# POSITIVE-LOCK, MKIII, .250 SERIES

## 1. INTRODUCTION

### 1.1 Purpose

Testing was performed on RECEPTACLE, POSITIVE-LOCK, MKIII, .250 SERIES 1Pos connectors to determine its conformance related to the performance requirements.

### 1.2 Scope

This report covers the electrical and mechanical performance of RECEPTACLE, POSITIVE-LOCK, MKIII, .250 SERIES 1Pos connectors. Testing was performed at the Shanghai Electrical Components Test Laboratory between Jan. 23, 2019 and Jan. 24, 2019. The associated test number is TP-19-00025.

### 1.3 Conclusion

All part numbers listed in Table 1 confirmed to the performance requirements.

### 1.4 Test Specimens

Specimens with the following part numbers were used for test:

Table 1

| P/N | Description | Quantity ( pcs ) | Note |
|---|---|---|---|
| 2-521120-3 | HOUSING, RECEPTACLE, POSITIVE-LOCK, MKIII, .250 SERIES | 5 | / |
| 63306-1 | FASTON 250 REC 18-14 AWG BR | 5 | / |

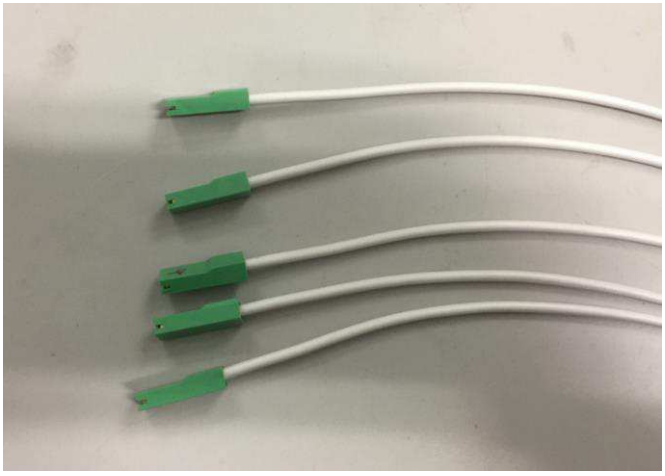

Fig.1

1.5 Test Sequence

The specimens listed in Table 1 were subjected to the test sequences listed in Table 2.

Table 2

| Test Item | Test Group (a) |
|---|---|
| | 1 |
| | Test Sequence (b) |
| Dielectric Withstanding Voltage | 2 |
| Contact Insertion Force | 1 |
| Contact Retention Force | 3 |

Note: a). Test group defined per customer requirement
b). Numbers indicate sequence in which tests are performed.

1.6 Environmental Conditions

Unless otherwise stated, the following environmental conditions prevailed during testing:
Temperature: 15°C to 35°C
Relative Humidity: 25% to 75%

## 2. TEST PROCEDUES

2.1 Dielectric Withstanding Voltage
Hold at 3.4 KV AC at sea level for 1 minute. Test between adjacent contacts and between housing and closest contacts in a mated connector.
Requirement: 1-minute hold without a creep discharge or flashover.
Current Leakage: 5 mA (maximum)
Test Method: EIA-364-20, Method A, Condition 1.

2.2. Contact Insertion Force
Measure the force required to insert contact into housing. Operation Speed: 25.4 mm/min.
Requirement: 18N Maximum
Test Method: EIA-364-05.

2.3. Contact Retention Force
Measure the axial force required to remove contact from the housing with and without a TPA accessory. Operation Speed: 25.4 mm/min.
Requirement: 80N Minimum
Test Method: EIA-364-29.

## 3. SUMMARY OF TESTING

3.1 Dielectric Withstanding Voltage
Test result are shown in Table 3.

Table 3

| Group | Quantity | Condition | Requirement | Results |
|---|---|---|---|---|
| 1 | 5 | Initial | No breakdown or flashover. | Meet spec. |

3.2. Contact Insertion Force
Test result are shown in Table 4.

Table 4

Unit: N

| Group | Quantity | Condition | Requirement | Results |
|---|---|---|---|---|
| 1 | 5 | Initial | 18 (max.) | Meet spec. |

3.3. Contact Retention Force
Test result are shown in Table 5.

Table 5

Unit: N

| Group | Quantity | Condition | Requirement | Results |
|---|---|---|---|---|
| 1 | 5 | Initial | 80N (min.) | Meet spec. |

## 4. CALIBRATION

### 4.1 Calibration Statement

All equipment containing a calibration number is calibrated and traceable through TE Connectivity (TE).

## 5. VALIDATION

Requested by:
Shukla, Divya 2019 01 04
_____ ____/____/____
Product Engineer
TE Connectivity USA product engineer

Prepared by:
Wintan Feng 2019 02 14
_____ ____/____/____
Test Engineer
Shanghai Electrical Components Test Lab.

Approved by:
Robin Lu 2019 02 14
_____ ____/____/____
Manager
Shanghai Electrical Components Test Lab.