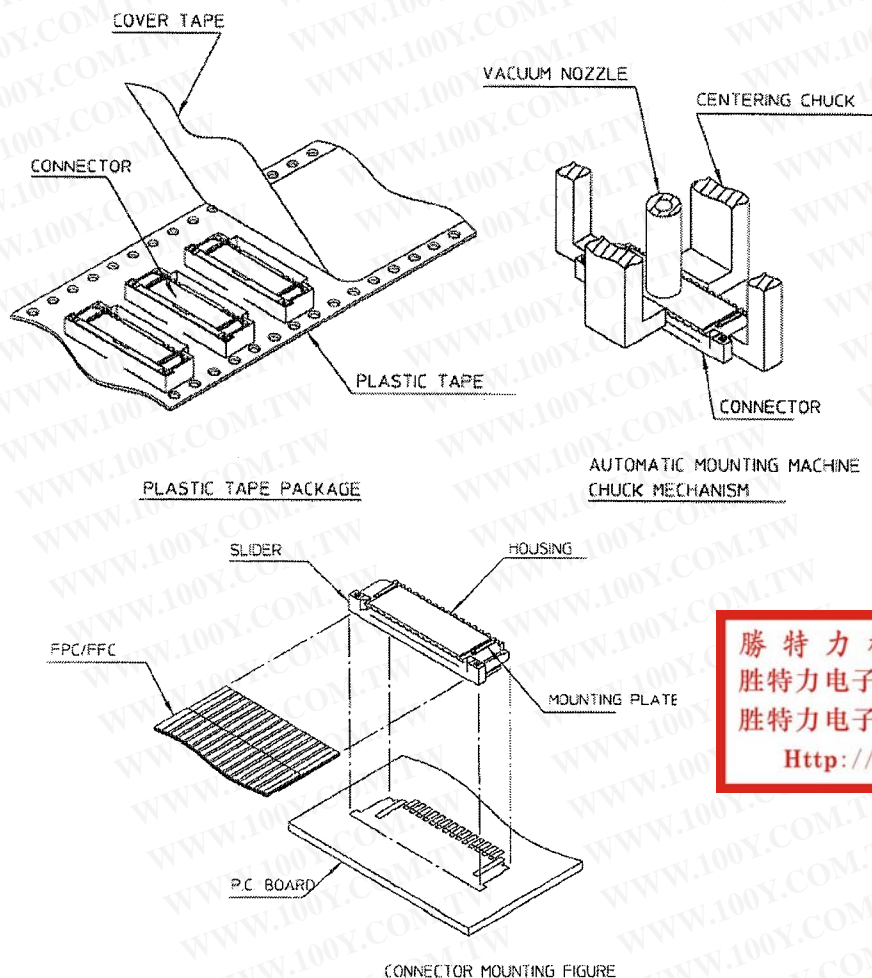
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NUMBER	TYPE	FCI	
GS-20-129	APPLICATION SPECIFICATION		
TITLE Handling Procedures and Remarks for 1.0mm Pitch FPC/FFC Connector SFW__R-1/2ST__LF		PAGE 1 of 6	REVISION A
		AUTHORIZED BY M.YAMASHITA	DATE 26 OCT 09
		CLASSIFICATION UNRESTRICTED	

1. MOUNTING METHOD OF THE CONNECTOR ON P.C.BOARD

This connector applies the construction which copes with automatic mounting and SMT. Therefore please proceed reflow soldering after mounting it on P. C. Board by automatic mounting machine.

Package style of connector	Plastic tape which cope with JIS C 0806
Automatic mounting machine	One by one system
Soldering	Reflow soldering (Infrared reflow system etc.)



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NOTE) Please refer to the drawings attached to the specification for details of dimensions etc.

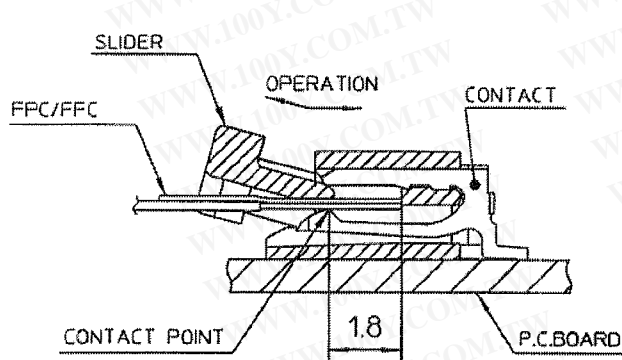
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		AUTHORIZED BY M.YAMASHITA	DATE 26 OCT 09
		CLASSIFICATION UNRESTRICTED	

2. BASIC OPERATION PROCEDURES OF CONNECTOR

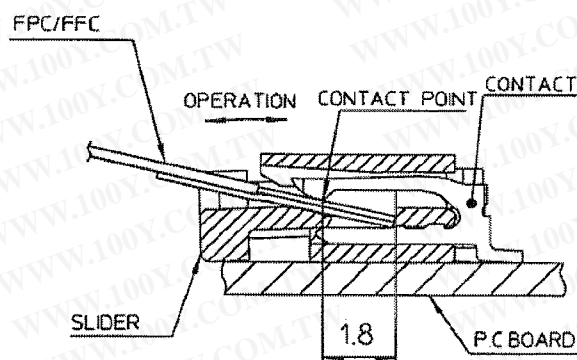
Conductor connections after soldered the connector on P. C. Board shall be done by the following procedures.

