















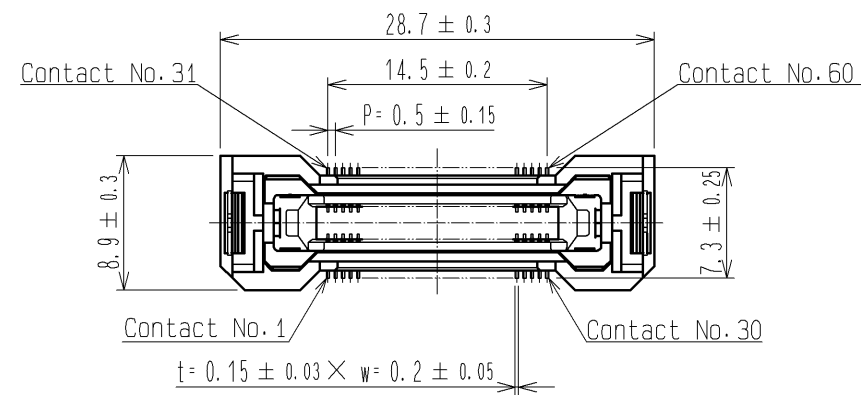


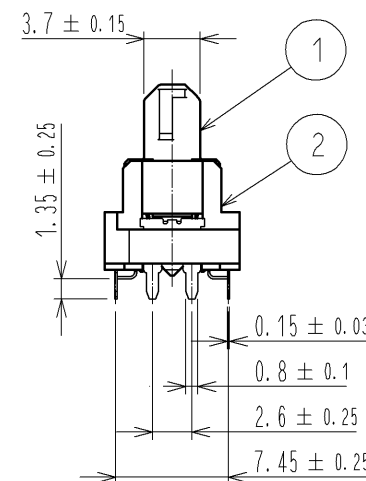
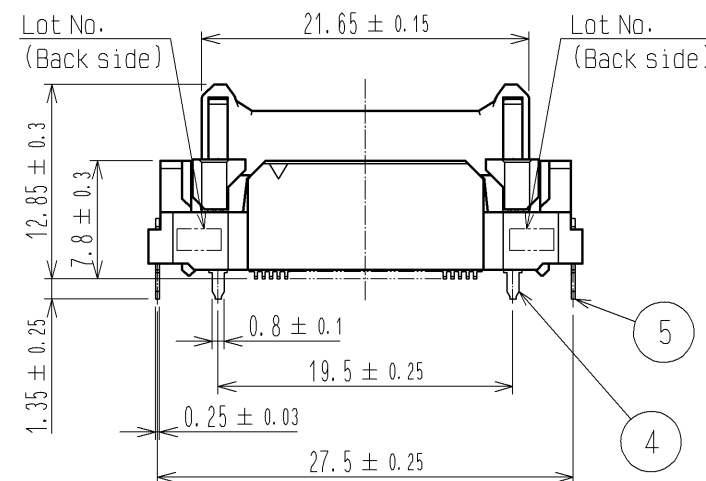
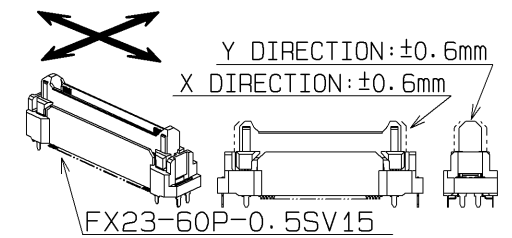
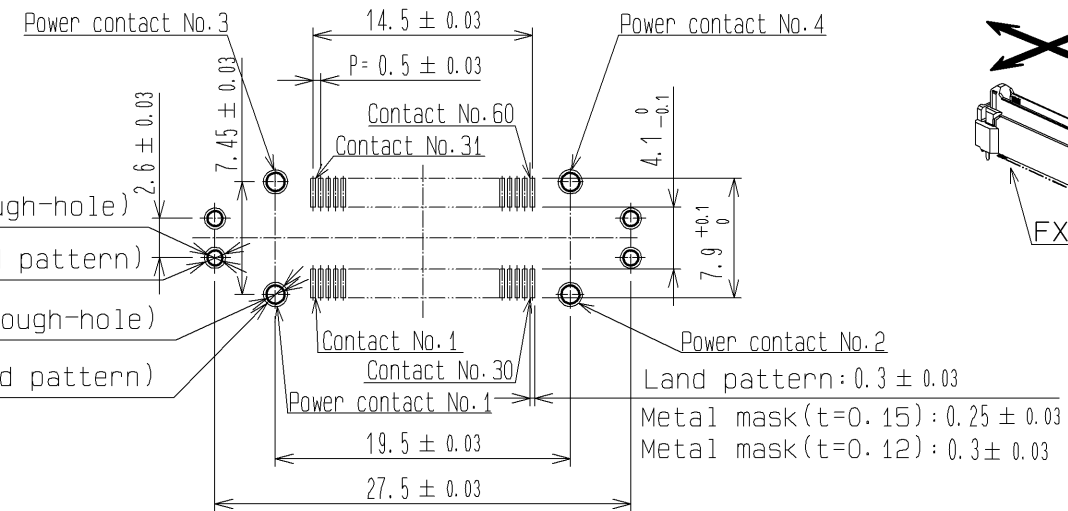
APPLICABLE STANDARD					
Rating	Operating Temperature Range	-55 °C to 85 °C <sup>(1)</sup>		Storage Temperature Range	-10 °C to 60 °C <sup>(2)</sup>
	Voltage	 Signal Contact : 50 V AC Power Contact : 200 V AC	Storage Humidity Range	Relative humidity 85% max (Not dewed)	
	Current		Operating Humidity Range		
SPECIFICATIONS					
ITEM		TEST METHOD		REQUIREMENTS	QT AT
CONSTRUCTION					
General Examination		Visually and by measuring instrument.		According to drawing.	x x
Marking		Confirmed visually.			x x
ELECTRIC CHARACTERISTICS					
Contact Resistance	100 mA(DC or 1000Hz)		Signal Contact : 70m Ω MAX.	 Power Contact : 20m Ω MAX.	x -
Insulation Resistance	Signal Contact : 100 V DC.		Signal Contact : 100 MΩ MIN.		x -
Voltage Proof	Power Contact : 250 V DC 		Power Contact : 1000 MΩ MIN. 		
	Signal Contact : 150 V AC for 1 min.		No flashover or breakdown.	x x	
	Power Contact : 600 V AC for 1 min. 			x -	
MECHANICAL CHARACTERISTICS					
Insertion and Withdrawal Forces	Measured by applicable connector.		Insertion Force: 27 N MAX. 		x -
Mechanical Operation	100 times insertions and extractions.		Withdrawal Force: 3 N MIN.		
Vibration	Frequency 10 to 55 to 10Hz, approx 5min		① Contact Resistance:	x -	
	Single amplitude : 0.75 mm, 10 cycles for 3 axial directions.		Signal Contact : 80m Ω MAX.		
Shock	490 m/s <sup>2</sup> , duration of pulse 11 ms		 Power Contact : 30m Ω MAX.		
	at 3 times for 3 both axial directions.		② No damage, crack and looseness of parts.		
			① No electrical discontinuity of 1 μs.	x -	
			② No damage, crack and looseness of parts.	x -	
ENVIRONMENTAL CHARACTERISTICS					
