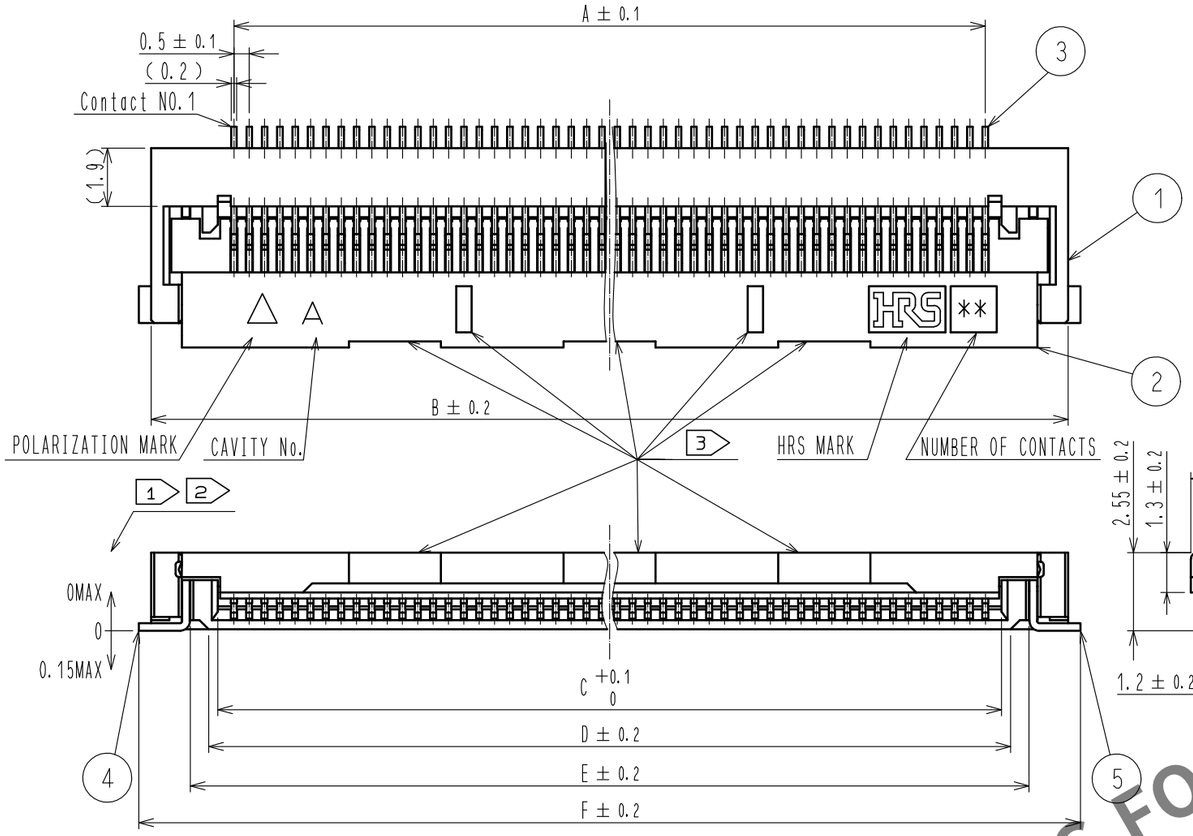
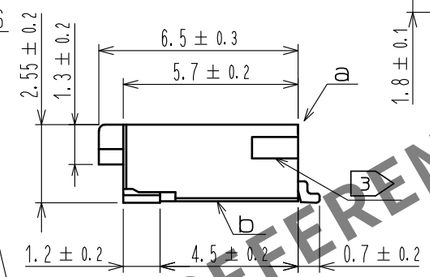
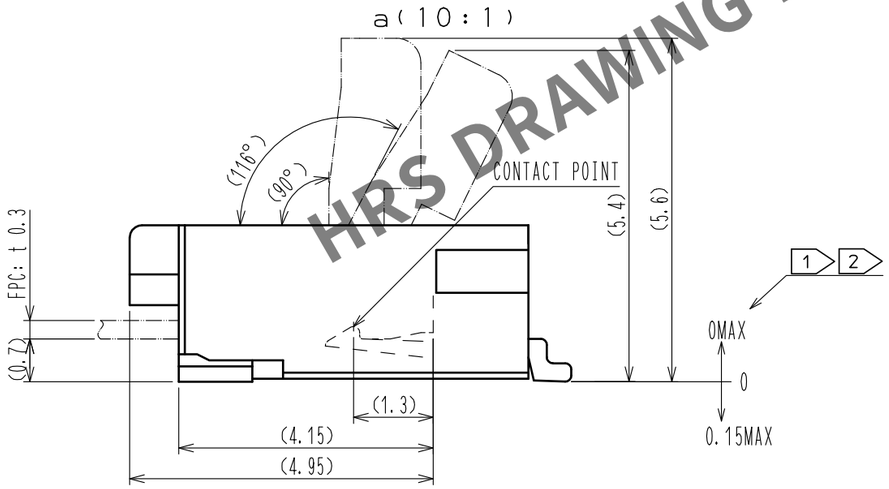
May.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.
In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