Pulling conductor forcibly in the condition of slider being locked must be avoided.

Works	No	Operating Procedure
Connecting of conductor	2-1	Provide open status by pulling slider
	2-2	Match connecting side of conductor to connecting side of connector
	2-3	Fix temporarily by inserting conductor into card slot
	2-4	Provide lock status by pressing slider into
Removing of conductor	2-5	Provide open status by pulling slider
	2-6	Extract conductor to upper slant direction against P.C. Board




SFW__R-1ST__LF




SFW__R-2ST__LF

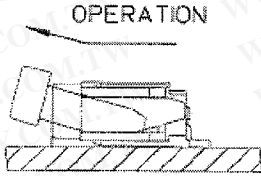
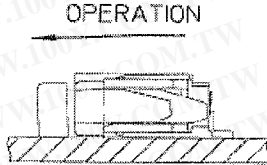
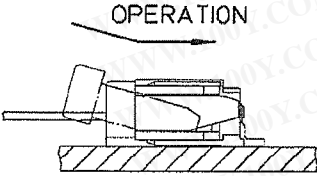
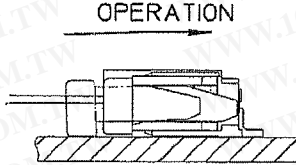
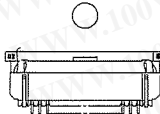
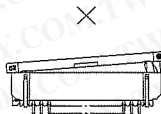
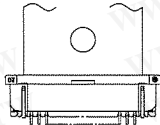
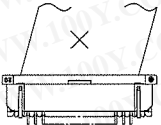
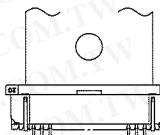
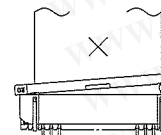
勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
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NUMBER GS-20-129	TYPE APPLICATION SPECIFICATION		
TITLE Handling Procedures and Remarks for 1.0mm Pitch FPC/FFC Connector SFW__R-1/2ST__LF		PAGE 3 of 6	REVISION A
		AUTHORIZED BY M.YAMASHITA	DATE 26 OCT 09
		CLASSIFICATION UNRESTRICTED	


3. HANDLING PROCEDURE DETAILS AND REMARKS

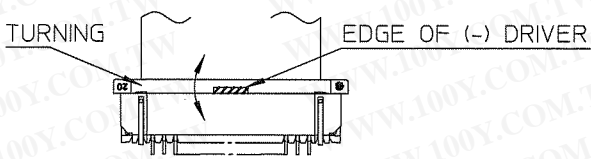
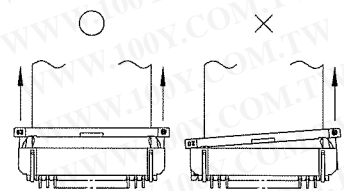
No	Procedure	Remarks
3-1	<u>Cream Solder Printing</u> Print cream solder with adequate quantity on P.C. B pattern. <Recommended cream solder> <ul style="list-style-type: none"> • JIS Z 3282 Sn96.5Ag3.0Cu0.5 • Stencil thickness: 0.15 ~ 0.2mm. 	<ul style="list-style-type: none"> • Please refer to the drawing attached to the specification for recommended P.C.B pattern dimensions. • Please print cream solder with adequate quantity by adjusting thickness of stencil.
3-2	<u>Mounting on P.C. Board</u> By using automatic mounting machine (One by one system) which copes with plastic tape, mount the connector on predetermined position on P.C. Board coated with cream solder.	<ul style="list-style-type: none"> • Please confirm carefully mounting accuracy of automatic mounting machine and dimensional accuracy of P.C.B. • Use by selecting adequate one for vacuum nozzle diameter and centering chuck shape of automatic mounting machine.
3-3	<u>Reflow soldering</u> 1) Soldering method Solder by using reflow bath. <Recommended soldering condition> <div data-bbox="256 1332 667 1615"> </div> <p><u>Recommended reflow temperature profile</u></p> <p>Note) Temperature shown above indicates it of contact terminal portion.</p> 2) Cleaning Cleaning of flux residue is recommended by considering the reliability of insulation resistance and corrosion characteristics after soldered.	<ul style="list-style-type: none"> • Please check the reflow soldering condition for your own application beforehand due to different conditions with soldering devices, P.C. Boards, etc. • No moisture treatment before reflow process. <div data-bbox="948 1581 1417 1762" style="border: 2px solid red; padding: 5px; margin-top: 10px;"> <p> 勝 特 力 材 料 886-3-5753170 勝特力电子(上海) 86-21-34970699 勝特力电子(深圳) 86-755-83298787 Http://www.100y.com.tw </p> </div>

