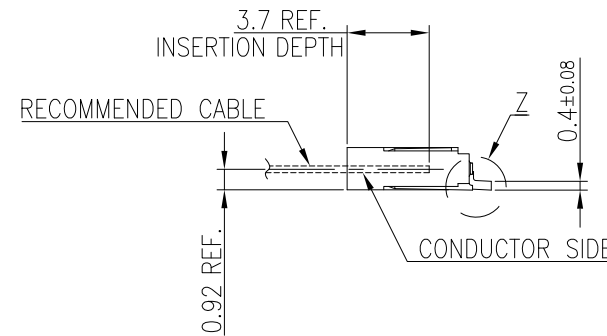
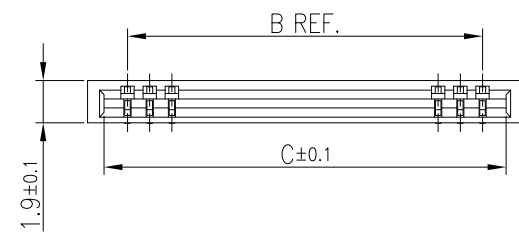
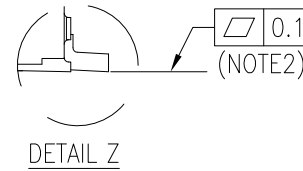
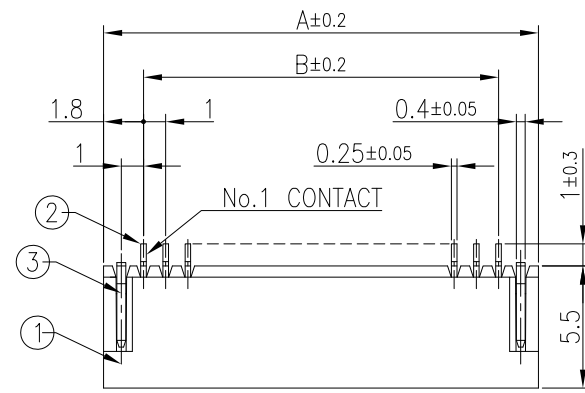


PRODUCT NO.

HFW_R-1ST__H1LF

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



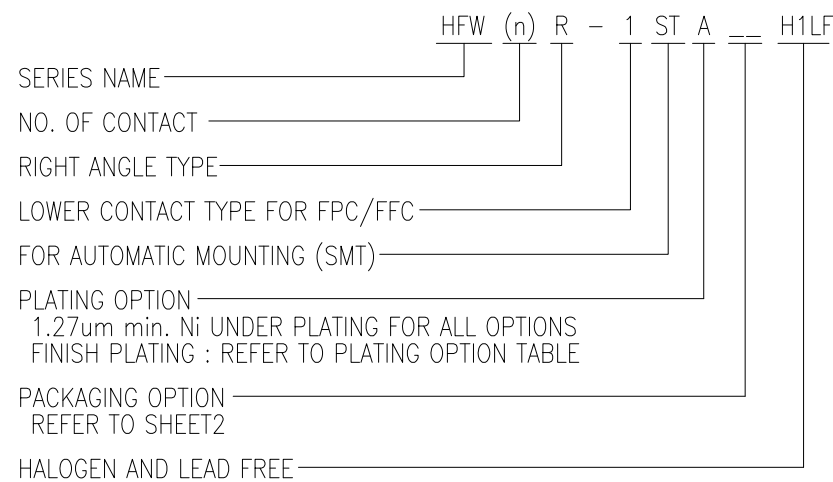
MATERIAL TABLE

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 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.



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.

