# Molex 731000207 PDF

# molex

深圳创唯电子有限公司 http://www.molex-connect.com

TITLE:

GENERAL SPECIFICATION FOR 50 OHM SMB SERIES CONNECTORS

PER ECN 0942 TITLE: GENERAL SPECIFICATION FOR SPECIAL 50 OHM SMB SERIES CONNECTORS Audy 961223 C PER ECN 0845 Andy 960716 В PER ECN 0778 Product Specification 960321 REV DESCRIPTION SIGN THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION DOCUMENT NO Prepared By: R. Halds SHEET NO. Date:950220 PS - 73598-0099 Checked By:( Date 96122 1 of 10

Approved By:

Date : 961230

#### 1.0 SCOPE

This specification covers the performance requirements and characteristics for 50 OHM SMB SERIES CONNECTORS

## 2.0 APPLICABLE DOCUMENTS SPECIFICATIONS

2.1 Per applicable Molex Material Spec. refer to Sales and Engineering Drawings.

#### 3.0 PRODUCT DESCRIPTION

- 3.1 Product Name
  - 50 OHM SMB SERIES CONNECTORS
  - 3.2 Material

Refer to respective sales drawing

3.3 Finishes

Refer to respective sales drawing.

# 4.0 RATINGS

Item	Rating
Working Voltage	500 VRMS @ Sea Level
Impedance	50 Ohm Nominal
Frequency Range	dc to 4 GHz
Temperature Range	-65 deg. C to +165 deg. C

## 5.0 PERFORMANCE SPECIFICATIONS

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# 5.1 Electrical Performance

	Tes	st Item	Test Spec.	Test Condition
	Insertion Los	s	Initial: 0.30 x (f) <sup>1/2</sup> After environment:N/A f(GHz): test frequency	dc to 4 GHz
	Insulation Re	sistance	1000 megohms min.	500 V DC.
	Dielectric Wi Voltage	thstanding	1000 volts rms. min.	at sea level
	VSWR		Initial:1.30 + (0.03 x f) per mated pair After environment:N/A f (GHz): test frequency	dc to 4 GHz
	Contact Resis	stance	Center Contact: 6.0 milliohms Max. Outer Contact: Initial:4.0 milliohms Max. After environment:N/A	
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# 5.2 Mechanical Performance

3.2	Mechanical Peri	ormance		
	Test I	tem	Test Spec.	Test Condition
	Durability		a) no damage to interface b) meet the requirements of 5.1, and mating and unmating force requirement	After 500 mating cycles @ 12 cycles per minute
	Center Contact Force	Retention	4 pounds min. (axial)	
	Mating Force		14 pounds max.	
	Unmating Force		14 pounds max. 2 pounds min.	
	Insertion Force (Center Contact)		2.5 pounds max.	
	Withdrawal Force (Center Contact)		1 ounce min.	
	Cable Retention Force Crimping		Cable O.D> Force min. <3.93 mm 5 lbs 3.94-4.80 mm 10 lbs 4.81-5.82 mm 20 lbs 5.83-6.33 mm 30 lbs >6.34 mm 40 lbs	
	Non-crimpir	ng	>6.34 mm 40 lbs 40 lbs	
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Test Spec.

No exposure of the base

metal on the interface or

mating surface

Test Condition

MIL-STD-202F, Method

101D. Test Condition B.

(less RF leakage)

#### 5.3 Environmental Performance

Test Item

Corrosion (Salt Spray)

Moisture Resistance	a) Insulation Resistance should be at least 200 megohms b) Parts will be tested for insulation resistance	MIL-STD-202F, Method 106F, (Less Step 7a & b)
Thermal Shock	<ul><li>a) No major effects to operating or physical properties.</li><li>b) I hour duration.</li></ul>	MIL-STD-202F, Method 107G, Test Condition A
Vibration (Hig	(High a) No discontinuity greater than 1 m sec. b) Tolerance of vibration amplitude is +/- 10% c) Vibration frequency shall be varied logarithmically between 10 to 2,000 Hz. d) The entire frequency range of 10 to 2,000 Hz and return to 10 Hz shall be transgressed in 20 minutes.	
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Mechanical Shock ----than 1 m.sec.

a) No discontinuity greater

213B, Test Condition A b) An 11 m.sec. duration. c) 3 shocks in each direction.

MIL-STD-202F, Method

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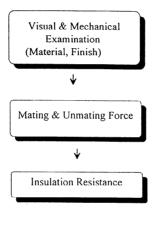
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6.0 Test Sequence

All sample units shall be subjected to the inspection of group I. The samples shall then be divided into subgroups consisting of five each connectors. The sample units shall then be subjected to the inspection for their particular group.

GROUP I



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GROUP II

Center Contact
Retention

GROUP III

.

VSWR

Durability

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Center contact resistance

Dielectric Withstanding Voltage

Vibration

Mechanical Shock

Thermal Shock

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Moisture

Cable Retention Force (Cable Type Only)

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# GROUP V

MOLEX TAIWAN LTD (RF)

R F Insertion Loss

**GROUP VI** 

Insertion Force & Withdraw Force

Contact Resistance

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