NUMBER GS-20-129	TYPE APPLICATION SPECIFICATION		
TITLE Handling Procedures and Remarks for 1.0mm Pitch FPC/FFC Connector SFW__R-1/2ST__LF		PAGE 4 of 6	REVISION A
		AUTHORIZED BY M.YAMASHITA	DATE 26 OCT 09
		CLASSIFICATION UNRESTRICTED	

No	Procedure	Remarks
3-4	<p>Connection of conductor (FPC/FFC)</p> <p>1) Provide open status by operating slider. In this case, operate both edges of slider by all means. (Slider is fixed by keeping lift up condition on the slant.)</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>OPERATION</p> <p>SFW__R-1ST__LF</p> </div> <div style="text-align: center;">  <p>OPERATION</p> <p>SFW__R-2ST__LF</p> </div> </div> <p>2) Conductive side(Finger portion) of conductor is matched to contacting portion of connector.</p> <p>3) Insert conductor from the inserting window of connector parallel until it fits against. (In this condition, conductor is fixed temporarily.)</p> <p>4) After confirming that the conductor is inserted correctly, lock slider. In this case, confirm that both edges are locked securely by operating both edges of slider.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>OPERATION</p> <p>SFW__R-1ST__LF</p> </div> <div style="text-align: center;">  <p>OPERATION</p> <p>SFW__R-2ST__LF</p> </div> </div>	<ul style="list-style-type: none"> When providing open status by operating slider, operate the both edges parallel until they stop perfectly. <div style="display: flex; justify-content: space-around;">   </div> <ul style="list-style-type: none"> Make conductor vertically against slider by all means at the condition of being slider locked by inserting conductor. <div style="display: flex; justify-content: space-around;">   </div> <ul style="list-style-type: none"> At the condition of being slider locked, adjust so as not to have any gap at connecting portion of slider and main body. <div style="display: flex; justify-content: space-around;">   </div> <ul style="list-style-type: none"> Do not put excess force on conductor and connector at the condition of being conductor mated.

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NUMBER GS-20-129	TYPE APPLICATION SPECIFICATION		
TITLE Handling Procedures and Remarks for 1.0mm Pitch FPC/FFC Connector SFW__R-1/2ST__LF		PAGE 5 of 6	REVISION A
		AUTHORIZED BY M.YAMASHITA	DATE 26 OCT 09
		CLASSIFICATION UNRESTRICTED	

No	Procedure	Remarks
3-5	<p>Removing of conductor (FPC/FFC)</p> <p>1) Provide open status by operating slider. In this case, operate both edges of slider by all means. Also, for SFW__R-1ST__LF (Lower contacts type), operate by turning minus driver after putting into the slot for operating fixture.</p>  <p>2) Extract conductor to upper slant direction against P.C.Board.</p>	<ul style="list-style-type: none"> Excessive operation may cause breakage of slider.  <ul style="list-style-type: none"> Remove conductor after making slider open status perfectly.

4. OTHER REMARKS

- Do not insert lead other than FFC, FPC, and probe etc. directly into contacting portion.
Since CIC (Conductor such as silver paste, carbon etc.) can not be used for this product, please consult us separately.
- Do not make any soldering in the condition of being conductor mated.
- Operating force of slider may become larger considerably if number of conductors increase.

5. STORAGE OF CONNECTOR

- Avoid the places where dust, oil and water etc. are splashed or have direct sunshine.
Solderability may be deteriorated if the connector is stocked for long time under high temperature, high humidity.
- Preferable stock condition
 Temperature : Less than 30℃
 Humidity : Less than 60% (Relative Humidity)
 Period : Within 3 months

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NUMBER	TYPE	FCI	
GS-20-129	APPLICATION SPECIFICATION		
TITLE Handling Procedures and Remarks for 1.0mm Pitch FPC/FFC Connector SFW__R-1/2ST__LF		PAGE	REVISION
		6 of 6	A
		AUTHORIZED BY	DATE
		M.YAMASHITA	26 OCT 09
		CLASSIFICATION UNRESTRICTED	

REVISION RECORD

REV.	PAGE	DESCRIPTION	ECR #	DATE
A	All	New release	J09-0378	26 OCT 09

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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 58 / tolerance ISO 1302 406 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.

