NICOMATIC R&D LABORATORY	QUALIFICATION TEST REPORT	QTR18008a
EMM SERIE ACCORDING TO MIL-DTL-83513G STANDARD		Page : 1 /9
		Qualification status : PASSED

Magnetic Permeability

According to MIL-DTL-83513G §3.5.1, 4.5.3 and ASTM A342/A342M test procedure

ISSUE	MODIFICATION	VISA	DATE
a	Original Issue	AJ	21/05/18
b			
c			

	Name	Duty	Date	Visa
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1 Conclusion

The EMM connectors are qualified regarding Magnetic Permeability according to MIL-DTL-83513G standard.

2 Technical Features Proposal

Magnetic Permeability: < 2 gamma

3 Connate Reports

4 Information about the tests

4.1 Object

Verify the magnetic permeability of EMM connectors according to MIL-DTL-83513G standard.

4.2 Reference documents/Qualification Plan

- MDC.P16020.a
- MIL-DTL-83513G
- ASTM A342/A342M

4.3 Tested Products

Designation	Article Reference*	Drawing issue*	Batch / DI*	Quantity
C18892-30 (Female, Straight on PCB, E60 guiding)	C18892-30	na	DI7576	20
C18900-30 (Female Straight on PCB, E50)	C18900-30	na	DI7577	20
C18891-30 (Male, Straight on PCB, E10)	C18891-30	na	DI7579	20
C18904-30 (Male, 90° on PCB, E11 guiding)	C18904-30	na	DI7578	20
C18893-30 (Female, 90° on PCB, E61 guiding)	C18893-30	na	DI7580	20
C18901-30 (Female, 90° on PCB, E51 jackscrew)	C18901-30	na	DI7581	20
C18981-30-0250 (Male, on cable AWG30, E01 jackscrew)	C18981-30-0250	na	DI7592	20
C18980-30-0250 (Male, on cable AWG28, E01 jackscrew)	C18980-30-025	na	DI7591	20
C18902-30-0250 (Male, on cable AWG26, E01 jackscrew)	C18902-30-0250	na	DI7588	20
C18979-30-0250 (Male, on cable AWG24, E01 jackscrew)	C18979-30-0250	na	DI7589	20
C18902-30-0250-BP (Male, on cable AWG26, E01 jackscrew BP)	C18902-30-0250-BP	na	DI7586	20
18224-AWG24	18224-AWG24	na	DI7594	25
18224-AWG26	18224-AWG26	na	DI7596	25
18240-AWG28	18240-AWG28	na	DI7597	25
18240-AWG30	18240-AWG30	na	DI7598	25

4.4 Persons present during the tests

Name	Duty
A.JAGHMIM	Test & Measurement Manager

4.5 Date and place of the tests

NICOMATIC France Lab. from 09/01/18 to 10/01/18

4.6 Environmental conditions

Ambient temperature: 23.5°C
Pressure: 953 mabr
Humidity: 43%

4.7 Incidents during the test

None

4.8 Test Equipments

Designation	Calibration Data	
LOW-MU PERMEABILITY INDICATOR 00349	**Last calibration date**	17/08/16
	Next calibration date	17/08/18

4.9 Test Tooling

Designation	Tooling reference

5 Requirements

The relative permeability shall not exceed 2.0 µ when measured as specified in 4.5.3 (of MIL-STD-83513G standard), except for hardware, see 3.1.

6 Test Procedure

Permeability shall be measured on connectors with an instrument in accordance with ASTM A342/A342M. The connectors may be wired or unwired, but shall not be carrying current.

7 Test setup





8 Measurements results

Magnetic Permeability Result :	< 2

	Sample 1	Sample 2	Sample 3
C18892-30 (Female, Straight on PCB, E60 guiding)	< 2 gamma	< 2 gamma	< 2 gamma
C18900-30 (Female Straight on PCB, E50)	< 2 gamma	< 2 gamma	< 2 gamma
C18891-30 (Male, Straight on PCB, E10)	< 2 gamma	< 2 gamma	< 2 gamma
C18904-30 (Male, 90° on PCB, E11 guiding)	< 2 gamma	< 2 gamma	< 2 gamma
C18893-30 (Female, 90° on PCB, E61 guiding)	< 2 gamma	< 2 gamma	< 2 gamma
C18901-30 (Female, 90° on PCB, E51 jackscrew)	< 2 gamma	< 2 gamma	< 2 gamma
C18981-30-0250 (Male, on cable AWG30, E01 jackscrew)	< 2 gamma	< 2 gamma	< 2 gamma
C18980-30-0250 (Male, on cable AWG28, E01 jackscrew)	< 2 gamma	< 2 gamma	< 2 gamma
C18902-30-0250 (Male, on cable AWG26, E01 jackscrew)	< 2 gamma	< 2 gamma	< 2 gamma
C18979-30-0250 (Male, on cable AWG24, E01 jackscrew)	< 2 gamma	< 2 gamma	< 2 gamma
C18902-30-0250-BP (Male, on cable AWG26, E01 jackscrew BP)	< 2 gamma	< 2 gamma	< 2 gamma

Magnetic Permeability Result :	< 2

	Sample 4	Sample 5	Sample 6
C18892-30 (Female, Straight on PCB, E60 guiding)	< 2 gamma	< 2 gamma	< 2 gamma
C18900-30 (Female Straight on PCB, E50)	< 2 gamma	< 2 gamma	< 2 gamma
C18891-30 (Male, Straight on PCB, E10)	< 2 gamma	< 2 gamma	< 2 gamma
C18904-30 (Male, 90° on PCB, E11 guiding)	< 2 gamma	< 2 gamma	< 2 gamma
C18893-30 (Female, 90° on PCB, E61 guiding)	< 2 gamma	< 2 gamma	< 2 gamma
C18901-30 (Female, 90° on PCB, E51 jackscrew)	< 2 gamma	< 2 gamma	< 2 gamma
C18981-30-0250 (Male, on cable AWG30, E01 jackscrew)	< 2 gamma	< 2 gamma	< 2 gamma
C18980-30-0250 (Male, on cable AWG28, E01 jackscrew)	< 2 gamma	< 2 gamma	< 2 gamma
C18902-30-0250 (Male, on cable AWG26, E01 jackscrew)	< 2 gamma	< 2 gamma	< 2 gamma
C18979-30-0250 (Male, on cable AWG24, E01 jackscrew)	< 2 gamma	< 2 gamma	< 2 gamma
C18902-30-0250-BP (Male, on cable AWG26, E01 jackscrew BP)	< 2 gamma	< 2 gamma	< 2 gamma

9 Visual Inspection

Required by the applicable standard ?			
YES		NO	☐

**********END OF REPORT**********

10 APPENDIX

Internal use only ?			
YES	☒	NO	☐

10.1 The Laboratory Advice

10.2 Pictures

**********END OF APPENDIX**********