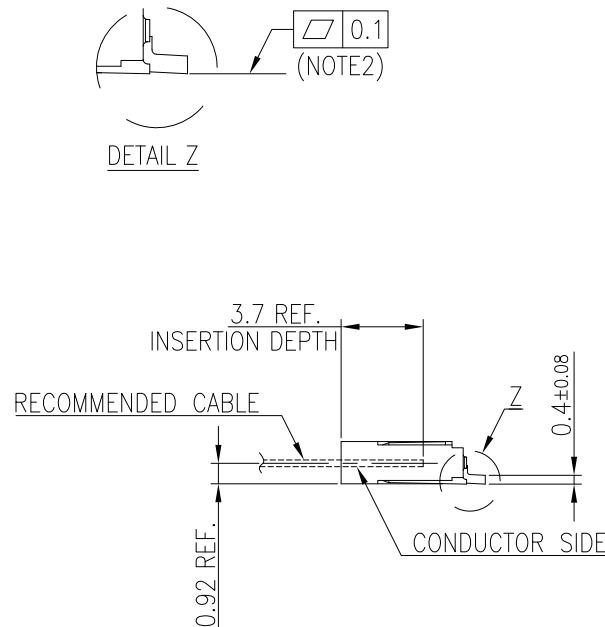
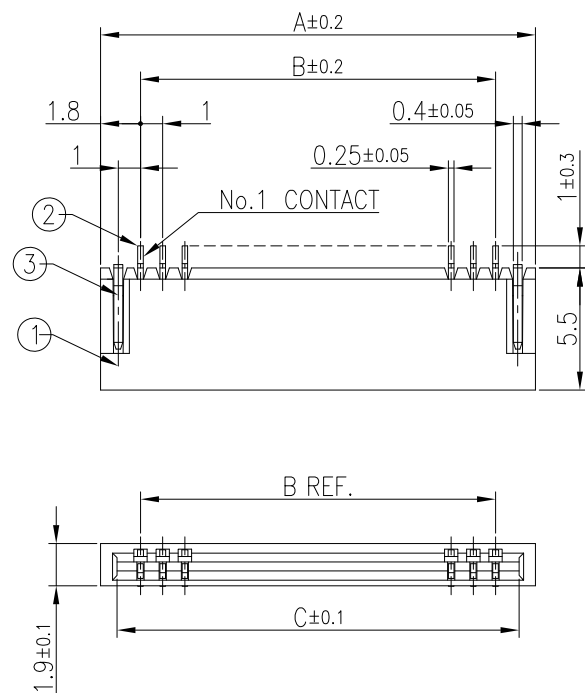


PRODUCT NO.  
HFW\_R-1ST\_\_\_H1LF



#### MATERIAL TABLE

PT. NO.	PARTS NAME	MATERIAL	Q'TY	NOTE
1	HOUSING	LCP RESIN GLASS REINFORCED (UL94V-0)	1	COLOR : BLACK (HALOGEN FREE)
2	CONTACT	PHOSPHOR BRONZE	n	PLATING : SEE PLATING OPTION (LEAD FREE)
3	MOUNTING PLATE		2	PLATING : MATTE TIN 1.5um min (LEAD FREE) NICKEL UNDER PLATING 1.27um min.

n : NO. OF CONTACTS

#### NOTES

- THIS PRODUCT IS THE LOWER CONTACT TYPE CONNECTOR DESIGNED TO TERMINATE FPC/FFC AND CYPES WITH AUTOMATIC MOUNTING (SMT).
- FLATNESS OF CONTACT TERMINAL AND MOUNTING PLATE TO HOUSING MUST BE WITHIN TOLERANCE IN Z PORTION DETAILED DRAWING.
- THIS PRODUCT MEETS EUROPEAN UNION DIRECTIVES AND OTHER COUNTRY REGULATIONS AS DESCRIBED IN GS47-0004.
- THE HOUSING WILL WITHSTAND EXPOSURE TO 260°C PEAK TEMPERATURE FOR 10 SECONDS IN A REFLOW SOLDERING OVEN.
- CATALOG NUMBER STRUCTURE IS AS FOLLOWINGS.