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)


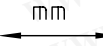
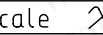

PACKAGE STYLE

LEAD FREE

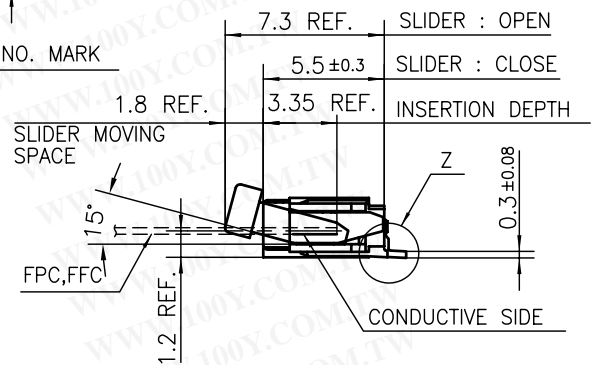
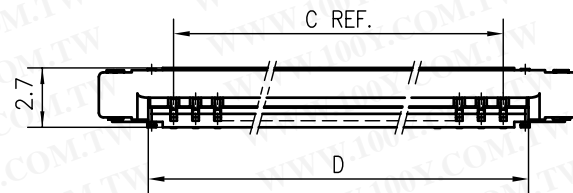
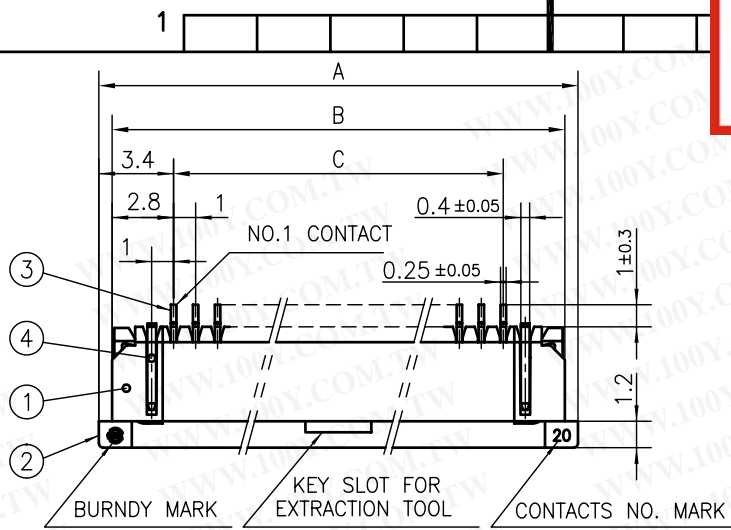
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NOTES

1. THIS PRODUCT IS THE CONNECTOR USED FOR FPC/FFC AND COPE 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 ✓ tolerance ISO 1302 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							scale 							
AC	S08-0276	DGOH	08-08-22														
				dr	H. TAKAKURA		06-09-26				dwg no				sheet 1 of 1		size
				enr	H. TAKAKURA		06-09-26				JSA 95854				A4		
				chr	DENNIS GOH		08-08-22				type Product Customer Drawing						
				appd	JOEY NG		08-08-22										
sheet index	revision	AC															Rev. AC
	sheet	1															

SC-SFW10 JSA95855 95856 95857 95858 95859 91605 91604



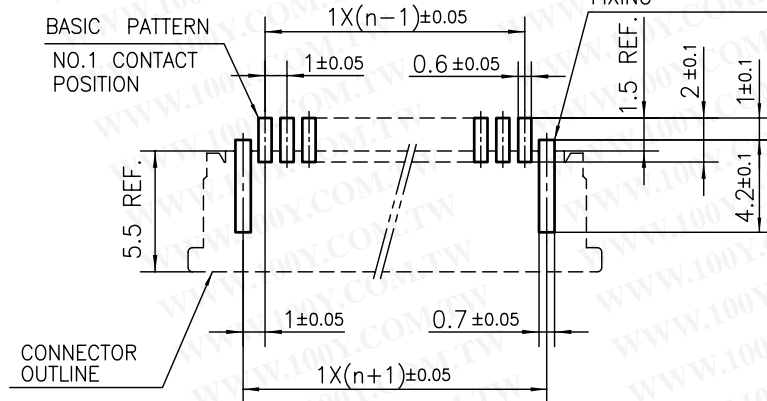
PT. NO.	PARTS NAME	MATERIAL	Q'TY	NOTE
1	HOUSING	PPS RESIN GLASS REINFORCED (UL94V-0)	1	COLOR : BROWN
2	SLIDER	PPS RESIN GLASS REINFORCED (UL94V-0)	1	COLOR : BLACK
3	CONTACT	PHOSPHOR BRONZE	n	PLATING : TIN
4	MOUNTING PLATE		2	