HRS DRAWING FOR REFERENCE

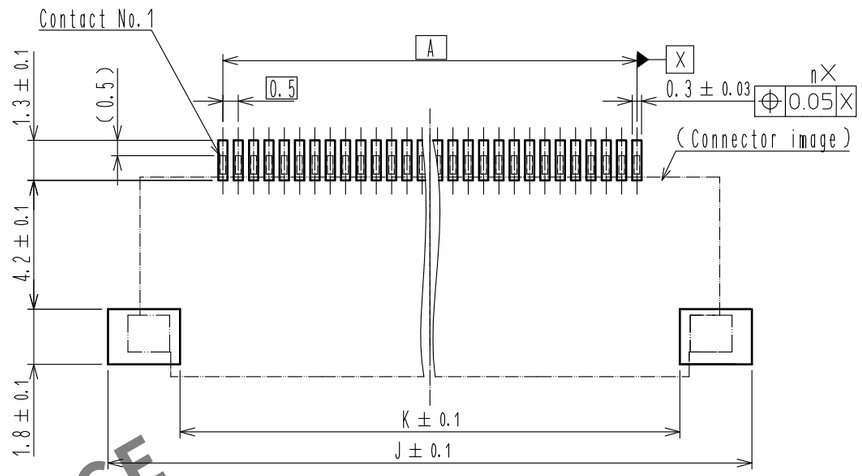




a (10 : 1)

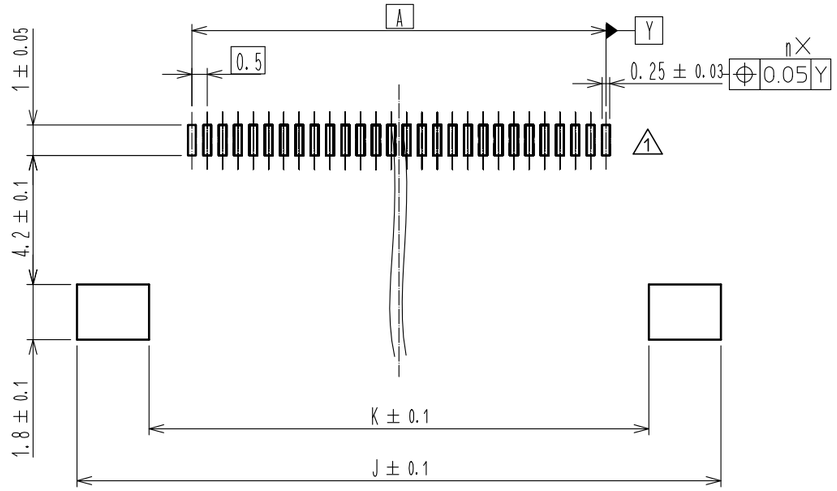


RECOMMENDED PCB MOUNTING PATTERN



RECOMMENDED STENCIL PATTERN

(RECOMMENDED STENCIL THICKNESS : t=0.15)



NOTES
1. Lead CO-PLANARITY including reinforced metal fittings shall be 0.1 MAX.
2. Dimension: from reference b.
3. Indicates notches or holes to prevent sink marks. The design and the location are discretionary, depending on the number of contacts.
4. This product satisfies halogen free requirements defined as 900ppm maximum chlorine, 900ppm maximum bromine, and 1500ppm maximum total of chlorine and bromine.
5. 'n' represents the number of contacts.
6. The dimensions in parentheses are for reference.