Damp Heat (Steady state)	Exposed at 40±2 °C, 90 ~ 95 %, 96 h.		① Contact Resistance:	x -	
Rapid Change of Temperature	Temperature -55 → +85 °C		Signal Contact : 80m Ω MAX.		
	Time 30 → 30 min.		 Power Contact : 30m Ω MAX.	x -	
	(Relocation time to chamber : within 2~3 MIN)		② Insulation Resistance:		
Cold	Exposed at -55°C, 96 h		Signal Contact : 100 MΩ MIN.		
Dry Heat	Exposed at 85°C, 96 h		 Power Contact : 1000 MΩ MIN.		
			③ No damage, crack and looseness of parts.		
Sulfur Dioxide	Exposed at 25±2°C, 75±5%RH, 25 PPM for 96 h. (Test standard: IEC 68) 		① Contact Resistance:	x -	
Resistance to Soldering Heat	1)Reflow soldering : Peak TMP : 260°C MAX		Signal Contact : 80m Ω MAX.		
	Reflow TMP: 220°C MIN for 60sec		 Power Contact : 30m Ω MAX.	x -	
Solderability	Soldered at solder temperature 240±3°C for immersion duration, 3 sec.		② No damage, crack and looseness of parts.		
			① No defect such as corrosion which impairs the function of connector.	x -	
			② Contact Resistance:		
			Signal Contact : 80m Ω MAX.		
			 Power Contact : 30m Ω MAX.		
			No deformation of case of excessive looseness of the terminal.	x -	
			A new uniform coating of solder shall cover a minimum of 95 % of the surface being immersed.	x -	
COUNT	DESCRIPTION OF REVISIONS		DESIGNED	CHECKED	DATE
	13	DIS-F-00000637	TS. 00N0	KN. SHIBUYA	15. 09. 09
REMARKS <sup>(1)</sup> Include temperature rise caused by current-carrying.			APPROVED	HS. OKAWA	14. 09. 02
<sup>(2)</sup> "STORAGE" means a long-term storage state for the unused product before assembly to PCB.			CHECKED	KN. SHIBUYA	14. 09. 02
Unless otherwise specified, refer to IEC 60512. 			DESIGNED	TS. 00N0	14. 09. 02
			DRAWN	TS. 00N0	14. 09. 02
Note QT:Qualification Test AT:Assurance Test X:Applicable Test			DRAWING NO. ELC-353539-00-00		
	SPECIFICATION SHEET		PART NO.	FX23-60P-0. 5SV15	
	HIROSE ELECTRIC CO., LTD.		CODE NO.	CL573-3003-6-00	 1/1

