



APPLICABLE STANDARD						
RATING	OPERATING TEMPERATURE RANGE	-40 °C TO 105 °C( <i>note 1</i> )	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 ( <i>note 2</i> )	APPLICABLE CABLE	t=0.3±0.05mm, GOLD PLATING		
SPECIFICATIONS						
ITEM		TEST METHOD		REQUIREMENTS	QT	AT
CONSTRUCTION						
GENERAL EXAMINATION		VISUALLY AND BY MEASURING INSTRUMENT.		ACCORDING TO DRAWING.	×	×
MARKING		CONFIRMED VISUALLY.			×	×
ELECTRICAL CHARACTERISTICS						
CONTACT RESISTANCE		1mA(DC OR 1000Hz).		50 mΩ MAX. INCLUDING FPC,FPC 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 AXIAL DIRECTIONS.		① NO ELECTRICAL DISCONTINUITY OF 1 μs. ② CONTACT RESISTANCE: 50 mΩ MAX.	×	—
SHOCK		981 m/s <sup>2</sup> , DURATION OF PULSE 6 ms AT 3 TIMES IN 3 BOTH AXIAL DIRECTIONS.		③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	×	—
FPC RETENTION FORCE		MEASURED BY APPLICABLE FPC. (CONNECTOR,FPC AT INITIAL CONDITION. THICKNESS OF FPC SHALL BE t=0.30mm )		DIRECTION OF INSERTION: 0.4xn N MIN ( n : NUMBER OF CONTACTS). ( <i>note 3</i> )	×	—
ENVIRONMENTAL CHARACTERISTICS						
RAPID CHANGE OF TEMPERATURE		TEMPERATURE -40→+15T <sub>0</sub> +35→+105+15T <sub>0</sub> +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 105±2 °C, 96 h.		① CONTACT RESISTANCE: 50 mΩ MAX.	×	—
COLD		EXPOSED AT -40±3°C, 96 h.		② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	×	—
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.	×	—
SULPHUR DIOXIDE [JIS C 60068-2-42]		EXPOSED AT 40±2 °C, RELATIVE HUMIDITY 80±5%, 25±5 ppm FOR 96 h.			×	—
HYDROGEN SULPHIDE [JIS C 60068-2-43]		EXPOSED AT 40±2 °C, RELATIVE HUMIDITY 80±5%, 10 TO 15 ppm FOR 96 h.			×	—
	COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE	
△						
REMARK				APPROVED	HS. HIRAHARA	20201229
				CHECKED	HS. HIRAHARA	20201229
				DESIGNED	NM. YONEYAMA	20201224
				DRAWN	YK. MITSUISHI	20201224
Unless otherwise specified, refer to JIS C 5402 and IEC 60512.						
Note QT:Qualification Test AT:Assurance Test X:Applicable Test			DRAWING NO.		ELC-335205-99-00	
HRS	SPECIFICATION SHEET		PART NO.	FH52-12S-1SH (99)		
	HIROSE ELECTRIC CO., LTD.		CODE NO.	CL0580-3323-5-99		
				△	1/2	

SPECIFICATIONS					
ITEM	TEST METHOD	REQUIREMENTS	QT	AT	
RESISTANCE TO SOLDERING HEAT	1) REFLOW SOLDERING (TO BE 2 TIMES MAX.) PEAK TMP. 250 °C MAX REFLOW TMP. OVER 230 °C WITHIN 60 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.	X	—	
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.	X	—	
<p><b>(note 1)</b></p> <p>FOLLOW THE SPECIFICATIONS OF FPC/FFC IF IT'S ALLOWABLE MAXIMUM OPERATING TEMPERATURE IS BELOW 105°C</p> <p><b>(note 2)</b></p> <p>WHEN THE SAME VALUE OF CURRENT ARE APPLIED TO ALL CONTACTS AT THE SAME TIME IN ONCE, SET THE CURRENT TO THE 70 % OF THE RATED CURRENT VALUE.</p> <p><b>(note 3)</b></p> <p>THERE'S A CASE WHICH FPC/FFC RETENTION FORCE DOESN'T FULFILL THE VALUE, BECAUSE FPC/FFC SPECIFICATION AFFECTS THE RESULT OF FPC/FFC RETENTION FORCE.</p>					
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