

H10B EMC Hood&Housing

1. INTRODUCTION

1.1 Purpose

This document provides the qualification summary of TE Connectivity EMC Hood & Housing of HDC connector.

1.2 Scope

This specification covers the electrical, mechanical, and environmental performance of H10B EMC Hood & Housing.

1.3 Conclusion

Based on the test results, all meet the requirements according to TE Connectivity Design Objectives 108-137016.

1.4 Product Description

Name	Remarks
H10B-AGS-LB-EMC	
H10B-TSH-RO-EMC-M20	
H10B-AGS-EMC	
H10B-TSH-EMC-M20	

1.5 Qualification Test Sequence

Test and Examination	Test Group				
	A	B	C	D	E
	Test Sequence ¹⁾				
Visual and dimensional examination	1,3	1,3	1,7	1,7	1,4
Mechanical strength impact	2				
Mechanical Operation (Durability)		2			
Vibration, Random					2
Shock					3
Cold			3	3	
Dry Heat			4	4	
Rapid Change of temperature (Temperature Cycle)			5	5	
Degree of protection IP6X			2,6		
Degree of protection IPX5				2,6	

*Notes:

- 1) Numbers indicate the sequence in which the tests are performed.

2. TEST PROCEDURE

General			
No.	Description	Requirements	Test procedure according
2.1	Visual and dimension examination	Meets requirements of product drawing	Visual and dimensional examination IEC 60512-1-1/-2, Test 1a and 1b

Mechanical			
2.2	Mechanical strength impact	No damage likely to impair function	Dropping height: - 750mm for specimens of mass ≤ 250g - 500mm for specimens of mass > 250g Dropping cycles: 8 positions in 45° step, one cycles per position IEC 60512-7-2 Test 7b
2.3	Mechanical Operation (Durability)	1) 100 operation cycles 2) No damage likely to impair normal use	Shall operate to open /close the locking system by means of A) a device simulating normal use B) manual open/close 200 Max. cycle per hour
2.4	Vibration, Random	No damage likely to impair function No discontinuities greater than $t > 1\mu s$	Frequency: 5~150Hz Per EN 61373, Category 1, Class B (IEC60068-2-6 Test Fc)

2.5	Shock	No damage likely to impair function No discontinuities greater than $t > 1\mu s$	Acceleration:50m/s ² Duration:30ms Total 18 shocks(three positive and three negative in each of the three orthogonal axes) Per EN 61373
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Environmental			
2.6	Cold	No damage likely to impair function	Subject mated specimen to -40°C Duration time:16h, Test Ab Per IEC 60512-11-10 Test 11j (IEC 60068-2-1)
2.7	Dry Heat	No damage likely to impair function	Subject mated specimen to +125°C Duration time:168h Test Bb Per IEC 60512-11-9 Test 11i (IEC 60068-2-2)
2.8	Rapid Change of temperature (Temperature Cycle)	No damage likely to impair function	Subject mated specimen to Ta=-40±2°C to Tb=+125±2°C, duration: ta=1h, tb=1h,, 100 cycles IEC 60512-11-4 Test 11d (IEC 60068-2-14 Test Na)

Protection			
2.9	Degree of protection IP6X	IP 6X, No ingress of dust	Test IP 6X according to IEC 60529
2.10	Degree of protection IPX5	IP X5, No ingress of water	Test IP X5 (water jetting) according to IEC 60529

3. SUMMARY OF TEST RESULTS:

Examination of product – all test group

Test Group	Test Item	Requirement	Test Result	Judgment
Group A	Visual and dimensional examination	Meets requirements of product drawing	No physical damage	passed
	Mechanical strength impact	No damage likely to impair function	No physical damage	passed
	Visual and dimensional examination	Meets requirements of product drawing	No physical damage	passed
Group B	Visual and dimensional examination	Meets requirements of product drawing	No physical damage	passed
	Mechanical Operation (Durability)	After 100 operation cycles, No damage likely to impair normal use	No physical damage	passed
	Visual and dimensional examination	Meets requirements of product drawing	No physical damage	passed
Group C	Visual and dimensional examination	Meets requirements of product drawing	No physical damage	passed
	Degree of protection IP6X	No ingress of dust	No ingress of dust	passed
	Cold	No damage likely to impair function	No physical damage	passed
	Dry Heat	No damage likely to impair function	No physical damage	passed
	Rapid Change of temperature (Temperature Cycle)	No damage likely to impair function	No physical damage	passed
	Degree of protection IP6X	No ingress of dust	No ingress of dust	passed
	Visual and dimensional examination	Meets requirements of product drawing	No physical damage	passed
Group D	Visual and dimensional examination	Meets requirements of product drawing	No physical damage	passed
	Degree of protection IPX5	No ingress of water	No ingress of water	passed
	Cold	No damage likely to impair function	No physical damage	passed
	Dry Heat	No damage likely to impair function	No physical damage	passed
	Rapid Change of temperature (Temperature Cycle)	No damage likely to impair function	No physical damage	passed
	Degree of protection IPX5	No ingress of water	No ingress of water	passed
	Visual and dimensional examination	Meets requirements of product drawing	No physical damage	passed
Group E	Visual and dimensional examination	Meets requirements of product drawing	No physical damage	passed
	Vibration, Random	No damage likely to impair function No discontinuities greater than $t > 1\mu s$	No breakdown or flashover	passed
	Shock	No damage likely to impair function No discontinuities greater than $t > 1\mu s$	No breakdown or flashover	passed
	Visual and dimensional examination	Meets requirements of product drawing	No physical damage	passed