NO.	MATERIAL	FINISH . REMARKS	NO.	MATERIAL	FINISH . REMARKS
5	BRASS	TIN PLATING 1㎛MIN OVER NICKEL 1㎛MIN			
4	BRASS	TIN PLATING 1㎛MIN OVER NICKEL 1㎛MIN	9	(CONNECTOR)	
3	PHOSPHOR BRONZE	GOLD PLATING 0.05㎛MIN OVER NICKEL 1㎛MIN	8	POLYSTYRENE	
2	LCP	(BLACK) UL94V-0	7	POLYESTER	
1	LCP	(GRAY) UL94V-0	6	POLYSTYRENE	

UNITS	SCALE		COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE
mm	5 : 1	⚠1	2	DIS-F-00003611	OTNIEL RINALDO	FN. TAMURA	18.07.27

HIROSE ELECTRIC CO., LTD.

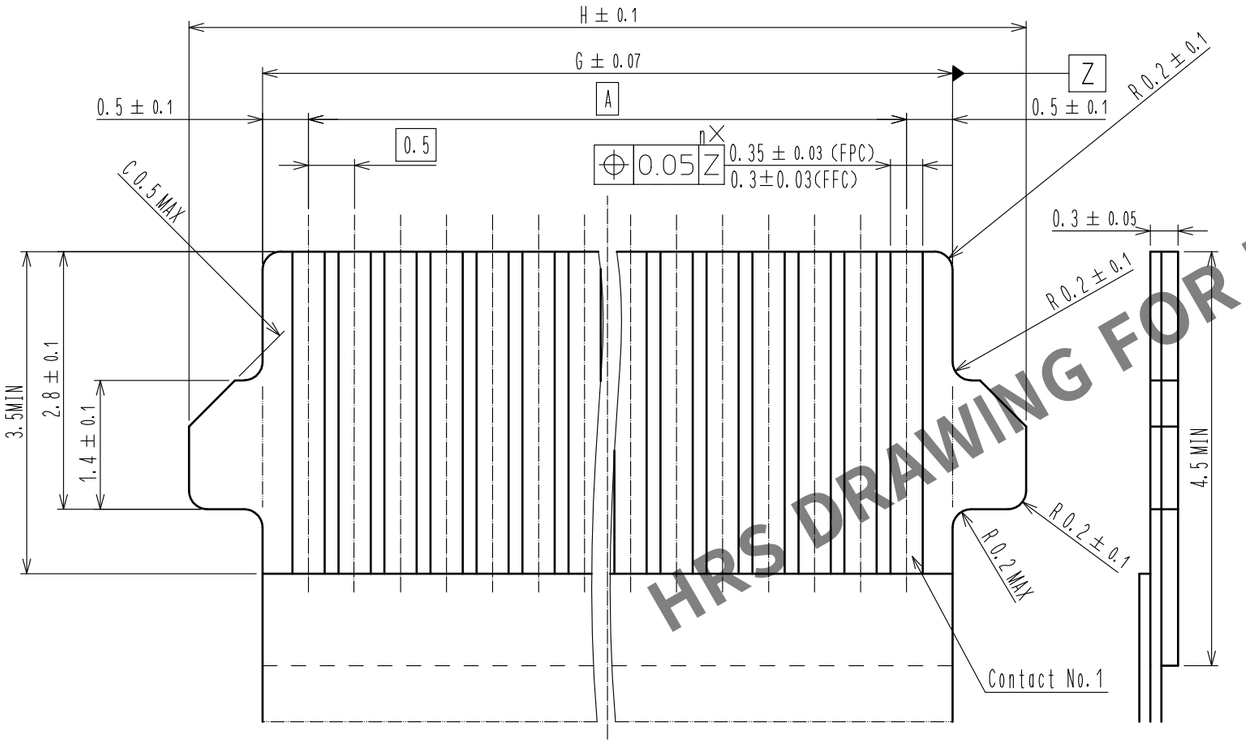
APPROVED	NF. MIYAZAKI	15.10.17
CHECKED	HS. SAKAMOTO	15.10.17
DESIGNED	RT. IKEDA	15.10.17
DRAWN	RN. IIDA	15.10.15