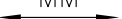

SERIES NAME \_\_\_\_\_ HFW (n) R - 1 ST A \_\_\_ H1LF  
NO. OF CONTACT \_\_\_\_\_  
RIGHT ANGLE TYPE \_\_\_\_\_  
LOWER CONTACT TYPE FOR FPC/FFC \_\_\_\_\_  
FOR AUTOMATIC MOUNTING (SMT) \_\_\_\_\_  
PLATING OPTION \_\_\_\_\_  
1.27um min. Ni UNDER PLATING FOR ALL OPTIONS  
FINISH PLATING : REFER TO PLATING OPTION TABLE  
PACKAGING OPTION \_\_\_\_\_  
REFER TO SHEET2  
HALOGEN AND LEAD FREE \_\_\_\_\_

#### CAT. NO. & DIMENSIONS

NO. OF CONT (n)	CAT. NO.	DIMENSIONS		
		A	B	C
4	HFW4R-1ST___H1LF	6.6	3	5.14
5	HFW5R-1ST___H1LF	7.6	4	6.14
6	HFW6R-1ST___H1LF	8.6	5	7.14
7	HFW7R-1ST___H1LF	9.6	6	8.14
8	HFW8R-1ST___H1LF	10.6	7	9.14
9	HFW9R-1ST___H1LF	11.6	8	10.14
10	HFW10R-1ST___H1LF	12.6	9	11.14
11	HFW11R-1ST___H1LF	13.6	10	12.14
12	HFW12R-1ST___H1LF	14.6	11	13.14
13	HFW13R-1ST___H1LF	15.6	12	14.14
14	HFW14R-1ST___H1LF	16.6	13	15.14
15	HFW15R-1ST___H1LF	17.6	14	16.14
16	HFW16R-1ST___H1LF	18.6	15	17.14
17	HFW17R-1ST___H1LF	19.6	16	18.14
18	HFW18R-1ST___H1LF	20.6	17	19.14
19	HFW19R-1ST___H1LF	21.6	18	20.14
20	HFW20R-1ST___H1LF	22.6	19	21.14
21	HFW21R-1ST___H1LF	23.6	20	22.14
22	HFW22R-1ST___H1LF	24.6	21	23.14
23	HFW23R-1ST___H1LF	25.6	22	24.14
24	HFW24R-1ST___H1LF	26.6	23	25.14
25	HFW25R-1ST___H1LF	27.6	24	26.14
26	HFW26R-1ST___H1LF	28.6	25	27.14
27	HFW27R-1ST___H1LF	29.6	26	28.14
28	HFW28R-1ST___H1LF	30.6	27	29.14
29	HFW29R-1ST___H1LF	31.6	28	30.14
30	HFW30R-1ST___H1LF	32.6	29	31.14

#### PLATING OPTION TABLE

PRODUCT NUMBER	PLATING OPTION	CONTACT PLATING	TERMINAL PLATING
HFW_R-1ST___H1LF	BLANK	MATTE TIN : 2um min.	MATTE TIN : 2um min.
HFW_R-1STZ___H1LF	Z	MATTE THIN TIN PLATING	MATTE TIN : 1um min.
HFW_R-1STA___H1LF	A	GOLD : 0.3um min.	GOLD : 0.05um min.
HFW_R-1STB___H1LF	B	GOLD : 0.3um min.	MATTE TIN : 1um min.
HFW_R-1STG___H1LF	G	GOLD : 0.05um min. WITH Ni DAM	GOLD : 0.05um min.

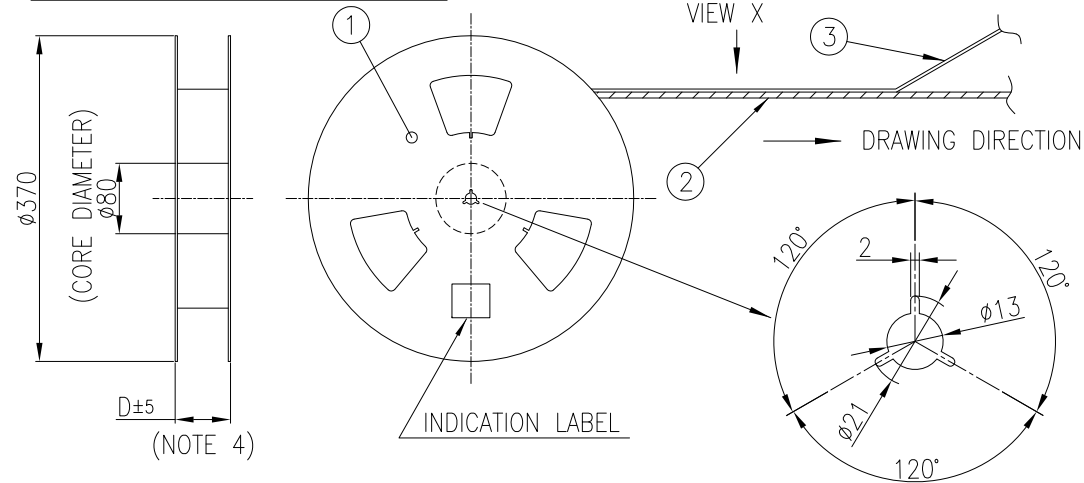
mat'l. code SEE_TABLE				surface ISO 1302 ✓				tolerance ISO 406 ISO 1101				projection 				product family 58NF															
ltr	ecn no		dr	date		tolerances unless otherwise specified								title 1mm SPACING SMT CONNECTOR (Cat. No. HFW__R-1ST___H1LF)																	
A			S.W.	2018-10-18		angles linear		0.X/±0.2																							
B	ELX-J-32753		S.W.	2019-02-22				0.XX/±0.2																							
						0°±2°		0.XXX/±0.2				scale 3:1																			
						dr		S.WATANABE				2019-02-22								dwg no				sheet 1 of 5				size			
						engr		S.WATANABE				2019-02-22								10149903				A3							
						chr		S-H.THIO				2019-02-25																			
						appd		Y.KAMEDA				2019-02-25																			
sheet index		revision sheet		B	B	B	B	B												type CUSTOMER DRAWING											
				1	2	3	4	5																							

