

## FX10 connector specification / Reliability test deviation

Hirose Bd to Bd connector, FX10 Series

Hirose Document # 10HIF-10HSI-M002-R0

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### 1. Generic Design Requirement

No.	Category	Parameter	GR1217	Hirose Spec.	Remarks
1	Mechanical	Contact Normal Force	> 100 Grams (End of life)	80 Grams	
2	Electrical characteristics	Contact Resistance	< 20 or 55 mΩ (Noble Metals)	70 mΩ	
3		Contact Resistance Change	< 10 mΩ (Noble Metals)	20 mΩ	To be reviewed after the reliability test . In Hirose stadard reliability test, Conatct Resistance Change shall be < 10 mΩ.
4		Current Rating for Signal	1 A	0.3 A	Due to 0.5mm pitch, the current rate is defined as 0.3A. * Refer to the temperature rise test report for the detail (0.75 A for 16pins in both edges of the connector)
5		Insulation Resistance	1000 MΩ minimum	100 MΩ minimum	Due to 0.5mm pitch, insulation resistance is defined as 100MΩ.
6	Environmental Stress Immunity	Withstanding Voltage	1000 Vdc or p-p Vac	150 p-p Vac	Due to 0.5mm pitch, the Withstanding Voltage is defined as 150 p-p Vac.
7		Atmospheric Contaminants	GR-63-CORE	Under examination	
8		CO Temp & Hum.	IEEE Std 1156.1-1993 (PL5)	Under examination	
9		Vibration	GR-63-CORE	Under examination	
10		Mech & Shock	GR-63-CORE	Under examination	

### 2. Reliability Test

No.	Test Item	GR1217	Hirose Spec.	Remarks
1	Dust	GR1217 Section 9.1.1.1	Not applied	FX10 contact reliability test conforms to IEA-364-1000.01 which specifies Environmental methodology for assessing the performance of electrical connectors and sockets used in business office applications.
2	Vibration	GR1217 Section 9.1.2.1 EIA-364-28B, Condiiton II ..... 10-500Hz in each 3 directions For 2H, 10G to be applied.	EIA-364-28, condition VII, Letter D ..... Ramdom vibration 10-500Hz, in each 3 directions For 15 min/firction, PSD 0.1G2/Hz to be applied.	
3	Mechanical shock	GR1217 Section 9.1.2.1 EIA-364-27B, Condiiton I ..... Peak acceleration : 294 m/s2 Duration : 11 ms	EIA-364-27B, Condiiton A ..... Peak acceleration : 490 m/s2 Duration : 11 ms	
4	Thermal shock	GR1217 Section 6.3.3 EIA-364-32B, condition I ..... -55 to 85°C 5 cycle	EIA-364-32C Condition 1 ..... -55 to 85°C 10 cycle	
5	Humidity	EIA-364-31B condition A ..... 90-95% , 42 +/-2 °C For 500h	Temperature / Humidity cycle EIA-364-31B EIA-364-1000.01, Table 2 ..... 50-80% , 25-65 +/-3°C For 24h	
6	Temperature Life	EIA-364-17, Method A condition 3 ..... 85°C, 500h	EIA-364-17, Method A condition 3 ..... 105°C, 1000h ( 85°C, 1000h if the 105Co exceeds the rated temperature of the polymeric materials used in th connector)	
7	Mixed flowing gas	GR1217 Section 9.1.3 EIA-364-65A ..... Concentration(ppb) RH% : 70±2 Temp C : 30±1 Cl2 : 10±3 NO2 : 200±50 H2S : 10±5 SO2 : 100±20 Exposure : 10 days/ Unmate 10 days/ Mate	EIA-364-65A, Class IIA ..... Concentration(ppb) RH% : 70±2 Temp °C : 30±1 Cl2 : 10±3 NO2 : 200±50 H2S : 10±5 SO2 : 100±20 Exposure : 7days/ Unmate 7days/ Mate	