n : NO. OF CONTACTS

NOTES

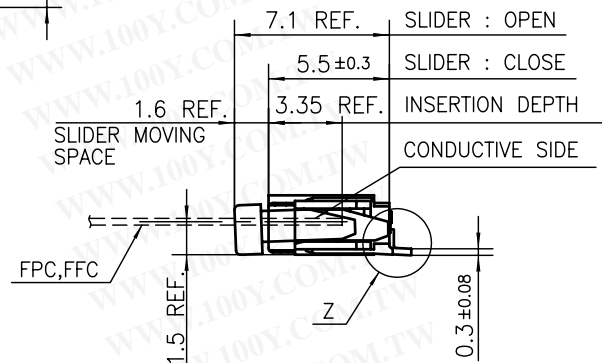
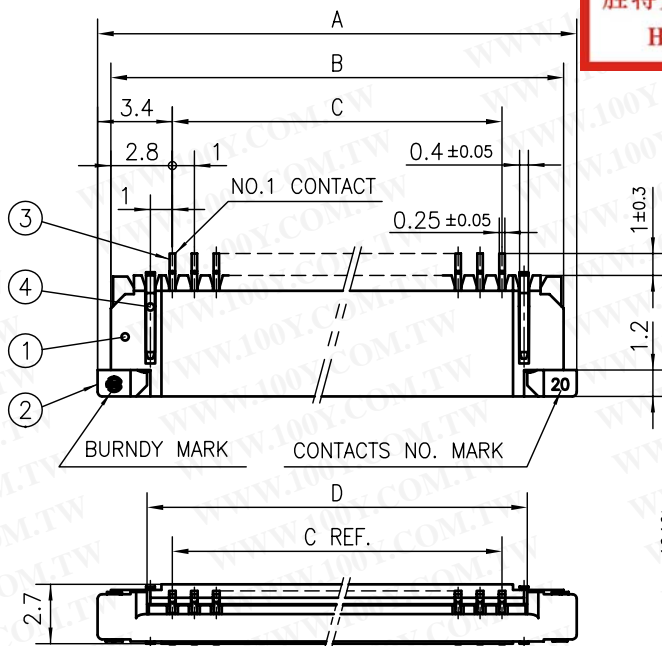
1. THIS PRODUCT IS THE CONNECTOR USED FOR FPC/FFC AND COPES WITH AUTOMATIC MOUNTING (SMT).
2. FLATNESS FOR CONTACT TERMINAL HOUSING MUST BE WITHIN TOLERANCE IN Z PORTION DETAILED DRAWING.
3. THIS PRODUCT IS LOWER CONTACT TYPE CONNECTOR.
4. THIS PRODUCT MEETS EUROPEAN UNION DIRECTIVES AND OTHER COUNTRY 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 sheet	AE	1					


SC_SF10 JSA95854
 form: A4



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

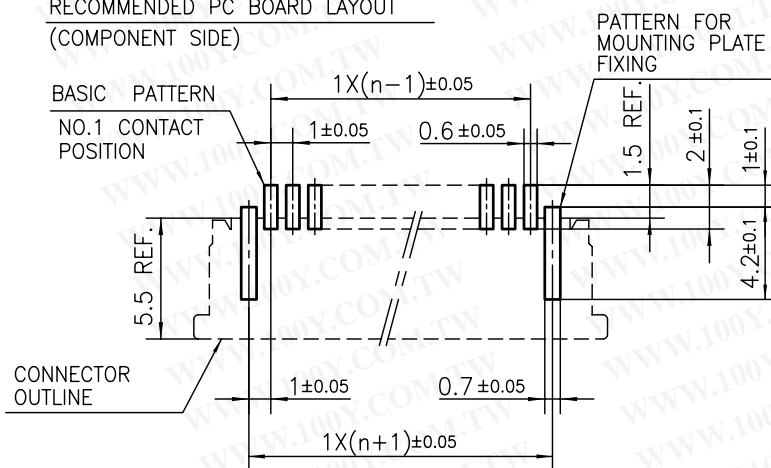
n : NO. OF CONTACTS

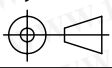
NOTES

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)

BASIC PATTERN
NO.1 CONTACT
POSITION



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	
AC	J05-0736	H.T	05-10-28			scale X		
AD	J06-0398	H.T	06-09-26	dr	H. TAKAKURA	06-09-26	JSA 95856	
AE	S08-0276	DGOH	08-08-22	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	AE						Rev. AE
sheet	sheet	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)