PRODUCT NO.  
HFW\_\_R-1ST\_E\_H1LF

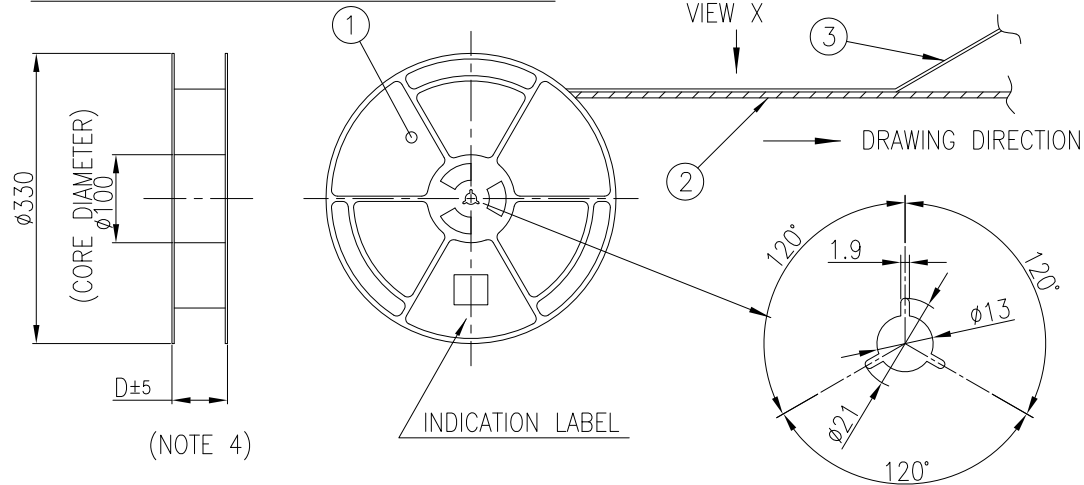
CAT. NO. & DIMENSIONS

NO. OF CONT (n)	CAT. NO.	DIMENSIONS		
		D	E	F
4	HFW4R-1ST_E_H1LF	28.4	24	—
5	HFW5R-1ST_E_H1LF	28.4	24	—
6	HFW6R-1ST_E_H1LF	28.4	24	—
7	HFW7R-1ST_E_H1LF	28.4	24	—
8	HFW8R-1ST_E_H1LF	28.4	24	—
9	HFW9R-1ST_E_H1LF	28.4	24	—
10	HFW10R-1ST_E_H1LF	28.4	24	—
11	HFW11R-1ST_E_H1LF	28.4	24	—
12	HFW12R-1ST_E_H1LF	28.4	24	—
13	HFW13R-1ST_E_H1LF	28.4	24	—
14	HFW14R-1ST_E_H1LF	28.4	24	—
15	HFW15R-1ST_E_H1LF	36.4	32	28.4
16	HFW16R-1ST_E_H1LF	36.4	32	28.4
17	HFW17R-1ST_E_H1LF	36.4	32	28.4
18	HFW18R-1ST_E_H1LF	36.4	32	28.4
19	HFW19R-1ST_E_H1LF	48.4	44	40.4
20	HFW20R-1ST_E_H1LF	48.4	44	40.4
21	HFW21R-1ST_E_H1LF	48.4	44	40.4
22	HFW22R-1ST_E_H1LF	48.4	44	40.4
23	HFW23R-1ST_E_H1LF	48.4	44	40.4
24	HFW24R-1ST_E_H1LF	48.4	44	40.4
25	HFW25R-1ST_E_H1LF	48.4	44	40.4
26	HFW26R-1ST_E_H1LF	48.4	44	40.4
27	HFW27R-1ST_E_H1LF	48.4	44	40.4
28	HFW28R-1ST_E_H1LF	48.4	44	40.4
29	HFW29R-1ST_E_H1LF	48.4	44	40.4
30	HFW30R-1ST_E_H1LF	60.4	56	52.4