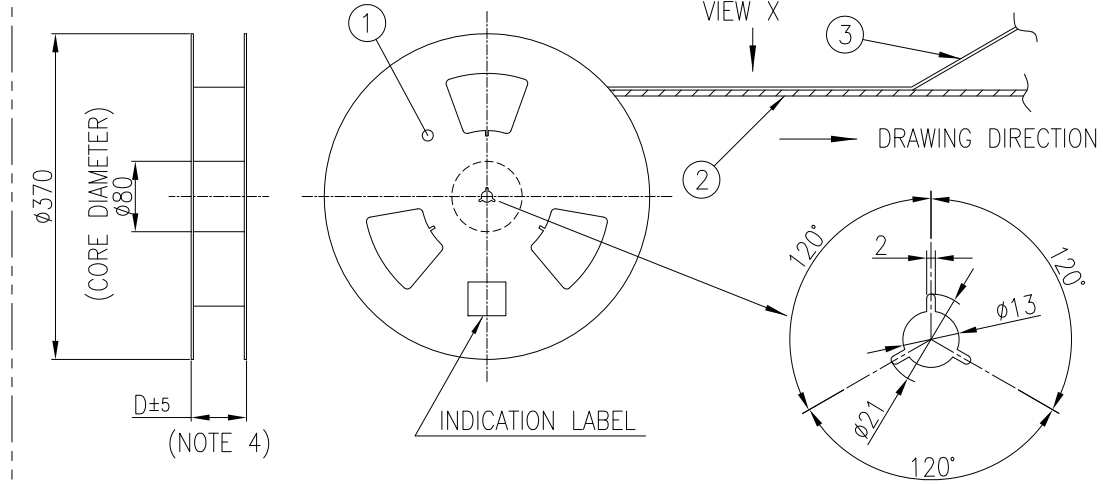
mat'l. code		surface		tolerance		projection		product family		
SEE_TABLE		ISO 1302 ✓		ISO 406 ISO 1101				58NF		
ltr	ecn no	dr	date	tolerances unless otherwise specified				title		
A		S.W.	2018-10-18	angles	linear	MM		1mm SPACING SMT CONNECTOR		
B	ELX-J-32753	S.W.	2019-02-22	0°±2'		scale 3:1		(Cat. No. HFW__R-1ST__H1LF)		
		dr	S.WATANABE	2019-02-22				dwg no		
		enr	S.WATANABE	2019-02-22				sheet 1 of 5		size
		chr	S-H.THIO	2019-02-25				10149903		A3
		app	Y.KAMEDA	2019-02-25				CUSTOMER DRAWING		
sheet index	revision sheet	B	B	B	B	B				
		1	2	3	4	5				

PRODUCT NO.
HFW__R-1ST_E_H1LF

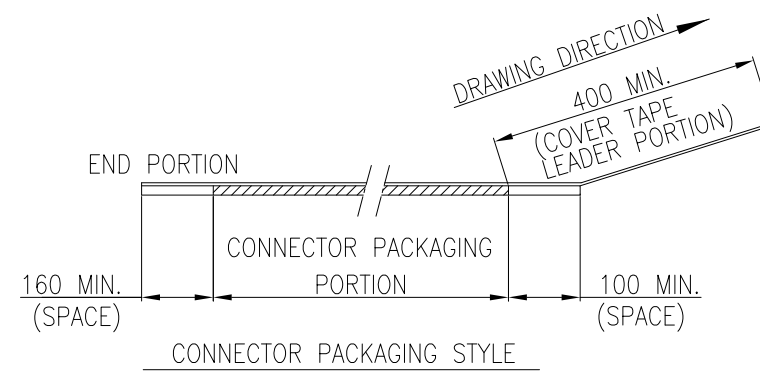
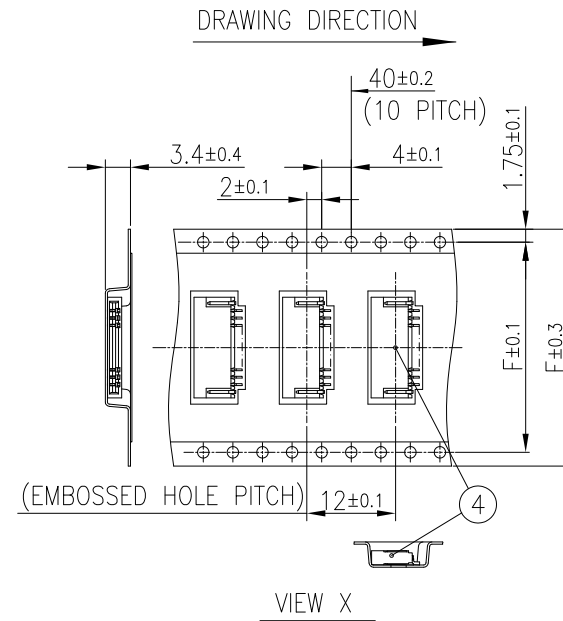
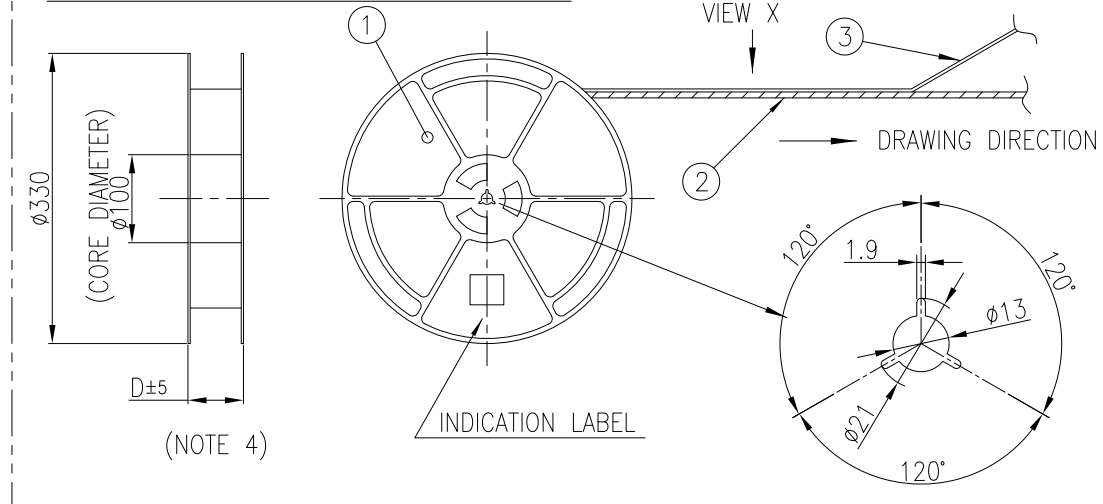
CAT. NO. & DIMENSIONS

