



**THE DATASHEET OF
TF31-20S-0.5SH(800)**



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	COUNT	DESCRIPTION OF REVISIONS	BY	CHKD	DATE		COUNT	DESCRIPTION OF REVISIONS	BY	CHKD	DATE	
①	8	RE-5-2033	Y.K.G	C.D.H	18.10.04	△						
②	1	RE-5-2988	C.Y.H	C.D.H	23.04.24	△						
APPLICABLE STANDARD												
RATING	OPERATING TEMPERATURE RANGE	① -40°C ~ +105°C (note1)				STORAGE TEMPERATURE RANGE	-10°C ~ +50°C(Packed Condition)					
	VOLTAGE	50V [AC(rms) / DC]				OPERATING OR STORAGE HUMIDITY RANGE	RELATIVE HUMIDITY 90% MAX (NOT DEWED)					
	CURRENT	① 0.5A [AC(rms) / DC] (note2)				APPLICABLE CABLE	FPC/FFC (TYPE A : t=0.3±0.03mm) (TYPE B : t=0.3±0.05mm)					
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		MATE APPLICABLE FPC/FFC AND APPLY A CURRENT OF AC 20mV MAX, 1mA				50 mΩ MAX. INCLUDING FPC/FFC BULK RESISTANCE(L=8mm)				○	○	
INSULATION RESISTANCE		MATE APPLICABLE FPC/FFC AND APPLY A VOLTAGE OF DC 100V				500 MΩ MIN.				○	○	
VOLTAGE PROOF		MATE APPLICABLE FPC/FFC AND APPLY A VOLTAGE OF AC 150V FOR 1 min.				① NO BREAKDOWN.				○	○	
MECHANICAL CHARACTERISTICS												
FPC RETENSION FORCE		① MEASURE BY APPLICABLE FPC/FFC(t=0.3) AT INITIAL CONDITION				① HORIZONTAL DIRECTION : 0.4N*n min. ② VERTICAL DIRECTION : 0.3N*n min. (n = Number of Contacts)(note 3)				○	-	
MECHANICAL OPERATION		20 TIMES INSERTIONS AND EXTRATIONS				① CONTACT RESISTANCE: 50mΩ MAX ② NO DAMAGE, CRACK AND LOOSENESS OF PARTS				○	-	
VIBRATION		FREQUENCY 10 ~ 55 Hz, TOTAL AMPLITUDE 1.5 mm AT 2h, IN 3 DIRECTIONS				① NO ELECTRICAL DISCONTINUITY OF 1μs. ② CONTACT RESISTANCE : 50mΩ MAX				○	-	
SHOCK		981m/s ² DIRECTION OF PULSE 6ms AT 3 TIMES IN 3 DIRECTIONS.				③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS				○	-	
ENVIRONMENTAL CHARACTERISTICS												
DAMP HEAT(STEADY STATE)		EXPOSED AT 40±2°C, 90~95 %, 96Hr.				① CONTACT RESISTANCE: 50 mΩ MAX.				○	-	
RAPID CHANGE OF TEMPERATURE		① TEMPERATURE: -40±2→-15→-35→+105±2→-15→-35 °C TIME : 30 → 2~3 → 30 → 2~3 min. UNDER 5 CYCLES.				② INSULATION RESISTANCE: 50MΩ MIN. ③ NO DAMAGE, CRACK OR LOOSENESS OF PARTS.				○	-	
DAMP HEAT, CYCLE		TEMPERATURE -10→+65 HUMIDITY : 90~95% 10 CYCLE(240Hr)								○	-	
DRY HEAT		① EXPOSED AT 105±2°C, 96Hr				① CONTACT RESISTANCE : 50mΩ MAX				○	-	
COLD		EXPOSED AT -40±2°C, 96Hr				② NO DAMAGE, CRACK OR LOOSENESS OF PARTS.				○	-	
CORROSION SALT SPRAY		EXPOSED AT 35±2°C, 5±1% SALT WATER SPRAY FOR 48Hr				① CONTACT RESISTANCE 50mΩ MAX ② NO DAMAGE, CRACK OR LOOSENESS OF PARTS.				○	-	
HYDROGEN SULPHIDE		EXPOSED IN 3 PPM FOR 96Hr. (TEST STANDARD : JEIDA-38)				③ NO EVIDENCE OF CORROSION WHICH AFFECTS TO OPERATION OF CONNECTOR.				○	-	
RESISTANCE TO SOLDERING HEAT		1) REFLOW SOLDERING: PEAK TMP. : 250°C MAX. TMP. 230°C MIN FOR 60s 2) SOLDERING IRONS TMP. : 350±10°C FOR 5±1s				① NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS. ② NO DAMAGE OF ELECTRICAL PERFORMANCE				○	-	
SOLDER ABILITY		SOLDER DIPPING TEMPERATURE 245±5°C (TEST STANDARD : MIL-STD-202) FOR IMMERSION DURATION, 3±0.3 sec.				A NEW UNIFORM COATING OF SOLDER SHALL COVER A MINIMUM OF 95% OF THE SURFACE BEING IMMERSUED.				○	-	
<p>① (note 1) FOLLOW THE SPECIFICATIONS OF FPC/FFC IF IT'S ALLOWABLE MAXIMUM OPERATING TEMPERATURE IS BELOW 105°C</p> <p>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.</p> <p>① (note 3) 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>												
REMARKS		CONDITIONS FOR TESTING				DRAWN B.J KIM	DESIGNED B.J KIM	CHECKED D.H CHO	APPROVED H.C SONG	RELEASED ENG 23.04.24 DEPT		
		UNLESS OTHERWISE SPECIFIED, REFER TO JIS C 5402.				18.03.02	18.03.02	18.03.02	18.03.02			
NOTE QT: QUALIFICATION TEST AT: ASSURANCE TEST O: APPLICABLE TEST												
HIROSE KOREA CO.,LTD.				SPECIFICATION SHEET				PART NO. TF31-**S-0.5SH (800)				
CODE NO.(OLD) CL		DRAWING NO. ELC4-632346		CODE NO. CL 6535-****-* -800						1 1		

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