FOR E1 PACKAGING OPTION



FOR E5 AND E9 PACKAGING OPTION

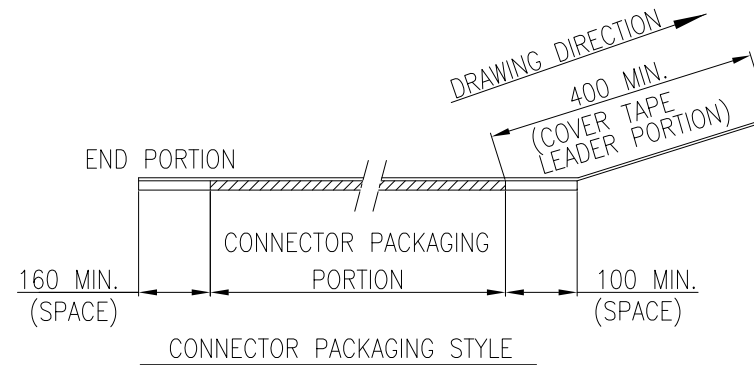
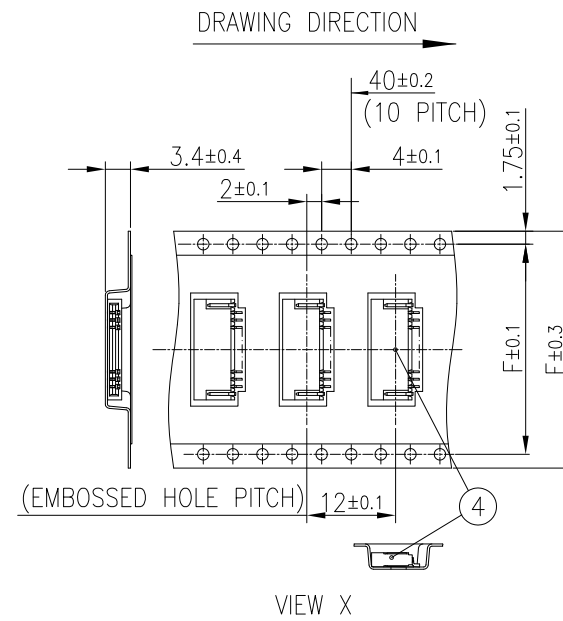


PACKAGING OPTION TABLE

PRODUCT NUMBER	PACKAGING OPTION	REEL MATERIAL	REEL DIAMETER	CONNECTOR QUANTITY
HFW_R-1ST_E1H1LF	E1	CARDBOARD	$\phi 370$	2000 / REEL
HFW_R-1ST_E5H1LF	E5	PLASTIC	$\phi 330$	1500 / REEL
HFW_R-1ST_E9H1LF	E9	PLASTIC	$\phi 330$	500 / REEL

NOTES

- THIS IS PLASTIC TAPE PACKAGED CONNECTOR DESIGNED TO TERMINATE FPC/FFC AND COPES WITH AUTOMATIC MOUNTING (SMT).
- SEE JIS C 0806 (PACKING OF ELECTRONIC COMPONENTS ON CONTINUOUS TAPES (SURFACE MOUNTING DEVICES)) FOR SHAPE AND DIMENSIONS OF PLASTIC (EMBOSSSED) TAPE AND REEL.
- D DIMENSION IS PORTION OF THE CORE.