# RECOMMENDED LAND PATTERN DIMENSION OF PCB (PCB THICKNESS: $t=1.6\text{mm}$ )

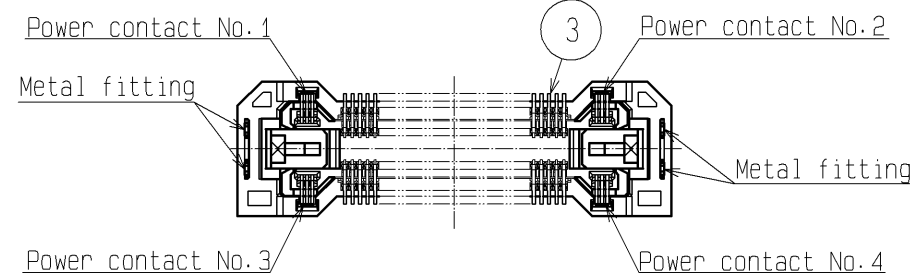
## 3 FLOATING RANGE



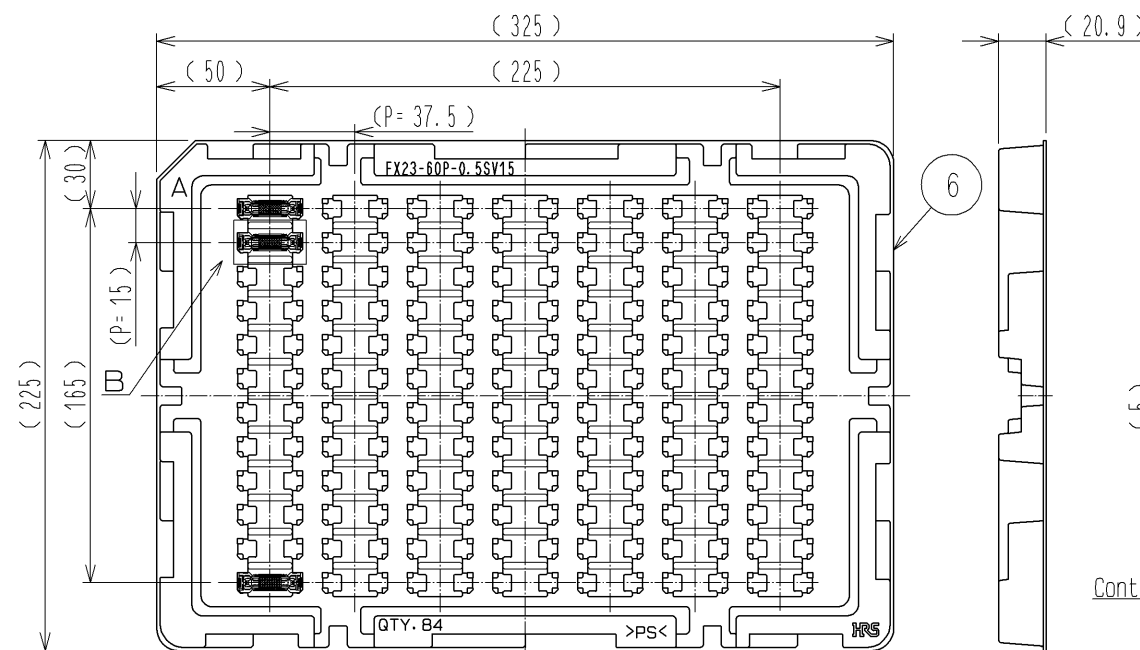
$4 \times \phi 1^{+0.1}_0$  (Through-hole)  
 $4 \times \phi 1.4^{+0.2}_0$  (Land pattern)  
 $4 \times \phi 1.2^{+0.1}_0$  (Through-hole)  
 $4 \times \phi 1.6^{+0.2}_0$  (Land pattern)



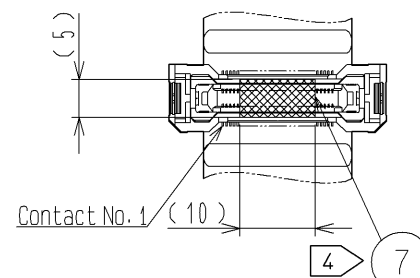
## PCB DISTANCE (No scale)



## 2 DRAWING FOR PACKING (No scale)



## B (1:1)



- 1 Lead CO-Planarity is 0.1mm MAX.
- 2 This is packaged in tray. (84pcs/tray)
- 3 Floating range of this connector is  $\pm 0.6\text{mm}$  MAX.
- 4 It shows the vacuum pickup area. Remove the mylar tape before mating connectors.
- 5 Blemish and hit mark can be occurred through out the manufacturing process which doesn't affect quality level.
