

HB Housing series for housing mating housing application

1. INTRODUCTION

1.1 Purpose

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

1.2 Scope

This specification covers the electrical, mechanical, and environmental performance of HB Housing series. Testing was performed at the Shanghai Electrical Components Test Laboratory.

1.3 Conclusion

Based on the test results, all meet the requirements according to TE Connectivity Design Objectives 108-137505.

1.4 Product Description

Name	Remarks
H24B-AG-BO	H24B HOUSING, BULKHEAD MOUNTED,4 EAR, POWDER COATED, GREY, WITHOUT SEAL AND GASKET
H16B-AG-BO	H16B HOUSING, BULKHEAD MOUNTED,4 EAR, POWDER COATED, GREY, WITHOUT SEAL AND GASKET
H10B-AG-BO	H10B HOUSING, BULKHEAD MOUNTED,4 EAR, POWDER COATED, GREY, WITHOUT SEAL AND GASKET
H6B-AG-RO	H6B HOUSING, BULKHEAD MOUNTED,2 EAR, POWDER COATED, GREY, WITHOUT SEAL AND GASKET

1.5 Qualification Test Sequence

Visual and dimensional examination	Test Group				
	A	B	C	D	E
Visual and dimensional examination	Test Sequence ¹⁾				
Visual and dimensional examination	1,3	1,5	1,5	1,4	1,3
Mechanical strength impact	2				
Locking and unlocking force		2,4			
Mechanical Operation (Durability)		3			
Vibration, Random				2	
Shock				3	
Cold			2		
Dry Heat			3		
Rapid Change of temperature (Temperature Cycle)			4		
Salt Mist Cyclic Test					2

*** Notes:**

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

2. TEST PROCEDURE

General			
No.	Test Items	Requirements	Condition according to
2.1	Visual and dimensional 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	Locking and unlocking force	Locking force: 100N max. Un-locking force: 100N max.	The specified force shall be applied in operating direction like normal use with the speed of 20mm/min. IEC 60512-13-1 Test 13a
2.4	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
2.5	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)
2.6	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

Environmental			
2.7	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)
2.8	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)
2.9	Rapid Change of temperature (Temperature Cycle)	No damage likely to impair function	Subject mated specimen to $T_a = -40 \pm 2^\circ C$ to $T_b = +125 \pm 2^\circ C$, duration: $t_a = 1h$, $t_b = 1h$, 100 cycles IEC 60512-11-4 Test 11d (IEC 60068-2-14 Test Na)
2.10	Salt Mist Cyclic Test	No damage likely to impair function	Mated connector and expose to the following salt mist condition. Atmosphere: salt spray from a 5±1% concentration solution; PH value: 6.5~7.2 per IEC60068-2-52, Severity 1, 1 Cycle

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
	Locking and unlocking force	Locking force: 100N max. Un-locking force: 100N max.	Locking force: 25.69N max. Un-locking force: 46.48N max.	passed
	Mechanical Operation (Durability)	After 100 operation cycles, No damage likely to impair normal use	No physical damage	passed
	Locking and unlocking force	Locking force: 100N max. Un-locking force: 100N max.	Locking force: 25.8N max. Un-locking force: 34.3N max.	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
	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
	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
	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
Group E	Visual and dimensional examination	Meets requirements of product drawing	No physical damage	passed
	Salt Mist Cyclic Test	No damage likely to impair function	No physical damage	passed
	Visual and dimensional examination	Meets requirements of product drawing	No physical damage	passed