# QUALIFICATION TEST REPORT

## 40 WAYS MQS PLUG CONNECTOR

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|---|---|---|---|---|---|---|---|
| | | | | | | DR<br>G.P. Cattaneo | tyco Electronics<br>AMP – Italia Spa |
| | | | | | | CHK<br>G.P. Cattaneo | NUMBER<br>501-20060 / REV A |
| | | | | | | APP<br>A.Genta | |
| A | - | G.P.C. | 25/07/99 | G.P.C | 28/07/99 | NAME<br>40 WAYS MQS PLUG CONNECTOR | |
| REV LTR | REVISION RECORD | DR | DATE | CHK | DATE | | |

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**LABORATORY**

QUALIFICATION TEST REPORT

CONFIDENTIAL FOR CUSTOMER

40 POS RECEPTACLE CONNECTOR FOR MICRO QUADLOK SYSTEM CONTACT

| | | |
|---|---|---|
| PRODUCT PART NUMBERS | 284150-1/-2/–3/-4 | REC HOUSING |
| | 284229-1/-2 | FRAME/COVER |
| | 928999-1 | MQS REC CONTACT ( 0,35-0,5 SQ MM WIRE ) |
| | 963715-1 | MQS REC CONTACT ( 0,75 SQMM WIRE ) |

FOREWARD

TESTING HAS BEEN MADE ACCORDING TO THE FIAT PROCUREMENT SPECIFICATION 9.91320.02 AND FIAT TEST SPECIFICATION 7.Z8260, ONTO 10 SAMPLES EACH TEST TYPE, MATED WITH THE MALE COUNTERPART.
EACH TEST WAS PERFORMED WITH THE PARAMETERS AS REQUIRED IN THE A.M. SPEC.

| TEST TYPE | RESULTS | COMMENTS |
|---|---|---|
| Visual Examination | No defects detected | Test passed |
| Connector mating Force | From 32 to 41 N<br>Aver. 36,8 N | Test passed, ( ≤ 70 N ) |
| Unmating Force | From 25,3 to 34,1 N<br>Aver. 28,1 N | Test passed ( ≤ 70 N ) |
| Contact Extraction Force (Primary Locking Only ) | From 74,1 to 125,5 N<br>Aver. 88,77 N (*) | Test passed ( ≥ 30 N ) |
| Contact Extraction Force (Primary plus Secondary Locking SL2 type) | From 94,5 to 155,5 N<br>Aver. 108,7 N (*) | Test passed ( ≥ 60 N ) |
| Connector pull-out force | Tested samples withstood the applied axial load without loosing receptacle housing from header | Test passed ( ≥ 100 N ) |

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| TEST TYPE | RESULTS | COMMENTS |
|---|---|---|
| Accelerated Aging 200 hr +105°C | No deformation nor cracking of plastic parts | Test passed |
| Contact Insertion Force | From 2,47 to 5,62 N Aver. 3,84 N (**) | Test passed ( ≤ 10 N ) |
| Closing Force of secondary lock (SL2 type) with one or more terminals wrongly inserted | Under the applied load the receptacle housing can't be inserted into the frame. | Test passed (≥ 80 N ) |
| Resistance of lever to transverse force | No damages or coming out of the lever from its seat | Test passed |
| Lever lock uncoupling load | From 87,27 to 92,72 N Aver. 90,17 N | Test passed (≥ 70 N ) |
| Polarization Effectiveness | No electrical continuity detected | Test passed |
| Insulation Resistance | (between adjacent contact pairs At 500 V x 1 min) | Test passed ( ≥ 10 Mohm ) |
| Dielectric Breakdown | (between adjacent contact pairs) No discharge observed when submitted to 1000 V ac x1min. | Test passed (≥ 1000 V ) |
| Connector Mechanical Retention (Kojiri Test with 100N applied load) | No damage on the coupling system, no connection uncoupling nor microinterruptions of electrical continuity | Test passed |

(*) Ref. Qualification Test Report 501-20025

(**) Ref. Report on Additional Tests to QTR 501-18004 (18 & 26 pos. MQS Connectors)

For all the remaining features, see the AMP Germany MQS contact QUALIFICATION TEST REPORT 501-18004.

3. VALIDATION

Prepared by:

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Reviewed by:

Laboratory Manager P. CATTANEO

Approved by:

Project Engineering Manager A. GENTA