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	φ370	2000 / REEL
HFW_R-1ST_E5H1LF	E5	PLASTIC	φ330	1500 / REEL
HFW_R-1ST_E9H1LF	E9	PLASTIC	φ330	500 / REEL

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	

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 (EMBOSS) TAPE AND REEL.
- D DIMENSION IS PORTION OF THE CORE.

mat'l. code SEE_TABLE	surface ISO 1302 ✓	tolerance ISO 406 ISO 1101	projection MM	product family 58NF
ltr B	ecn no	dr date	angles linear 0°±5°	title 1mm SPACING SMT CONNECTOR (Cat.No. HFW__R-1ST_E_H1LF)
		dr S.WATANABE 2019-02-22		dwg no sheet 2 of 5 size
		enr S.WATANABE 2019-02-22		10149903 A3
		chr S-H.THIO 2019-02-25		type CUSTOMER DRAWING
		appd Y.KAMEDA 2019-02-25		
sheet index	revision sheet			

Amphenol FCI

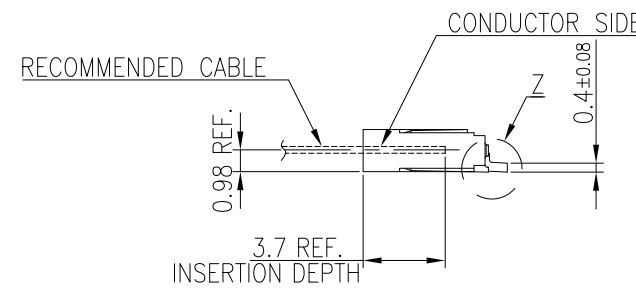
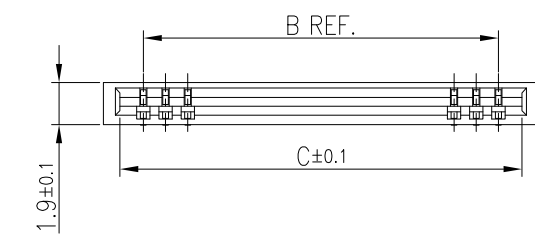
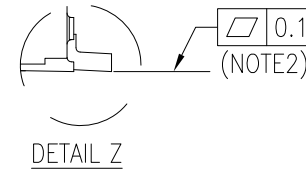
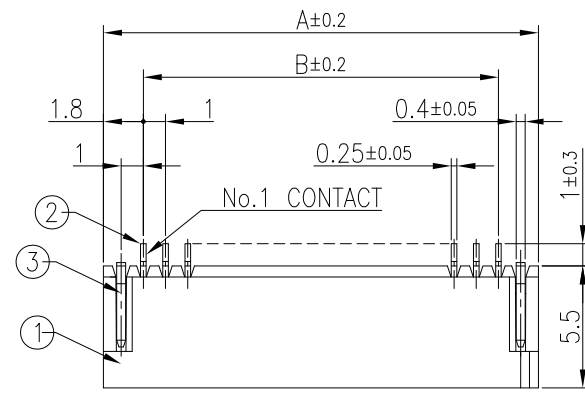
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PRODUCT NO.

