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In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

TO
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COUNT	DESCRIPTION OF REVISIONS	BY	CHKD	DATE	COUNT	DESCRIPTION OF REVISIONS	BY	CHKD	DATE
△					△				
△					△				
APPLICABLE STANDARD									
RATING	OPERATING TEMPERATURE RANGE	-40 °C TO 85 °C			STORAGE TEMPERATURE RANGE	-10°C TO 50°C (PACKED CONDITION)			
	VOLTAGE	50 V AC / DC			OPERATING OR STORAGE HUMIDITY RANGE	RELATIVE HUMIDITY 90% MAX (NOT DEWED)			
	CURRENT	※ 0.5 A			APPLICABLE CABLE	t=0.3±0.05, GOLD PLATED			
SPECIFICATIONS									
ITEM		TEST METHOD			REQUIREMENTS			QT	AT
CONSTRUCTION									
GENERAL EXAMINATION		VISUALLY AND BY MEASURING INSTRUMENT.			ACCORDING TO DRAWING.			×	×
MARKING		CONFIRMED VISUALLY.						×	×
ELECTRIC CHARACTERISTICS									
CONTACT RESISTANCE		1 mA (DC OR 1000 Hz).			50 mΩ MAX. INCLUDING FPC, FFC BULK RESISTANCE (L=8mm)			×	×
INSULATION RESISTANCE		100 V DC.			500 MΩ MIN.			×	×
VOLTAGE PROOF		150 V AC FOR 1 min.			NO FLASHOVER OR BREAKDOWN.			×	×
MECHANICAL CHARACTERISTICS									
MECHANICAL OPERATION		20 TIMES INSERTIONS AND EXTRACTIONS.			① CONTACT RESISTANCE: 50 mΩ MAX. ② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.			×	—
VIBRATION		FREQUENCY 10 TO 55 Hz, HALF AMPLITUDE 0.75 mm, FOR 10 CYCLES IN 3 DIRECTIONS.			① NO ELECTRICAL DISCONTINUITY OF 1 μs. ② CONTACT RESISTANCE: 50 mΩ MAX.			×	—
SHOCK		981 m/s ² , DURATION OF PULSE 6 ms AT 3 TIMES IN 3 DIRECTIONS.			③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.			×	—
FPC RETENSION FORCE		MEASURED BY APPLICABLE FPC. (CONNECTOR, FPC AT INITIAL CONDITION. THICKNESS OF FPC SHALL BE t=0.30mm)			DIRECTION OF INSERTION : 0.4 × n N MIN. (n : NUMBER OF CONTACTS)			×	—
ENVIRONMENTAL CHARACTERISTICS									
RAPID CHANGE OF TEMPERATURE		TEMPERATURE -40 → +15 TO +35 → +85 → +15 TO +35 °C TIME 30 → 2 TO 3 → 30 → 2 TO 3 min. UNDER 5 CYCLES.			① CONTACT RESISTANCE: 50 mΩ MAX. ② INSULATION RESISTANCE: 50 MΩ MIN. ③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.			×	—
DAMP HEAT (STEADY STATE)		EXPOSED AT 40 ± 2 °C, RELATIVE HUMIDITY 90 TO 95 %, 96 h.						×	—
DAMP HEAT, CYCLIC		EXPOSED AT -10 TO +65 °C, RELATIVE HUMIDITY 90 TO 96 %, 10 CYCLES, TOTAL 240 h.			① CONTACT RESISTANCE: 50 mΩ MAX. ② INSULATION RESISTANCE: 1 MΩ MIN. (AT HIGH HUMIDITY) ③ INSULATION RESISTANCE: 50 MΩ MIN. (AT DRY) ④ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.			×	—
DRY HEAT		EXPOSED AT 85 ± 2 °C, 96 h.			① CONTACT RESISTANCE: 50 mΩ MAX. ② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.			×	—
COLD		EXPOSED AT -40 ± 3 °C, 96 h.						×	—
EMARKS				DRAWN	DESIGNED	CHECKED	APPROVED	RELEASED	
Unless otherwise specified, refer to JIS C 5402.				D.YAMADA 04.06.07	T.MURAI 04.06.07	T. Kuwata '04.06.07	R. Takayanagi 04.06.07		
Note QT: Qualification Test AT: Assurance Test ×: Applicable Test									
HS HIROSE ELECTRIC CO., LTD.				SPECIFICATION SHEET			PART NO. FH12S - * * S - 0.5SH (55)		
CODE NO. (OLD) CL		DRAWING NO. ELC4 - 153313 - 51			CODE NO. CL 586			1 2	



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SPECIFICATIONS				
ITEM	TEST METHOD	REQUIREMENTS	QT	AT
CORROSION SALT MIST	EXPOSED AT 35±2 °C, 5 % SALT WATER SPRAY FOR 96 h.	① CONTACT RESISTANCE: 50 mΩ MAX. ② NO EVIDENCE OF CORROSION WHICH AFFECTS TO OPERATION OF CONNECTOR.	×	—
SURPHUR DIOXIDE [JIS C 0090]	EXPOSED AT 40±2 °C, RELATIVE HUMIDITY 80±5 % , 25±5 PPM FOR 96 h.		×	—
HYDROGEN SULPHIDE [JIS C 0092]	EXPOSED AT 40±2 °C, RELATIVE HUMIDITY 80±5 % , 10 TO 15 PPM FOR 96 h.		×	—
RESISTANCE TO SOLDERING HEAT	1) REFLOW SOLDERING (TO BE 2 TIMES MAX.) PEAK TMP. 250 °C MAX. REFLOW TMP. 230 °C MIN. FOR 30 sec. PRE-HEATING. 150 TO 200 °C 90 TO 120 sec. 2) SOLDERING IRONS : 350 ± 10 °C, FOR 5±1 sec.	NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS.	×	—
SOLDERABILITY	SOLDERED AT SOLDER TEMPERATURE, 235 ± 5 °C, FOR IMMERSION DURATION, 2±0.5 sec.	A NEW UNIFORM COATING OF SOLDER SHALL COVER A MINIMUM OF 95 % OF THE SURFACE BEING IMMersed.	×	—

※ WHEN THE SAME VALUE OF CURRENT ARE APPLID TO ALL CONTACTS AT THE SAME TIME IN ONCE,
SET THE CURRENT TO THE 70 % OF THE RATED CURRENT VALUE.

REMARKS	DRAWN	DESIGNED	CHECKED	APPROVED	RELEASED
	D.YAMADA 04.06.07	T.MURAI 04.06.07	T. Kuwata 04.06.07	R. Takayama 04.06.07	

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		CODE NO.(OLD)	
CL	ELC4 - 153313 - 51	CL 586	2

