

APPLICABLE STANDARD						
RATING	Operating temperature range	-55°C to 85°C	Storage temperature range	-10°C TO 50°C (packed condition)		
	Voltage	30V AC/DC	Operating or storage humidity range	Relative humidity 90% MAX (not dewed)		
	Current	0.20A	Applicable cable	t=0.2±0.02mm, gold plating		
SPECIFICATIONS						
ITEM		TEST METHOD		REQUIREMENTS	QT	AT
CONSTRUCTION						
General examination		Visually and by measuring instrument.		According to drawing. (note 1,2)	×	×
Marking		Confirmed visually.			×	×
ELECTRICAL CHARACTERISTICS						
Voltage proof		90V AC for 1 min.		No flashover or breakdown.	×	×
Insulation resistance		100V DC.		50MΩ MIN.	×	×
Contact resistance		20mV AC MAX, 1mA.		300mΩ MAX. Including FPC bulk resistance (L=8mm)	×	×
MECHANICAL CHARACTERISTICS						
Vibration		Frequency 10 to 55 Hz, half amplitude 0.75 mm, for 10 cycles in 3 axial directions.		① No electrical discontinuity of 1μs. ② Contact resistance: 300mΩ MAX. ③ No damage, crack and loose parts.	×	—
Shock		981 m/s ² , duration of pulse 6 ms at 3 times in 3 both axial directions.			×	—
Mechanical operation		10 times insertions and extractions.		① Contact resistance: 300mΩ MAX. ② No damage, crack and loose parts.	×	—
FPC retention force		Measured by applicable FPC. (thickness of FPC shall be t=0.20mm at initial condition)		Direction of insertion: 12.34N MIN (note 3)	×	—
ENVIRONMENTAL CHARACTERISTICS						
Corrosion salt mist		Exposed at 35±2°C, 5% salt water spray for 96h.		① Contact resistance: 300mΩ MAX. ② No damage, crack and loose parts. ③ No evidence of corrosion which affects connector's operation.	×	—
Rapid change of temperature		Temperature-55 → +15T ₀ +35 → +85 → +15T ₀ +35°C Time 30 → 2T ₀ 3 → 30 → 2T ₀ 3 min Under 5 cycles.		① Contact resistance: 300mΩ MAX. ② Insulation resistance: 50MΩ MIN. ③ No damage, crack and loose parts.	×	—
Damp heat (steady state)		Exposed at 40±2°C, relative humidity 90 to 95%, 96h.			×	—
Damp heat, cyclic		Exposed at -10 to +65°C, relative humidity 90 to 96%, 10 cycles, total 240h.		① Contact resistance: 300mΩ MAX. ② Insulation resistance: 1MΩ MIN. (at high humidity) ③ Insulation resistance: 50MΩ MIN. (at dry) ④ No damage, crack and loose parts.	×	—
Dry heat		Exposed at 85±2°C, 96h.		① Contact resistance: 300mΩ MAX. ② No damage, crack and loose parts.	×	—
Cold		Exposed at -55±3°C, 96h.			×	—
Sulphur dioxide [JIS C 60068-2-42]		Exposed at 40±2°C, relative humidity 80±5%, 25±5ppm for 96h.		① Contact resistance: 300mΩ MAX. ② No damage, crack and loose parts. ③ No evidence of corrosion which affects connector's operation.	×	—
Hydrogen sulphide [JIS C 60068-2-43]		Exposed at 40±2°C, relative humidity 80±5%, 10 to 15ppm for 96h.			×	—
	COUNT	DESCRIPTION OF REVISIONS		DESIGNED	CHECKED	DATE
△						
REMARK				APPROVED	HY. YAMAZAKI	20220907
				CHECKED	HY. YAMAZAKI	20220907
				DESIGNED	ST. YUDATE	20220907
				DRAWN	ST. YUDATE	20220907
Unless otherwise specified, refer to IEC 60512.						
Note QT:Qualification Test AT:Assurance Test X:Applicable Test				DRAWING NO.		ELC-391816-99-00
HRS	SPECIFICATION SHEET			PART NO.	FH58SA-81S-0. 2SHW (99)	
	HIROSE ELECTRIC CO., LTD.			CODE NO.	CL0580-3825-0-99	△ 1/2

SPECIFICATIONS					
ITEM	TEST METHOD		REQUIREMENTS	QT	AT
Solderability	Soldered at solder temperature 245±3°C, for immersion duration 3±0.3 sec.		A new uniform coating of solder shall cover a minimum of 95% of the surface being immersed.	×	—
Resistance to soldering heat	1) Reflow soldering: peak tmp. 250°C MAX. reflow tmp. over 230°C within 60 sec. 2) Soldering irons: tmp. 350±10°C for 5±1 sec.		No case-deformation and loose contacts. (note 4)	×	—
(note1) This connector is back flip lock type, and top/bottom both contact points are available. (note2) Do not close the actuator before inserting FPC even after the connector is mounted onto a PCB. Closing the actuator without FPC could make the contact gap smaller, which increases the FPC insertion force. (note3) If pull-up or pull-down force is expected to be applied to the FPC, stabilize the FPC into PCB or other fixed components. There's a case which FPC retention force doesn't fulfill the value, because FPC specification affects the results of FPC retention force. (note4) Blisters which may be generated on the housing do not affect product performance.					
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