1. SCOPE

1.1. Contents

This specification covers the requirements for product performance, test methods and quality assurance provisions of DIP socket

1.2. Qualification Test Results

The Qualification Test Report number for this testing is 501-160922.

2. REQUIREMENTS

2.1. Design and Construction

Product shall be of the design, construction and physical dimensions specified on the applicable product drawing.

2.2. Materials

Materials used in the construction of this product shall be as specified on the applicable product drawing.

A. Socket assembly

Contact : Copper Alloy
Housing : Thermoplastic UL94V-0.

2.3. Ratings

Current Rating : 1 Amp
Operating : -55 to 125°C

2.4. Performance requirements and test descriptions.

The product shall be designed to meet the electrical, mechanical, and environmental performance requirements specified in Fig. 1.
All tests shall be performed in the room temperature, unless otherwise specified.

2.5. Test Requirements and Procedures Summary

Figure 1

Test Items	Requirements	Procedures
Examination of product	Meets requirements of customer drawing.	Visual and dimensional inspection. No physical damage

Electrical Requirements		
Contact resistance	Initial value : 10 mΩ max. Final value : 20 mΩ max	EIA 364-23 or IEC60512-2-1 or SAE/USCAR-2,5.3.1 or MIL-STD-1344, Method 3002.1 or MIL-STD-202F, Method 307 Subject mated contacts assembled in housing to closed circuit current of 100 mA maximum at open circuit at 20 mVDC maximum.
Dielectric withstanding voltage	No disruptive discharge, leakage, or deterioration. Current leakage: 0.5 mA Max	EIA 364-20 or IEC60512-4-1 or MIL-STD-1344, Method 3001.1 or MIL-STD-202F, Method 301 Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector assemblies Test Potential: 1000Vac at sea level Test Duration: 1 Minute
Insulation resistance	1000MΩ Min	EIA 364-21 or IEC60512-3-1 or SAE/USCAR-2,5.5.1 or MIL-STD-1344, Method 3003.1 or MIL-STD-202F, Method 302 Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector assemblies. Test Voltage: 1000 V DC. Test Duration: 1 Minute

Mechanical Requirements		
Retention force test	2.5Kgf min/per pin	EIA-364-29 or IEC60512-15-1 or SAE/USCAR-2,5.7.1or MIL-STD-1344, Method 2007.1 Draw out a contact in solder tail direction at 25.4 mm/minute
Durability test	No evidence of damage. The electrical performances meet the contact resistance spec	EIA 364-09 or IEC60512-9-1 or MIL-STD-1344, Method 2016 Mate contact at 25.4mm/minute for 500 cycles.
Insert & Extract force test	Insert force test：14 Kgf max Extract force test：1.4kgf min	EIA 364-13or IEC60512-13-2 or SAE/USCAR-2,5.4.2or SAE/USCAR-2,5.4.3or MIL-STD-1344, Method 2013.1 Measure total mating force at normal working range during 3 cycles, speed:25.4mm/minute

Environmental Requirement		
Humidity test	No evidence of damage. No evidence of damage. The electrical performances meet the contact resistance spec	EIA364-31 or IEC60512-11-3/IEC60512-11-12 or IEC60068-2-30Db or SAE/USCAR-2,5.6.2 or MIL-STD-1344, Method 1002.2 or MIL-STD-202F, Method 103B or MIL-STD-202F, Method 106E , Method III Test Condition A Subject mated connectors should be tested according to the condition listed below: Temperature: 25 ~ 65°C Humidity: 90 ~ 95% (R.H) Duration: 96 hours
Thermal shock test	No evidence of damage. No evidence of damage. The electrical performances meet the contact resistance spec	EIA 364-32 or IEC60512-11-4 or IEC60068-2-14 or SAE/USCAR-2,5.6.1 or MIL-STD-1344, Method 1003.1 or MIL-STD-202F, Method 107G, Test Condition I Subject mated connectors should be tested according to the condition listed below: Temperature: -55~ 125° C Cycles: 5 Exposure time at temperature extremes: 30 minutes
Salt spray test	No evidence of damage. The electrical performances meet the contact resistance spec	EIA 364-26 or IEC60512-11-6 or IEC60068-2-7 or MIL-STD-1344, Method 1001.1 or MIL-STD-202F, Method 101D, Test Condition A Subject mated and unmated connectors should be tested according to the condition listed below: Temperature: 35±2° C Humidity: 95 ~ 98% (R.H) PH Value: 6.5 ~ 7.2 Duration: 48hours
Temperature life test	No evidence of damage. The electrical performances meet the contact resistance spec	EIA 364-17 or IEC60512-9-2 or IEC60068-2-2Bb or SAE/USCAR-2,5.6.3 or MIL-STD-1344, Method 1005.1 or MIL-STD-202F, Method 108A, Test Condition 3 Method A Subject mated connectors should be tested according to the condition listed below:

		Temperature: 105±2°C Duration: 1008 hours
Resistance to soldering heat	No evidence of damage.	EIA 364-56 or IEC60512-12-4 or MIL-STD-202F, Method 210 A, Procedure 3 Test Condition C Soldering bath method Dip terminal or pin into immerse the area up to 1.2mm from the bottom of the housing into solder molder molten at 280±5°C for 5-10 sec
Solderability test	Continuous solder coating with a minimum 95% coverage.	EIA 364-52 Category 3 Subject unmated connectors should be tested according to the condition listed below: Steam Aging Temperature: 90 ~ 96°C Steam Aging Duration: 8 hours±5 min. Soldering Temperature: 245±5°C Soldering Time: 3 ~ 5 seconds

2.6. Product Qualification Test Sequence

Table 1

Test Examination	Test Group (a)											
	1	2	3	4	5	6	7	8	9	10	11	12
	Test Sequence (b)											
Examination of Product	1	1	1	1	1,9	1,5	1,9	1,9	1,9	1,9	1,3	1
Contact resistance	2				2,6	2,4	2,6	2,6	2,6	2,6		
Insulation Resistance		2			3,7		3,7	3,7	3,7	3,7		
Dielectrics withstanding voltage			2		4,8		4,8	4,8	4,8	4,8		
Retention force test				2								
Durability test					5							
Insert force test						3						
Humidity test							5					
Thermal shock test								5				
Salt spray test									5			
Temperature life test										5		
Resistance to soldering heat											2	
Solderability test												2

3. QUALITY ASSURANCE PROVISIONS

3.1. Qualification Testing

A. Test Sequence

Qualification inspection shall be verified by testing specimens as specified in table 1.

3.2. Acceptance

Acceptance is based on verification that the product meets the requirements of Figure 1. Failures attributed to equipment, test setup or operator deficiencies shall not disqualify the product. If product failure occurs, corrective action shall be taken, and specimens resubmitted for qualification. Testing to confirm corrective action is required before re-submittal.

3.3. Quality Conformance Inspection

The applicable quality inspection plan shall specify the sampling acceptable quality level to be used. Dimensional and functional requirements shall be in accordance with the applicable product drawing and this specification.

Product parts number	Description
2445893-X (*)	DIP Socket

(*) Refer to customer drawing for detail

Rev.	Rev. Record	Prepared		Approval	
A	Released	Boney Thomas	23rd Feb 2023	Kim Jin	24th Feb 2023