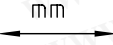
TAPE PACKAGING

LEAD FREE

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

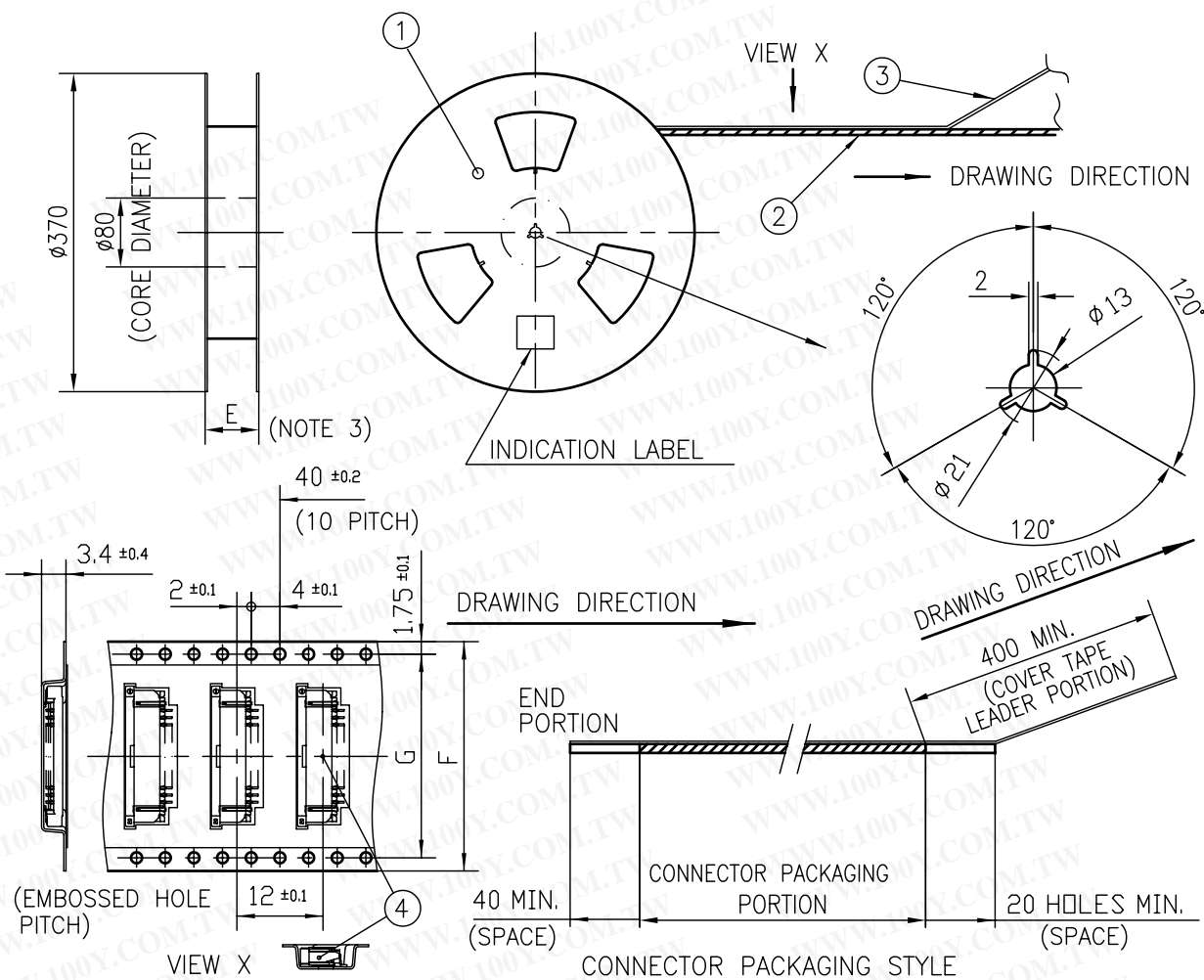
NOTES

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 / tolerance ISO 1302 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					
AC	S08-0276	DGOH	08-08-22					
				dr	H. TAKAKURA	06-09-26	dwg no sheet 1 of 1 size JSA 95857 A4	
				enr	H. TAKAKURA	06-09-26		
				chr	DENNIS GOH	08-08-22		
				appd	JOEY NG	08-08-22		
sheet index	revision	AC					type Product Customer Drawing	
	sheet	1					Rev. AC	