HFW_R-2ST__H1LF

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



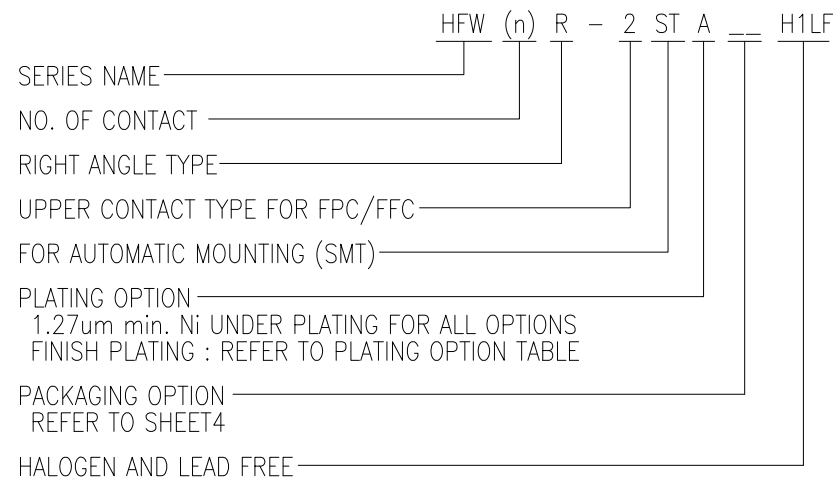
MATERIAL TABLE

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 FOLLOWS.



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.

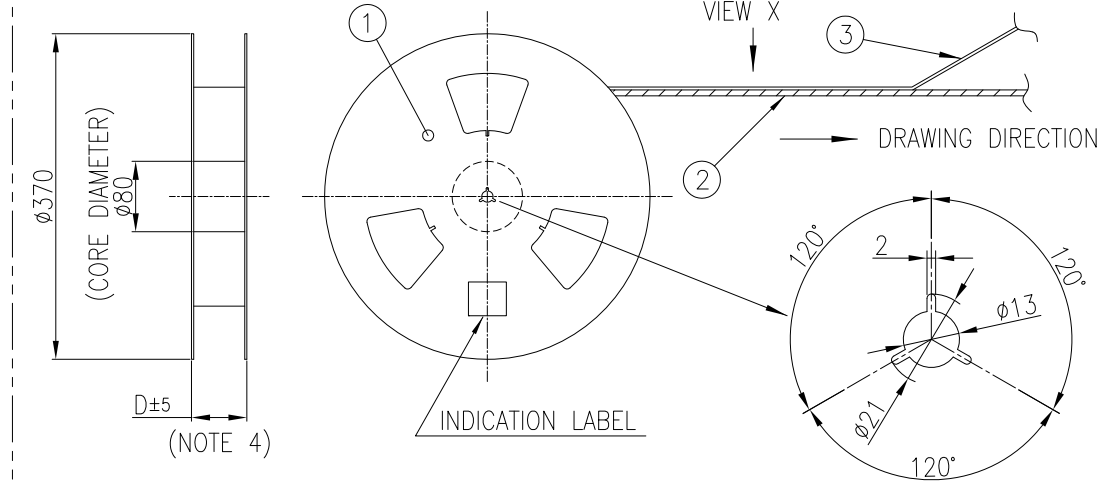
mat'l. code		surface		tolerance		projection		product family	
SEE_TABLE		ISO 1302 ✓		ISO 406 ISO 1101				58NF	
ltr	ecn no	dr	date	tolerances unless otherwise specified				title	
B				angles	linear	MM		1mm SPACING SMT CONNECTOR (Cat. No. HFW__R-2ST__H1LF)	
				0°±2'	0.X/±0.2	scale 3:1		dwg no	
				dr	S.WATANABE	2019-02-22		sheet 3 of 5 size	
				enr	S.WATANABE	2019-02-22		10149903 A3	
				chr	S-H.THIO	2019-02-25		type	
				appd	Y.KAMEDA	2019-02-25		CUSTOMER DRAWING	
sheet index	revision sheet								