- 6 The dimensions in parentheses are for references.
- 7 Please use the connectors within the specified PCB distance.

3	COPPER ALLOY	CONTACT AREA: GOLD $0.1\mu\text{m}$ LEAD AREA: GOLD $0.03\mu\text{m}$ UNDER PLATING: NICKEL $1.3\mu\text{m}$	7	POLYIMIDE	(TAPE FOR VACUUM PICKUP)
2	POLYAMIDE	BLACK UL94V-0	6	POLYSTYRENE	(TRAY)
1	POLYAMIDE	BLACK UL94V-0	5	BRASS	LEAD AREA: TIN-PLATING $3\mu\text{m}$ UNDER PLATING: NICKEL $1\mu\text{m}$
NO.	MATERIAL	FINISH, REMARKS	4	COPPER ALLOY	CONTACT AREA: GOLD $0.1\mu\text{m}$ LEAD AREA: TIN-PLATING $1\mu\text{m}$ UNDER PLATING: NICKEL $1.3\mu\text{m}$
UNITS mm		SCALE 2:1	COUNT	DESCRIPTION OF REVISIONS	DESIGNED
	HIROSE ELECTRIC CO., LTD.	APPROVED: HS. OKAWA	14.12.12	DRAWING NO.	EDC3-353539-00
		CHECKED: KN. SHIBUYA	14.12.12	PART NO.	FX23-60P-0.5SV15
		DESIGNED: TS. OONO	14.12.12	CODE NO.	CL573-3003-6-00
		DRAWN: TS. OONO	14.12.12		