SC_SFW10 JSA95854 95858 95859

form: A4

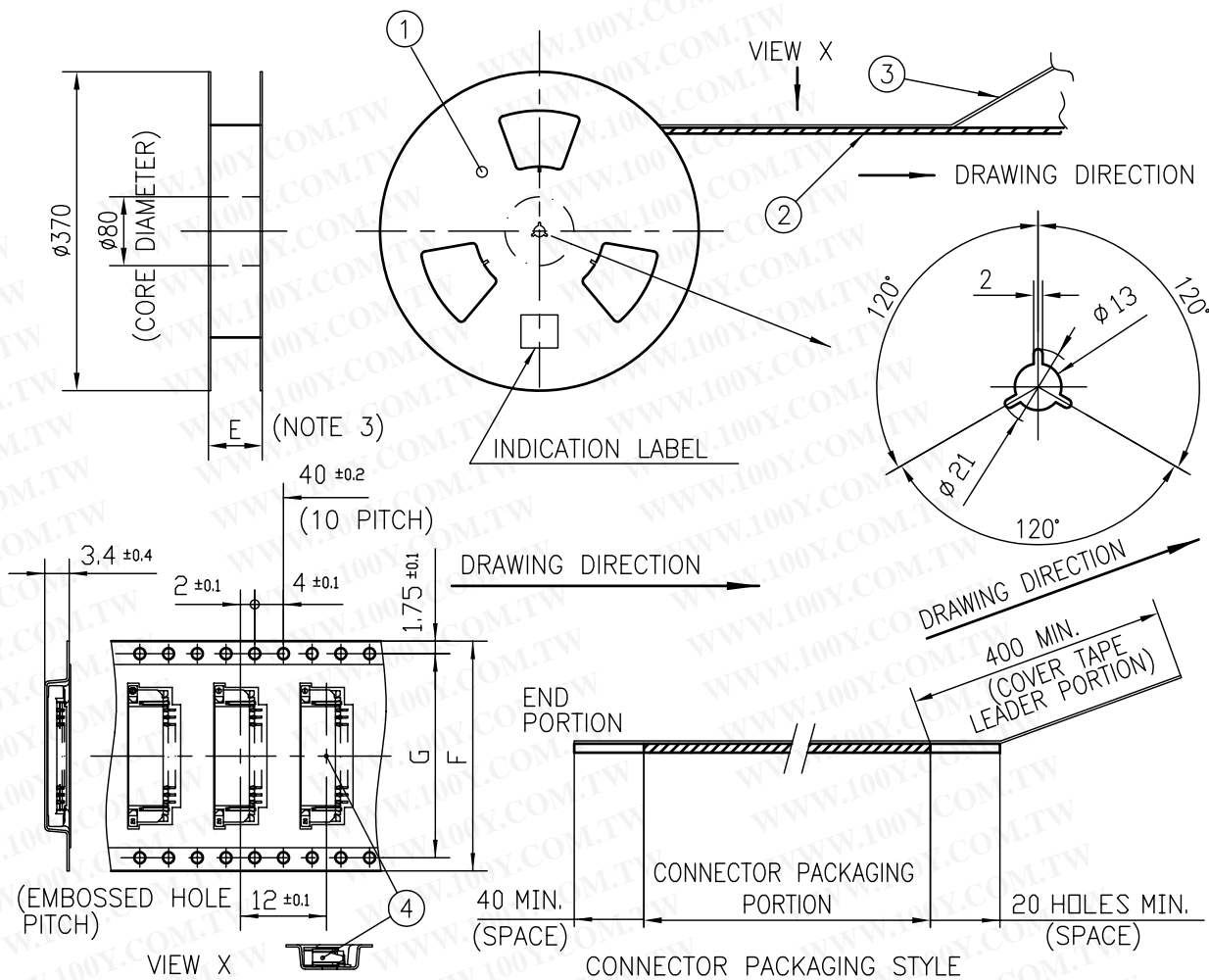


PT. NO.	PARTS NAME	CAT. NO.	MATERIAL	Q'TY	NOTE
1	REEL	_____	CARDBOARD	1	COLOR:WHITE/GREY
2	PLASTIC (EMBOSS) TAPE	_____	PET	_____	COLOR:TRANSPARENCY
3	COVER	_____	POLYESTER	_____	COLOR:TRANSPARENCY
4	CONNECTOR	SFW__R-1ST__LF	SEE ATTACHED DWG.	2000	LOWER CONTACT TYPE

NOTES


1. THIS IS PLASTIC TAPE PACKAGED CONNECTOR USED FOR FPC/FFC AND 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.

[illegible]