DRAWING NO.	EDC-156370-05-05
PART NO.	FH28E-*S-0.5SH(05)
CODE NO.	CL586

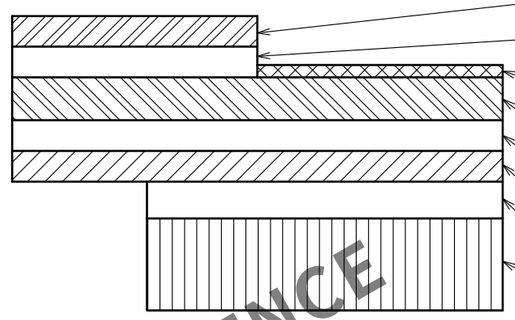
⚠1 1/4

May.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.
In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

RECOMMENDED FPC/FFC (15:1)

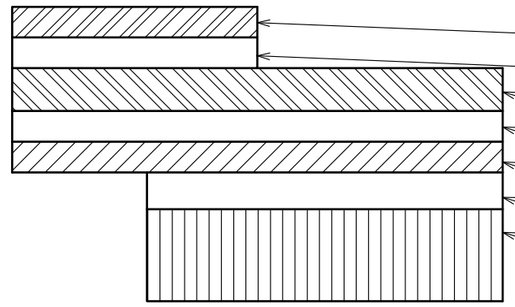


FPC CONFIGURATION (REFERENCE EXAMPLE) (SCALE:FREE)



MATERIAL NAME	MATERIAL	THICKNESS(μm)
COVERING FILM LAYER	POLYIMIDE 1mil thick.	(25)
COVER ADHESIVE		(25)
SURFACE TREATMENT	Nickel undercoat 1 to 5μm + Gold plating 0.2μm	3
COPPER FOIL	Cu 1 oz	35
BASE ADHESIVE	HEAT-HARDENED ADHESIVE	25
BASE FILM	POLYIMIDE 1mil thick	25
REINFORCEMENT MATERIAL ADHESIVE	HEAT-HARDENED ADHESIVE	30
STIFFENER FILM	POLYIMIDE 7 mil thick	175

FFC CONFIGURATION (REFERENCE EXAMPLE) (SCALE:FREE)



MATERIAL NAME	MATERIAL	THICKNESS(μm)
POLYESTER FILM		12
ADHESIVE	THERMOPLASTIC POLYESTER	30
GOLD PLATED, SOFT COPPER FILM		35
ADHESIVE	POLYESTER	30
POLYESTER		12
ADHESIVE	POLYESTER	30
STIFFENER FILM	POLYESTER	188