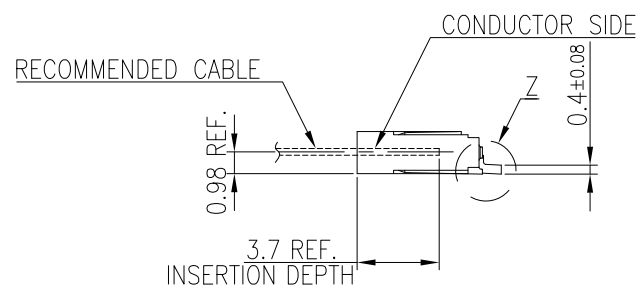
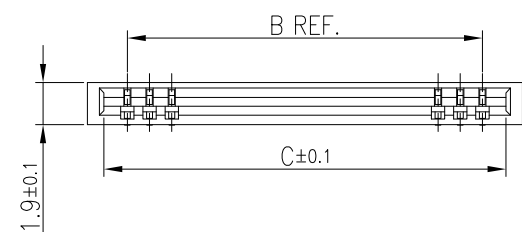
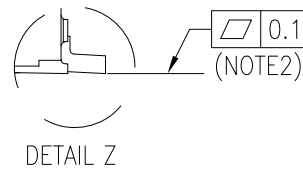
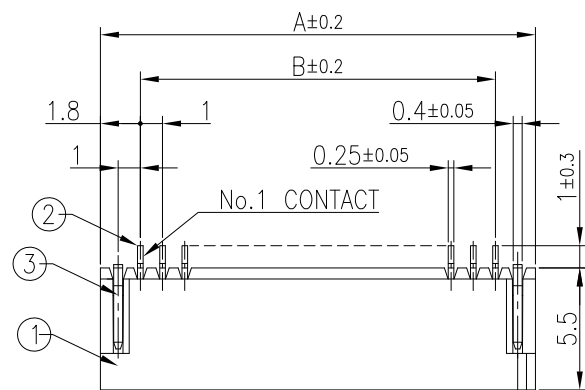


MATERIAL TABLE

PT. NO.	PARTS NAME	CAT. NO.	MATERIAL	COLOR
1	REEL	—	CARDBOARD	WHITE
			POLYSTYRENE	BLACK
2	EMBOSS TAPE	—	PS or A-PET	TRANSPARENT
3	COVER TAPE	—	POLYESTER, POLYETHYLENE	TRANSPARENT
4	CONNECTOR	HFW_R-1ST__H1LF	SEE SHEET 1	

mat'l. code SEE_TABLE				surface ISO 1302 ✓	tolerance ISO 406 ISO 1101	projection MM	product family 58NF
ltr	ecn no	dr	date	tolerances unless otherwise specified	linear	scale N/A	title 1mm SPACING SMT CONNECTOR (Cat.No. HFW__R-1ST_E_H1LF)
B				angles $0^\circ \pm 5^\circ$	$0.X/\pm 0.5$ $0.XX/\pm 0.5$ $0.XXX/\pm 0.5$		dwg no 10149903
				dr	S.WATANABE	2019-02-22	sheet 2 of 5
				enr	S.WATANABE	2019-02-22	size A3
				chr	S-H.THIO	2019-02-25	
				appd	Y.KAMEDA	2019-02-25	
sheet index	revision sheet						type CUSTOMER DRAWING

PRODUCT NO.  
HFW\_R-2ST\_\_\_H1LF



#### MATERIAL TABLE

PT. NO.	PARTS NAME	MATERIAL	Q'TY	NOTE
1	HOUSING	LCP RESIN GLASS REINFORCED (UL94V-0)	1	COLOR : BLACK (HALOGEN FREE)
2	CONTACT	PHOSPHOR BRONZE	n	PLATING : SEE PLATING OPTION (LEAD FREE)
3	MOUNTING PLATE		2	PLATING : MATTE TIN 1.5um min. (LEAD FREE) NICKEL UNDER PLATING 1.27um min.

n : NO. OF CONTACTS

#### NOTES

- THIS PRODUCT IS THE UPPER CONTACT TYPE CONNECTOR DESIGNED TO TERMINATE FPC/FFC AND COPES WITH AUTOMATIC MOUNTING (SMT).
- FLATNESS OF CONTACT TERMINAL AND MOUNTING PLATE TO HOUSING MUST BE WITHIN TOLERANCE IN Z PORTION DETAILED DRAWING.
- THIS PRODUCT MEETS EUROPEAN UNION DIRECTIVES AND OTHER COUNTRY REGULATIONS AS DESCRIBED IN GS47-0004.
- THE HOUSING WILL WITHSTAND EXPOSURE TO 260°C PEAK TEMPERATURE FOR 10 SECONDS IN A REFLOW SOLDERING OVEN.
- CATALOG NUMBER STRUCTURE IS AS FOLLOWINGS.

SERIES NAME \_\_\_\_\_ HFW (n) R - 2 ST A \_\_\_ H1LF  
NO. OF CONTACT \_\_\_\_\_  
RIGHT ANGLE TYPE \_\_\_\_\_  
UPPER CONTACT TYPE FOR FPC/FFC \_\_\_\_\_  
FOR AUTOMATIC MOUNTING (SMT) \_\_\_\_\_  
PLATING OPTION \_\_\_\_\_  
1.27um min. Ni UNDER PLATING FOR ALL OPTIONS  
FINISH PLATING : REFER TO PLATING OPTION TABLE  
PACKAGING OPTION \_\_\_\_\_  
REFER TO SHEET4  
HALOGEN AND LEAD FREE \_\_\_\_\_