PRODUCT NO.
HFW__R-2ST_E_H1LF

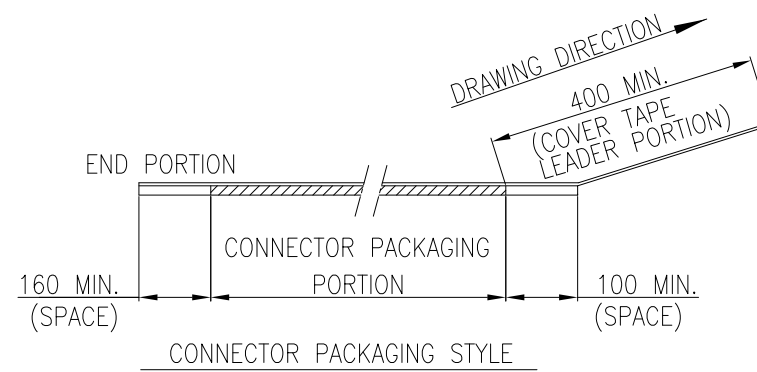
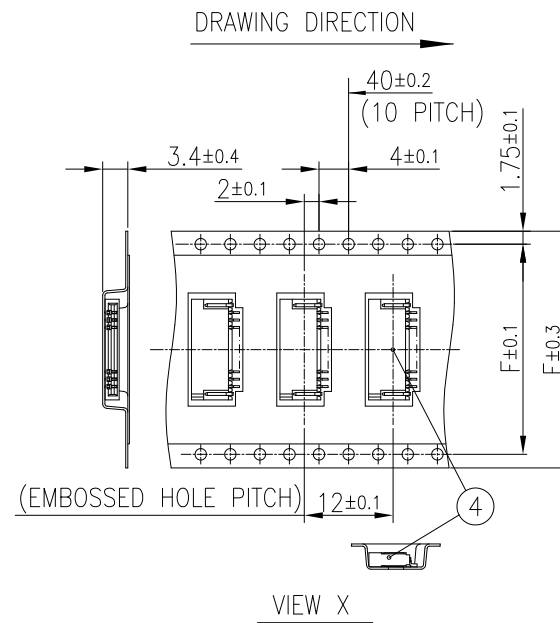
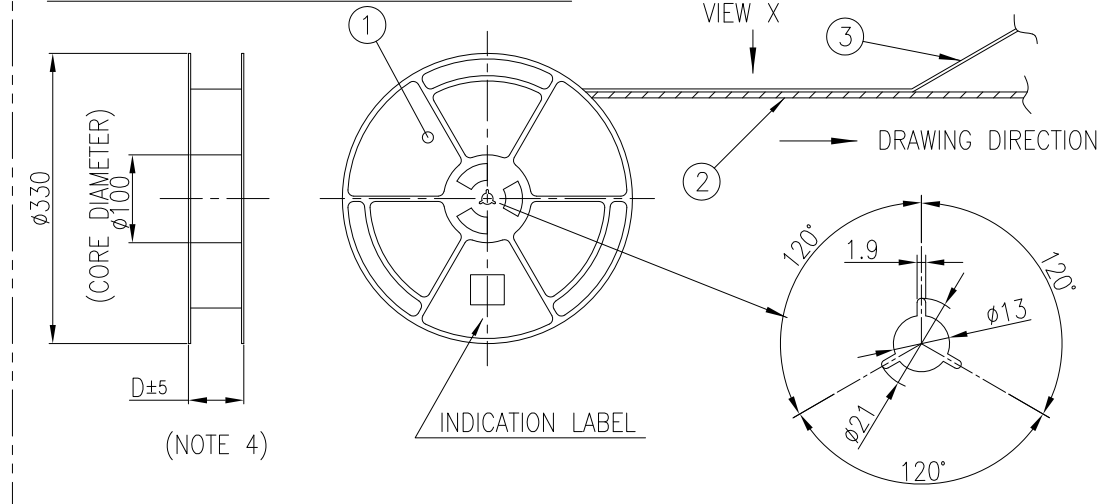
CAT. NO. & DIMENSIONS

