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APPLICABLE STANDARD				
RATING	OPERATING TEMPERATURE RANGE	⚠1 -40 °C TO 125 °C (***note 1***)	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	⚠1 0.5 A (***note 2***)	APPLICABLE CABLE	t=0.3±0.05mm, GOLD PLATING HEAT RESISTANCE : 125℃

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,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 AXIAL DIRECTIONS.	① NO ELECTRICAL DISCONTINUITY OF 1 μs. ② CONTACT RESISTANCE: 50 mΩ MAX. ③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	×	—
SHOCK	981 m/s^2 , DURATION OF PULSE 6 ms AT 3 TIMES IN 3 BOTH AXIAL DIRECTIONS.		×	—
FPC RETENTION 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). (***note 3***) ⚠1	×	—
ENVIRONMENTAL CHARACTERISTICS				
RAPID CHANGE OF TEMPERATURE	TEMPERATURE-55→+15 TO +35→+125→+15 TO +35°C TIME 30→ 2 TO 3 → 30→ 2 TO 3 min. UNDER 1000 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 60±2 °C, RELATIVE HUMIDITY 90 TO 95 %, 1000 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 125±2 °C, 1000 h.	① CONTACT RESISTANCE: 50 mΩ MAX. ② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	×	—
COLD	EXPOSED AT -55±3°C, 1000 h.		×	—
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
⚠1	8	DIS-F-00021531	GT. TSURUMAKI	HS. HIRAHARA	20241106

REMARK

Unless otherwise specified, refer to IEC 60512.

APPROVED	NF. MIYAZAKI	20160330
CHECKED	HS. SAKAMOTO	20160330
DESIGNED	HK. KINOUCHI	20160330
DRAWN	RK. OGASAWARA	20160330

Note QT:Qualification Test AT:Assurance Test X:Applicable Test

DRAWING NO. ELC-365730-00-01

HRS	SPECIFICATION SHEET	PART NO.	FH52K-**S-0.5SH	
	HIROSE ELECTRIC CO., LTD.	CODE NO.	CL580 ⚠1	1/2

FORM HD0011-2-1

SPECIFICATIONS

ITEM	TEST METHOD	REQUIREMENTS	QT	AT
RESISTANCE TO SOLDERING HEAT	1) REFLOW SOLDERING (TO BE 2 TIMES MAX.) PEAK TMP. 250 ℃ MAX REFLOW TMP. OVER 230 ℃ WITHIN 60 sec. PRE-HEATING. 150 TO 200℃ 90 TO 120 sec. 2)SOLDERING IRONS : 400 ± 10 ℃, FOR 5± 1 sec .	NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS. (***note 4***) ⚠1	×	—
SOLDERABILITY	SOLDERED AT SOLDER TEMPERATURE, 245±3 ℃ FOR IMMERSION DURATION, 3±0.3 sec.	A NEW UNIFORM COATING OF SOLDER SHALL COVER A MINIMUM OF 95 % OF THE SURFACE BEING IMMERSED.	×	—

⚠1 (***note 1***)

THE HEAT RESISTANT TEMPERATURE WHEN USING FFC IS 105℃.

WHEN THE HEAT RESISTANT TEMPERATURE OF FPC/FFC IS LESS THAN 125℃/105℃,

THE HEAT RESISTANT TEMPERATURE OF FPC/FFC IS APPLIED.

⚠1 (***note 2***)

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.

⚠1 (***note 3***)

STABILIZE THE FPC/FFC TO PCB OR SOMETHING FIXED,

IF PULL-UP OR PULL-DOWN FORCE IS EXPECTED TO BE APPLIED TO THE FPC/FFC.

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.

⚠1 (***note 4***)

BLISTERS WHICH MAY BE GENERATED ON THE HOUSING DO NOT AFFECT PRODUCT PERFORMANCE.

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