#### CAT. NO. & DIMENSIONS

NO. OF CONT (n)	CAT. NO.	DIMENSIONS		
		A	B	C
4	HFW4R-2ST___H1LF	6.6	3	5.14
5	HFW5R-2ST___H1LF	7.6	4	6.14
6	HFW6R-2ST___H1LF	8.6	5	7.14
7	HFW7R-2ST___H1LF	9.6	6	8.14
8	HFW8R-2ST___H1LF	10.6	7	9.14
9	HFW9R-2ST___H1LF	11.6	8	10.14
10	HFW10R-2ST___H1LF	12.6	9	11.14
11	HFW11R-2ST___H1LF	13.6	10	12.14
12	HFW12R-2ST___H1LF	14.6	11	13.14
13	HFW13R-2ST___H1LF	15.6	12	14.14
14	HFW14R-2ST___H1LF	16.6	13	15.14
15	HFW15R-2ST___H1LF	17.6	14	16.14
16	HFW16R-2ST___H1LF	18.6	15	17.14
17	HFW17R-2ST___H1LF	19.6	16	18.14
18	HFW18R-2ST___H1LF	20.6	17	19.14
19	HFW19R-2ST___H1LF	21.6	18	20.14
20	HFW20R-2ST___H1LF	22.6	19	21.14
21	HFW21R-2ST___H1LF	23.6	20	22.14
22	HFW22R-2ST___H1LF	24.6	21	23.14
23	HFW23R-2ST___H1LF	25.6	22	24.14
24	HFW24R-2ST___H1LF	26.6	23	25.14
25	HFW25R-2ST___H1LF	27.6	24	26.14
26	HFW26R-2ST___H1LF	28.6	25	27.14
27	HFW27R-2ST___H1LF	29.6	26	28.14
28	HFW28R-2ST___H1LF	30.6	27	29.14
29	HFW29R-2ST___H1LF	31.6	28	30.14
30	HFW30R-2ST___H1LF	32.6	29	31.14

#### PLATING OPTION TABLE

PRODUCT NUMBER	PLATING OPTION	CONTACT PLATING	TERMINAL PLATING
HFW_R-2ST___H1LF	BLANK	MATTE TIN : 2um min.	MATTE TIN : 2um min.
HFW_R-2STZ___H1LF	Z	MATTE THIN TIN PLATING	MATTE TIN : 1um min.
HFW_R-2STA___H1LF	A	GOLD : 0.3um min.	GOLD : 0.05um min.
HFW_R-2STB___H1LF	B	GOLD : 0.3um min.	MATTE TIN : 1um min.
HFW_R-2STG___H1LF	G	GOLD : 0.05um min. WITH Ni DAM	GOLD : 0.05um min.

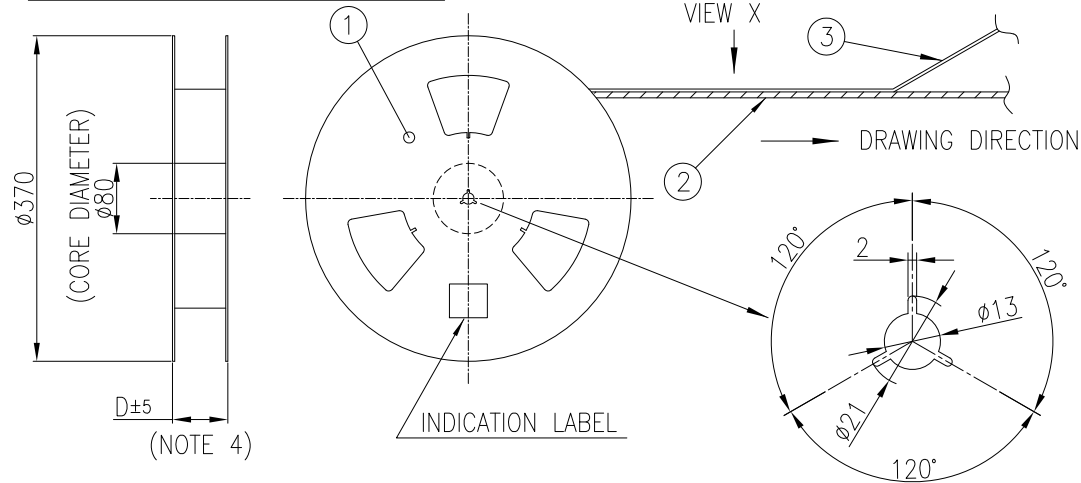
mat'l. code SEE_TABLE				surface ISO 1302 ✓	tolerance ISO 406 ISO 1101	projection MM	product family 58NF
ltr	ecn no	dr	date	tolerances unless otherwise specified			title
B				angles linear	0.X/±0.2		1mm SPACING SMT CONNECTOR
				0°±2°	0.XX/±0.2		(Cat. No. HFW___R-2ST___H1LF)
				dr	S.WATANABE	2019-02-22	dwg no
				enr	S.WATANABE	2019-02-22	sheet 3 of 5
				chr	S-H.THIO	2019-02-25	size
				appd	Y.KAMEDA	2019-02-25	A3
sheet index	revision sheet						type
							CUSTOMER DRAWING