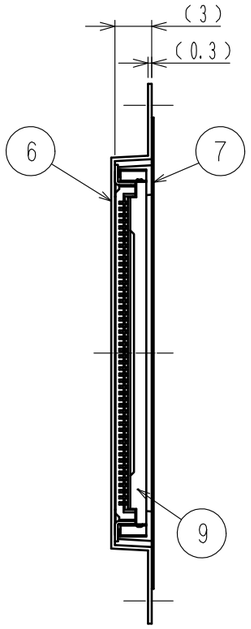
HRS DRAWING FOR REFERENCE

DRAWING NO.	EDC-156370-05-05
PART NO.	FH28E-*S-0.5SH(05)
CODE NO.	CL586

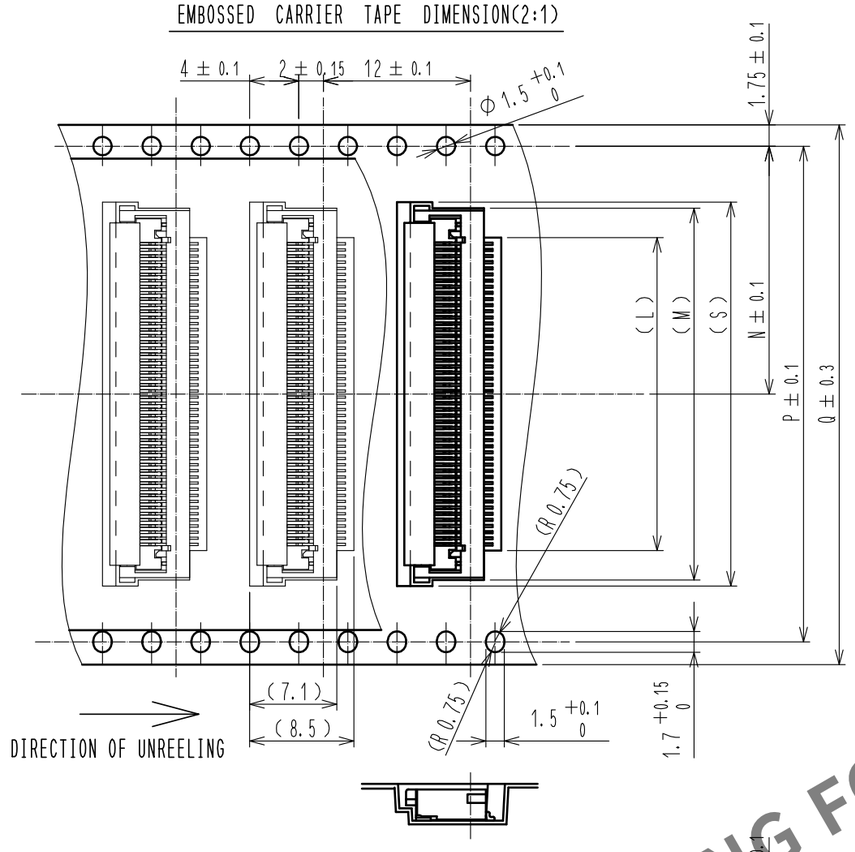
1 2/4

May.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.
In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

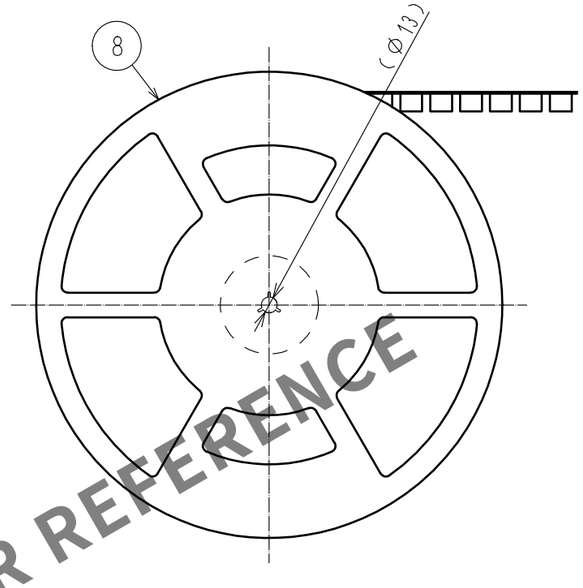
TAPE WIDTH:32mm MIN

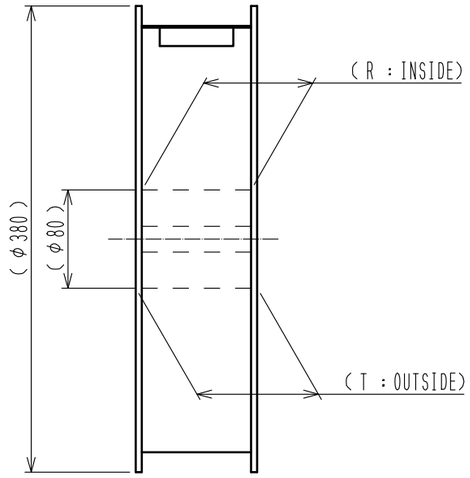


EMBOSSED CARRIER TAPE DIMENSION(2:1)