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	ø370	2000 / REEL
HFW_R-2ST_E5H1LF	E5	PLASTIC	ø330	1500 / REEL
HFW_R-2ST_E9H1LF	E9	PLASTIC	ø330	500 / REEL

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	

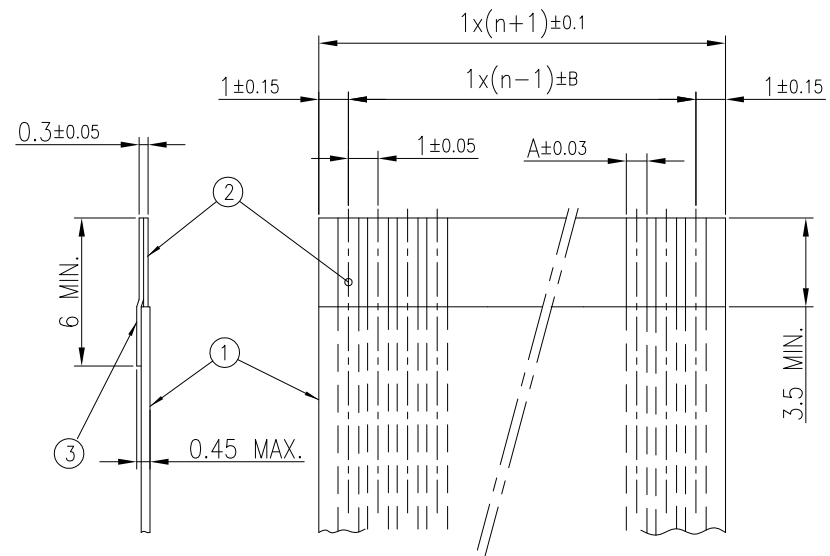
NOTES

- 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 (EMBOSS) TAPE AND REEL.
- D DIMENSION IS PORTION OF THE CORE.

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		MM		title 1mm SPACING SMT CONNECTOR (Cat.No. HFW__R-2ST_E_H1LF)		
B				angles	linear	scale N/A		dwg no 10149903		
				0°±5'	0.X/±0.5 0.XX/±0.5 0.XXX/±0.5			sheet 4 of 5 size A3		
				dr	S.WATANABE	2019-02-22	Amphenol FCI		type CUSTOMER DRAWING	
				enr	S.WATANABE	2019-02-22				
				chr	S-H.THIO	2019-02-25				
				appd	Y.KAMEDA	2019-02-25				
sheet index	revision sheet									

RECOMMENDED CABLE (FFC)
(NOTE1, NOTE2)