PRODUCT NO.  
HFW\_\_R-2ST\_E\_H1LF

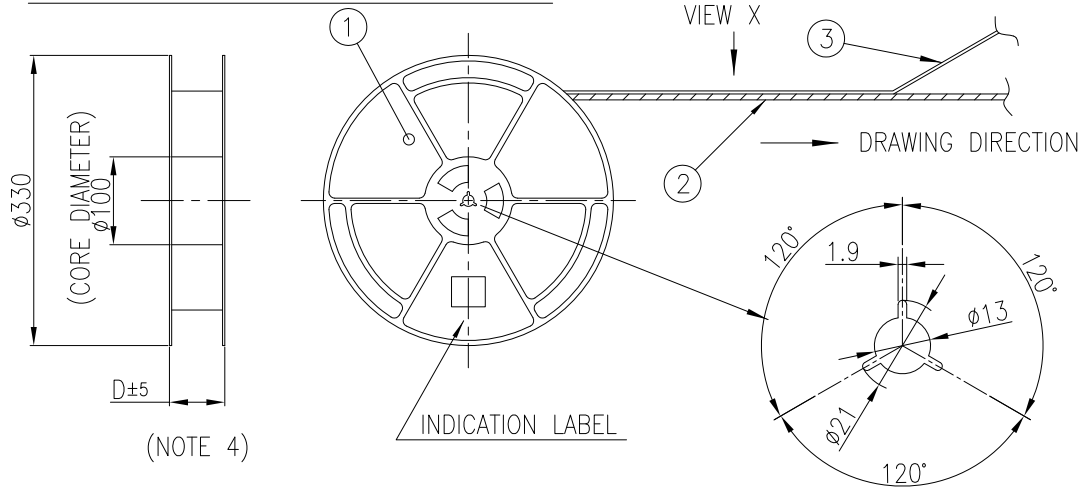
CAT. NO. & DIMENSIONS

NO. OF CONT (n)	CAT. NO.	DIMENSIONS		
		D	E	F
4	HFW4R-2ST_E_H1LF	28.4	24	—
5	HFW5R-2ST_E_H1LF	28.4	24	—
6	HFW6R-2ST_E_H1LF	28.4	24	—
7	HFW7R-2ST_E_H1LF	28.4	24	—
8	HFW8R-2ST_E_H1LF	28.4	24	—
9	HFW9R-2ST_E_H1LF	28.4	24	—
10	HFW10R-2ST_E_H1LF	28.4	24	—
11	HFW11R-2ST_E_H1LF	28.4	24	—
12	HFW12R-2ST_E_H1LF	28.4	24	—
13	HFW13R-2ST_E_H1LF	28.4	24	—
14	HFW14R-2ST_E_H1LF	28.4	24	—
15	HFW15R-2ST_E_H1LF	36.4	32	28.4
16	HFW16R-2ST_E_H1LF	36.4	32	28.4
17	HFW17R-2ST_E_H1LF	36.4	32	28.4
18	HFW18R-2ST_E_H1LF	36.4	32	28.4
19	HFW19R-2ST_E_H1LF	48.4	44	40.4
20	HFW20R-2ST_E_H1LF	48.4	44	40.4
21	HFW21R-2ST_E_H1LF	48.4	44	40.4
22	HFW22R-2ST_E_H1LF	48.4	44	40.4
23	HFW23R-2ST_E_H1LF	48.4	44	40.4
24	HFW24R-2ST_E_H1LF	48.4	44	40.4
25	HFW25R-2ST_E_H1LF	48.4	44	40.4
26	HFW26R-2ST_E_H1LF	48.4	44	40.4
27	HFW27R-2ST_E_H1LF	48.4	44	40.4
28	HFW28R-2ST_E_H1LF	48.4	44	40.4
29	HFW29R-2ST_E_H1LF	48.4	44	40.4
30	HFW30R-2ST_E_H1LF	60.4	56	52.4