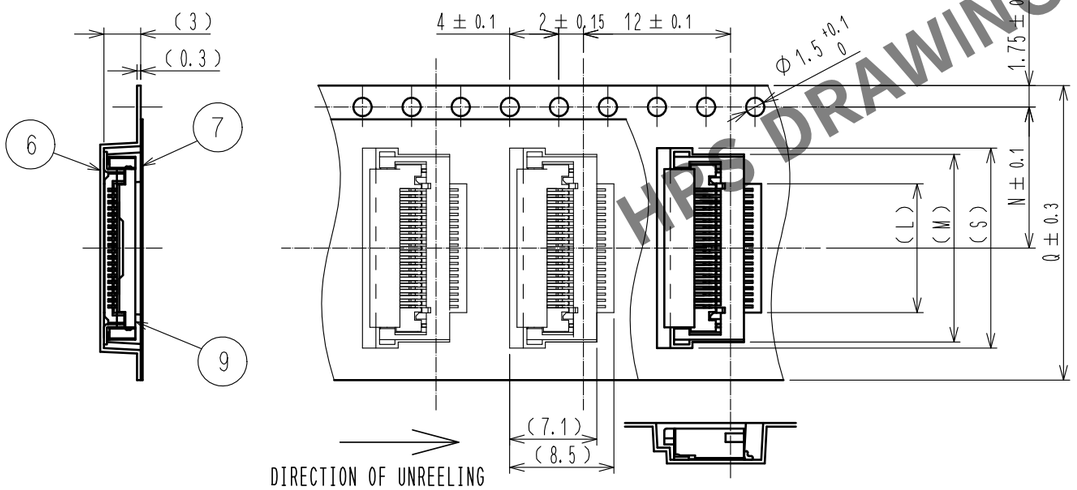


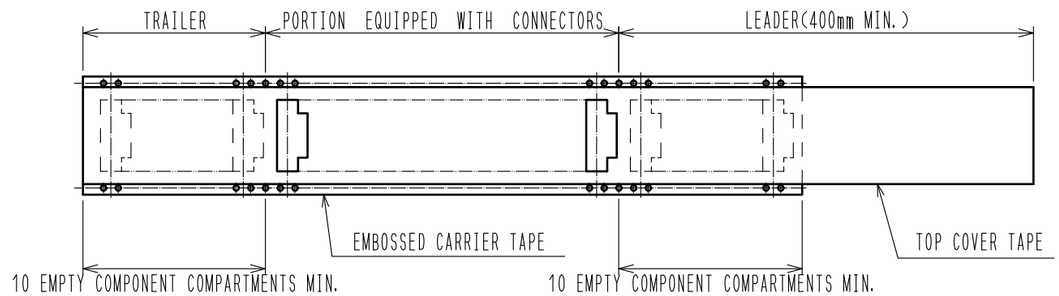
REEL DIMENSION (FREE)





TAPE WIDTH:24mm MAX





HRS DRAWING FOR REFERENCE

NOTE 7 Per reel:2000 connectors.
⚠1 8 Refer to JIS C 0806 and IEC 60286-3 (packaging of components for automatic handling).

DRAWING FOR PACKING

DRAWING NO.	EDC-156370-05-05
PART NO.	FH28E-*S-0.5SH(05)
CODE NO.	CL586

⚠1 3/4

May.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.
In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

PART No.	CODE No.	Number of contact	DIMENSION TABLE OF CONNECTOR, FPC, FFC, LAND PATTERN AND STENCIL PATTERN										DIMENSION TABLE OF DRAWING FOR PACKING							
			A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	T	S
FH28E-20S-0.5SH(05)	CL580-1822-2-05	20	9.5	14.9	10.57	11.15	12.35	15.7	10.5	12.1	16.7	12	10.5	15.3	11.5	-	24	25.4	29.4	16.3
FH28E-30S-0.5SH(05)	CL580-1833-9-05	30	14.5	19.9	15.57	16.15	17.35	20.7	15.5	17.1	21.7	17	15.5	20.3	14.2	28.4	32	33.4	37.4	21.3
9 FH28E-40S-0.5SH(07)	CL580-1814-4-07	40	19.5	24.9	20.57	21.15	22.35	25.7	20.5	22.1	26.7	22	20.5	25.3	20.2	40.4	44	45.4	49.4	26.3
FH28E-50S-0.5SH(05)	CL580-1815-7-05	50	24.5	29.9	25.57	26.15	27.35	30.7	25.5	27.1	31.7	27	25.5	30.3	20.2	40.4	44	45.4	49.4	31.3
FH28E-60S-0.5SH(05)	CL580-1834-1-05	60	29.5	34.9	30.57	31.15	32.35	35.7	30.5	32.1	36.7	32	30.5	35.3	26.2	52.4	56	57.4	61.4	36.3
FH28E-68S-0.5SH(05)	CL580-1841-7-05	68	33.5	38.9	34.57	35.15	36.35	39.7	34.5	36.1	40.7	36	34.5	39.3	26.2	52.4	56	57.4	61.4	40.3

HRS DRAWING FOR REFERENCE

9 : The specification of (07) is applied to FH28E-40S-0.5SH.

HRS	DRAWING NO.	EDC-156370-05-05
	PART NO.	FH28E-*S-0.5SH(05)
	CODE NO.	CL586
		1 / 4