n : NO. OF CONDUCTORS

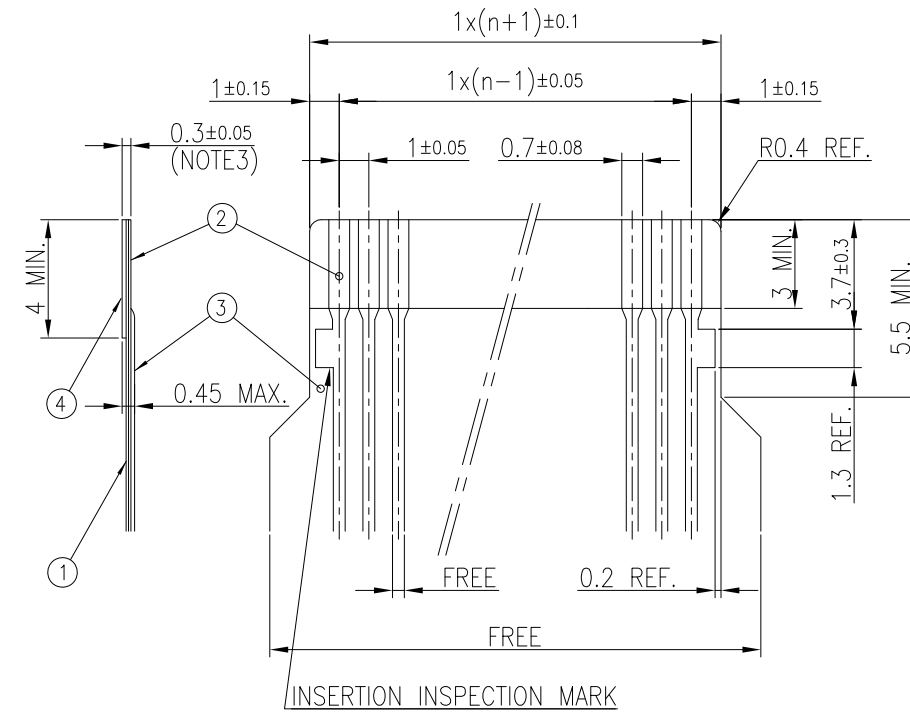


(NOTE4)	DIMENSION A	TOLERANCE B
1	0.7	0.1
2	0.6	0.07

PT. NO.	DESCRIPTION	MATERIAL
1	INSULATOR	FLAME RESISTING POLYESTER OR EQUIVALENT
2	CONDUCTOR	COPPER FOIL (PLATING : TIN OR GOLD) (NOTE5)
3	SUPPORTING TAPE	FLAME RESISTING POLYESTER OR EQUIVALENT

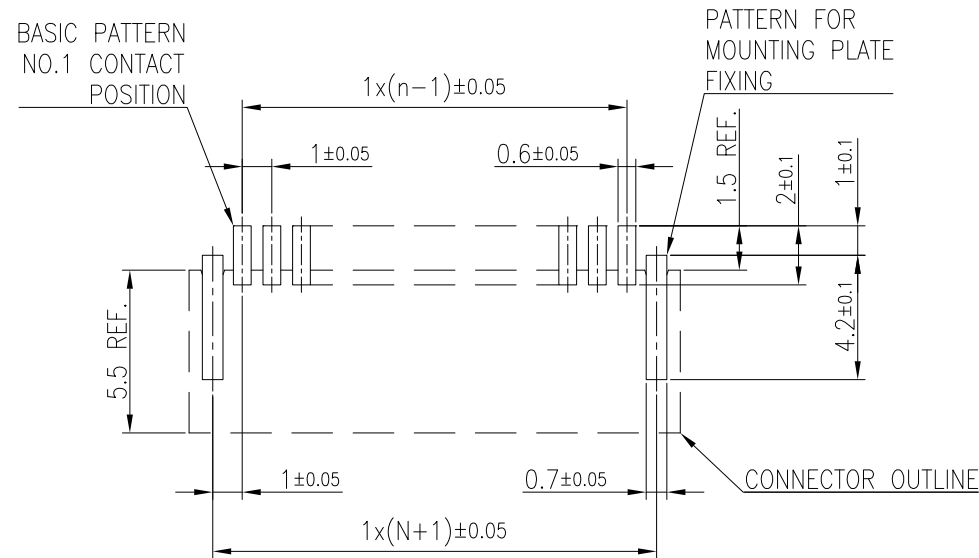
RECOMMENDED CABLE (FPC)
(NOTE1, NOTE2)

n : NO. OF CONDUCTORS



PT. NO.	DESCRIPTION	MATERIAL	THICKNESS (um)
1	BASE FILM	POLYIMIDE OR POLYESTER OR EQUIVALENT	25
2	CONDUCTOR	COPPER FOIL (PLATING : TIN OR GOLD) (NOTE5)	35
3	OVERLAY	POLYIMIDE OR POLYESTER OR EQUIVALENT	—
4	SUPPORTING TAPE	POLYESTER OR POLYIMIDE OR EQUIVALENT	188

RECOMMENDED PC BOARD LAYOUT
(COMPONENT SIDE)



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. BOTH COMBINATIONS ARE ALLOWED.
5. FINISH PLATING OF CABLE CONDUCTOR AND CONTACT SHOULD BE MATCHED.

mat'l. code SEE_TABLE		surface ISO 1302 ✓	tolerance ISO 406 ISO 1101	projection MM	product family 58NF
ltr	ecn no	dr	date	title RECOMMENDED CABLE AND PCB (Cat. No. HFW__R-1/2ST_E_H1LF)	
B				angles linear 0°±2°	scale 4:1
		dr	S.WATANABE 2019-02-22	dwg no 10149903	
		enr	S.WATANABE 2019-02-22	sheet 5 of 5 size A3	
		chr	S-H.THIO 2019-02-25	type CUSTOMER DRAWING	
		app	Y.KAMEDA 2019-02-25		
sheet index	revision sheet				