



HB IP65 plastic locking Hood and Housing series

1. INTRODUCTION

1.1 Purpose

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

1.2

1.3 Scope

This specification covers the electrical, mechanical, and environmental performance of H10B/H16B/H24B Hood & Housings. Testing was performed at the Shanghai Electrical Components Test Laboratory.

1.4 Conclusion

Based on the test results, all meet the requirements according to TE Connectivity Design Objectives 108-137018.

1.5 Product Description

Name	Remarks
H10B-TGH-M40	
H10B-AG-SL	
H16B-TGH-M40	
H16B-AG-SL	
H24B-TGH-M40	
H24B-AG-SL	

1.6 Qualification Test Sequence

Test and Examination	Test Group					
	A	B	C	D	E	F
	Test Sequence ¹⁾					
Visual and dimensional examination	1,3	1,3	1,6	1,6	1,4	1,3
Mechanical strength impact	2					
Mechanical Operation (Durability)		2				
Vibration, Random					2	
Shock					3	
Cold			3	3		
Dry Heat			4	4		
Salt Mist Cyclic Test						2
Degree of protection IP6X			2,5			
Degree of protection IPX5				2,5		

* Notes:

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

2. TEST PROCEDURE

No.	Description	Test procedure according	Requirements
2.1	Visual and dimension examination	Visual and dimensional examination IEC 60512-1-1/-2, Test 1a and 1b	Meets requirements of product drawing
2.2	Mechanical strength impact	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	No damage likely to impair function
2.3	Mechanical Operation (Durability)	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	1) 100 operation cycles 2) No damage likely to impair normal use
2.4	Vibration, Random	Frequency: 5~150Hz Per EN 61373, Category 1, Class B (IEC60068-2-6 Test Fc)	No damage likely to impair function No discontinuities greater than $t > 1\mu s$
2.5	Shock	Acceleration: 50m/s ² Duration: 30ms Total 18 shocks (three positive and three negative in each of the three orthogonal axes) Per EN 61373	No damage likely to impair function No discontinuities greater than $t > 1\mu s$

2.6	Cold	Subject mated specimen to -40°C Duration time:16h, Test Ab Per IEC 60512-11-10 Test 11j (IEC 60068-2-1)	No damage likely to impair function
2.7	Dry Heat	Subject mated specimen to +125°C Duration time:168h Test Bb Per IEC 60512-11-9 Test 11i (IEC 60068-2-2)	No damage likely to impair function
2.8	Salt Mist Cyclic Test	Follow: ASTM B117-11 Test Condition: 1).Mated connector 2).Salt spray: (5±1) % NaCl (m/m) concentration solution; 3).Temperature (35±1) °C 4). Precipitation rate of salt spray(1.0-2.0) ml (/ 80cm*h) 5).PH value: 6.5-7.2 6).Duration:72H	No damage likely to impair function
2.9	Degree of protection IP6X	Test IP 6X according to IEC 60529	IP 6X, No ingress of dust
2.10	Degree of protection IPX5	Test IP X5 (water jetting) according to IEC 60529	IP X5, No ingress of water

3. SUMMARY OF TEST RESULTS:

Examination of product – all test group

Test Group	Test Item	Test Result	Requirement	Judgment
Group A	Mechanical strength impact	No physical damage	No damage likely to impair function	passed
Group B	Mechanical Operation (Durability)	No physical damage	After 100 operation cycles, No damage likely to impair normal use	passed
Group C	Degree of protection IP6X	No ingress of dust	No ingress of dust	passed
	Cold	No physical damage	No damage likely to impair function	passed
	Dry Heat	No physical damage	No damage likely to impair function	passed
	Degree of protection IP6X	No ingress of dust	No ingress of dust	passed
Group D	Degree of protection IPX5	No ingress of water	No ingress of water	passed
	Cold	No physical damage	No damage likely to impair function	passed
	Dry Heat	No physical damage	No damage likely to impair function	passed
	Degree of protection IPX5	No ingress of water	No ingress of water	passed
Group E	Vibration, Random	No breakdown or flashover	No damage likely to impair function No discontinuities greater than $t > 1\mu s$	passed
	Shock	No breakdown or flashover	No damage likely to impair function No discontinuities greater than $t > 1\mu s$	passed
Group F	Salt Mist Cyclic Test	No physical damage	No damage likely to impair function	passed