

## H3A plastic IP65 Hood & Housing series

### 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 H3A plastic IP65 Hood & Housings. 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 108-137134.

#### 1.4 Product Description

Name	Remarks
H3A-TG-PG/M	
H3A-TS-PG/M	
H3A-AG/AGS	
H3A-AGSV-PG/M	
H3A-TGV-B-PG/M	

#### 1.5 Qualification Test Sequence

Test and Examination	Test Group				
	A	B	C	D	E
	Test Sequence <sup>1)</sup>				
Visual and dimensional examination	1,3	1,3	1,5	1,3	1,4
Mechanical strength impact	2				
Mechanical Operation (Durability)		2			
Vibration, Random					2
Shock					3
Cold			3		
Dry Heat			4		
Degree of protection IP6X			2		
Degree of protection IPX5				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 $\leq 250g$ - 500mm for specimens of mass $> 250g$ Dropping cycles: 8 positions in $45^\circ$ 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

Environmental			
2.6	Cold	No damage likely to impair function	Subject mated specimen to $-40^\circ C$ 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 $+125^\circ C$ Duration time: 168h Test Bb Per IEC 60512-11-9 Test 11i (IEC 60068-2-2)

Protection			
2.8	Degree of protection IP6X	IP 6X, No ingress of dust	Test IP 6X according to IEC 60529
2.9	Degree of protection IPX5	IP X5, No ingress of water	Test IP X5 (water jetting) according to IEC 60529 7.3.6.3&7.3.7 of EN61984

## 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 damage likely to impair function	passed
	Mechanical strength impact	No damage likely to impair function	No damage likely to impair function	passed
	Visual and dimensional examination	Meets requirements of product drawing	No damage likely to impair function	passed
Group B	Visual and dimensional examination	Meets requirements of product drawing	No damage likely to impair function	passed
	Mechanical Operation (Durability)	After 100 operation cycles, No damage likely to impair normal use	No damage likely to impair function	passed
	Visual and dimensional examination	Meets requirements of product drawing	No damage likely to impair function	passed
Group C	Visual and dimensional examination	Meets requirements of product drawing	No damage likely to impair function	passed
	Degree of protection IP6X	IP 6X, No ingress of dust	IP 6X, No ingress of dust	passed
	Cold	No damage likely to impair function	No damage likely to impair function	passed
	Dry Heat	No damage likely to impair function	No damage likely to impair function	passed
	Visual and dimensional examination	Meets requirements of product drawing	No damage likely to impair function	passed
Group D	Visual and dimensional examination	Meets requirements of product drawing	No damage likely to impair function	passed
	Degree of protection IPX5	IP X5, No ingress of water	IP X5, No ingress of water	passed
	Visual and dimensional examination	Meets requirements of product drawing	No damage likely to impair function	passed
Group E	Visual and dimensional examination	Meets requirements of product drawing	No damage likely to impair function	passed
	Vibration, Random	No damage likely to impair function No discontinuities greater than $t > 1\mu s$	No damage likely to impair function No discontinuities greater than $t > 1\mu s$	passed
	Shock	No damage likely to impair function No discontinuities greater than $t > 1\mu s$	No damage likely to impair function No discontinuities greater than $t > 1\mu s$	passed
	Visual and dimensional examination	Meets requirements of product drawing	No damage likely to impair function	passed