FOR E1 PACKAGING OPTION



FOR E5 AND E9 PACKAGING OPTION

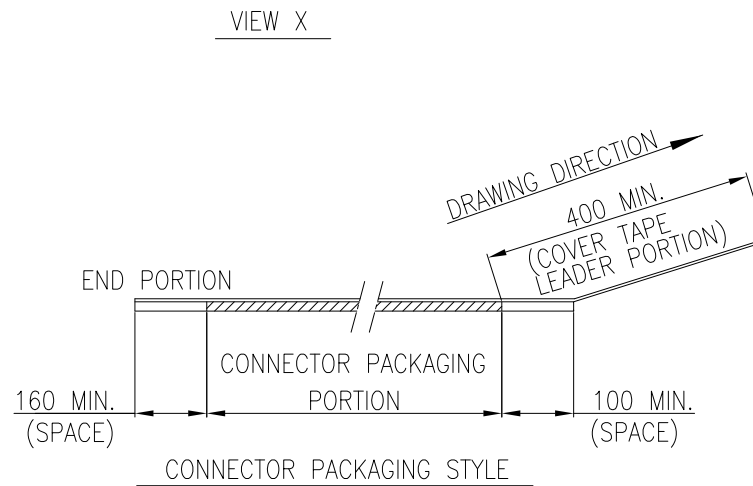
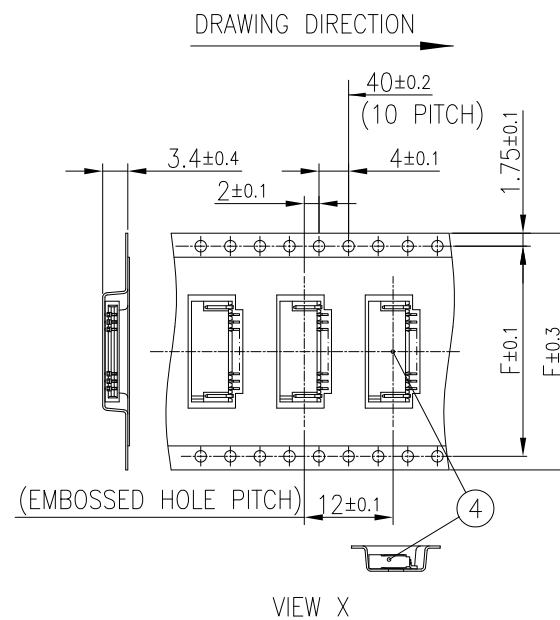


PACKAGING OPTION TABLE

PRODUCT NUMBER	PACKAGING OPTION	REEL MATERIAL	REEL DIAMETER	CONNECTOR QUANTITY
HFW_R-2ST_E1H1LF	E1	CARDBOARD	$\phi 370$	2000 / REEL
HFW_R-2ST_E5H1LF	E5	PLASTIC	$\phi 330$	1500 / REEL
HFW_R-2ST_E9H1LF	E9	PLASTIC	$\phi 330$	500 / REEL

NOTES

- THIS IS PLASTIC TAPE PACKAGED CONNECTOR DESIGNED TO TERMINATE FPC/FFC AND COPES WITH AUTOMATIC MOUNTING (SMT).
- SEE JIS C 0806 (PACKING OF ELECTRONIC COMPONENTS ON CONTINUOUS TAPES (SURFACE MOUNTING DEVICES)) FOR SHAPE AND DIMENSIONS OF PLASTIC (EMBOSSSED) TAPE AND REEL.
- D DIMENSION IS PORTION OF THE CORE.



MATERIAL TABLE

PT. NO.	PARTS NAME	CAT. NO.	MATERIAL	COLOR
1	REEL	—	CARDBOARD	WHITE
			POLYSTYRENE	BLACK
2	EMBOSS TAPE	—	PS or A-PET	TRANSPARENT
3	COVER TAPE	—	POLYESTER, POLYETHYLENE	TRANSPARENT
4	CONNECTOR	HFW_R-2ST__H1LF	SEE SHEET 3	

mat'l. code SEE_TABLE				surface ISO 1302 ✓	tolerance ISO 406 ISO 1101	projection MM	product family 58NF
ltr	ecn no	dr	date	tolerances unless otherwise specified	linear	scale N/A	title 1mm SPACING SMT CONNECTOR (Cat.No. HFW__R-2ST_E_H1LF)
B				angles $0^\circ \pm 5^\circ$	$0.X/\pm 0.5$ $0.XX/\pm 0.5$ $0.XXX/\pm 0.5$		
				dr	S.WATANABE	2019-02-22	dwg no
				enr	S.WATANABE	2019-02-22	sheet 4 of 5
				chr	S-H.THIO	2019-02-25	size A3
				appd	Y.KAMEDA	2019-02-25	type CUSTOMER DRAWING
sheet index	revision sheet						