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

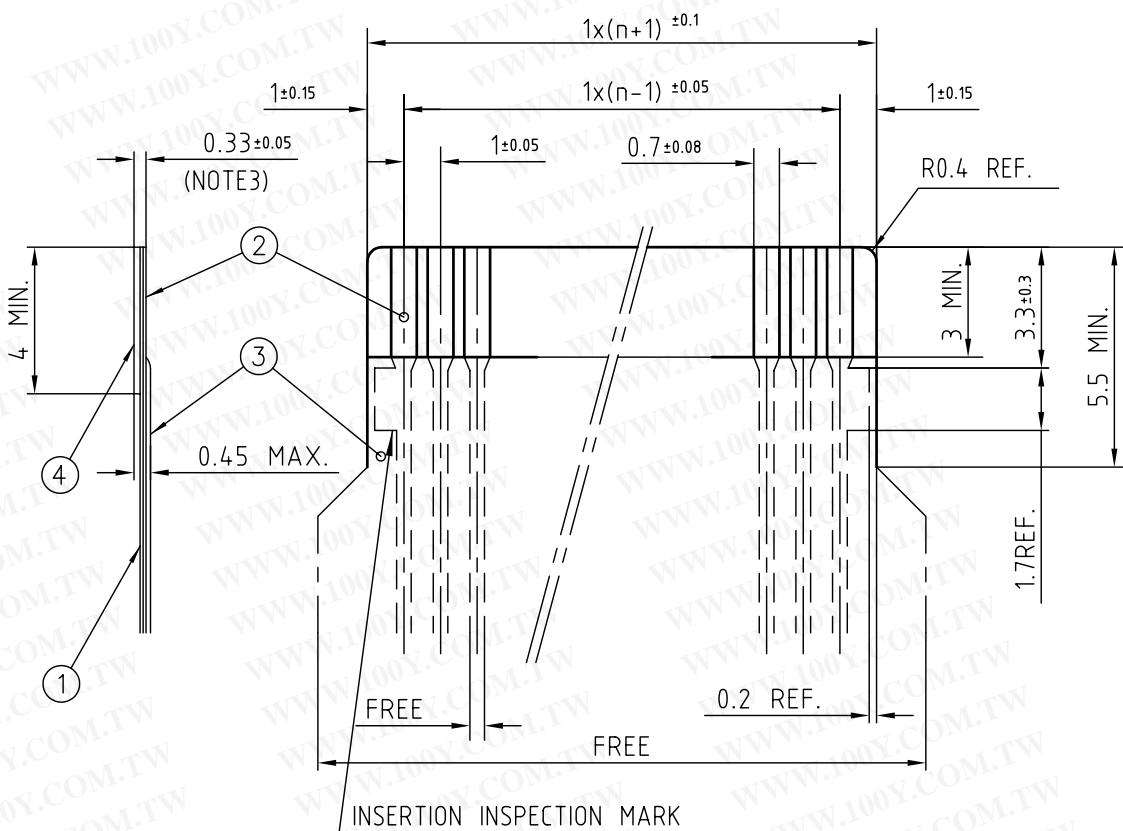
NOTES

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.

[illegible]


RECOMMENDED CABLE (FPC)

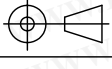
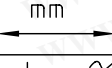

n : NO. OF CONDUCTOR



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

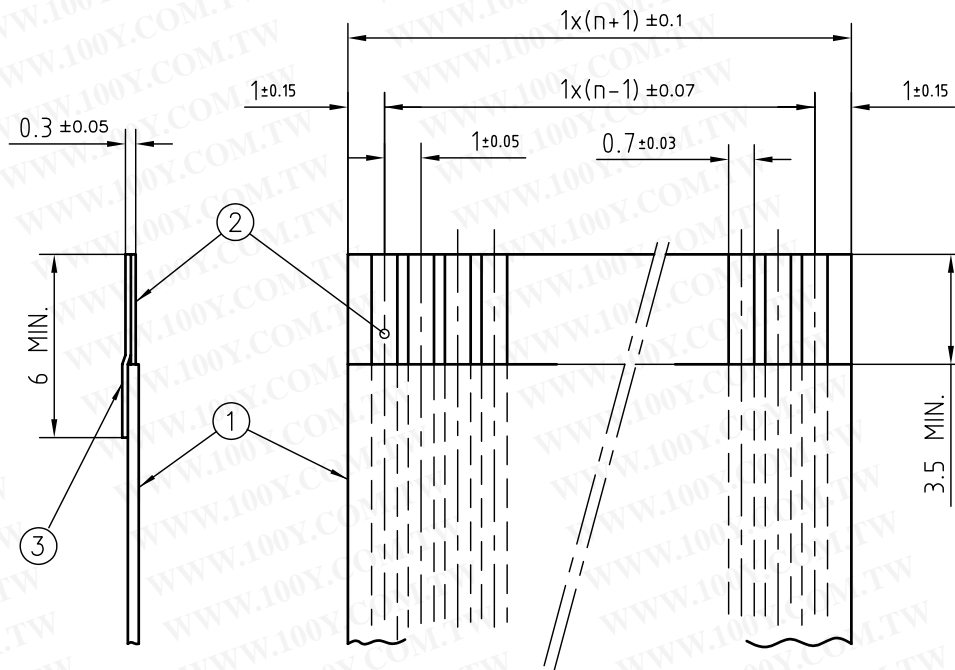
NOTES

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 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			scale 	dwg no sheet 1 of 1 size JSA 91605 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 sheet	AC	1					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	tolerance	projection	product family	CODE
				ISO 1302	ISO 406		58RF	JP
				tolerances unless otherwise specified			title	
ltr	ecn no	dr	date	angles	linear	mm	RECOMMENDED CABLE	
AA	J05-0055	H.T	05-02-04				(Cat. No. SFW__R-1/2__)	
AB	J06-0398	H.T	06-09-26				dwg no	
AC	S08-0276	DGOH	08-08-22			scale	sheet 1 of 1	
				dr	H. TAKAKURA	06-09-26	JSA 91604	
				enr	H. TAKAKURA	06-09-26	A4	
				chr	DENNIS GOH	08-08-22	type	
				appd	JOEY NG	08-08-22	Product Customer Drawing	
sheet	revision	AC					Rev.	
index	sheet	1					AC	