



COSMETIC SPECIFICATION FOR MOLEX PLATED PLASTIC CONNECTORS

Molex Plated Plastic Connectors

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COSMETIC SPECIFICATION FOR MOLEX PLATED PLASTIC CONNECTORS

1.0 Introduction

Molex has incorporated the use of plated plastic technology on various connectors. The purpose of using plated plastics is to provide electrical shielding, electrical continuity, or Radio Frequency capability. The following pages describe the functional aspects and criteria.

2.0 Scope

This specification applies to all plated plastic connectors produced by Molex Connector Products Division. It includes but is not limited to;

<u>Series #</u>	<u>Product Description</u>		<u>Series #</u>	<u>Product Description</u>
75003	HS Mezzanine Plug		75019	Floating side HS Dock
75005	HS Mezzanine Receptacle		75126	Interposer for HS Dock
75018	Fixed side HS Dock		75173	Interposer for SFP

3.0 Purpose:

The purpose of this specification is to create a workmanship standard for plated plastic connectors. It is Meant to establish "ACCEPTABLE" or "NOT ACCEPTABLE" criteria for the cosmetic quality of plated Plastic connectors and components.

4.0 Inspection Requirements

4.1 Non-Functional Areas

All inspection will be made under normal artificial lighting, unaided and viewed in a manner that duplicates the typical end use of the product. Surfaces shall be viewed without the aid of magnification. The light source should be approximately 80-100 foot candles at part surface. Viewing distance shall be no closer than 12 inches. This criteria is valid for all areas designated as non decorative and non functional. Non critical areas may, but are not required to be designated on the sales drawing.

4.2 Functional Areas

All inspection will be made under the same conditions as above except a maximum magnification of 10X may be used to view the surfaces if required. This criteria is valid for all areas designated as decorative and functional. Functional areas may, but are not required to be designated on the sales drawing.

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5.0 Definitions

Protrusion - A raised area on the surface (blister, bump, ridge or gate mark).

Discoloration - Change from original color or inconsistent color within the same part.

Flow marks - Wavy or streaked appearance of a surface. When plated over will exhibit different luminescence, and could also appear raised.

Pits - Small craters on the surface less than 1mm in size.

Knit / weld line - A visible line formed at the intersection of plastic material flow.

Specks - Small pieces of material stuck to the surface of a part.

Scratches - Shallow grooves forming lines on the surface.

Sink mark - Depression on the surface.

Blush - Inconsistency in the gloss or luminescence of a surface.

Parting line / flash - A visible line and or raised surface on the part formed at the intersection of two Mating surfaces of a mold.

Texture / surface roughness - Smoothness of the part surface.

Color Variations - Color of part appears different within the part.

Skip / Void Plating - Areas on connector lacking plating usually occurring at sharp edges such as corners, edges, peg tips, flanges, or other similar areas.

Flaking - Any piece or layer of plating or plated plastic broken off the plating surface or part.

6.0 Acceptable and Not Acceptable Defects:

Defect Type	Acceptable (see Note 1	Not Acceptable
Protrusions	At Gate Location	All Other Surfaces
Discoloration	All Surfaces	
Flow Marks	All Surfaces	
Pits	All Non-Functional Surfaces	Functional Surfaces (section 7.0)
Knit or Weld line	All Surfaces	
Specks	All Surfaces	
Scratches	All Non-Functional Surfaces	Functional Surfaces (section 7.0)
Sink Mark	All Non-Functional Surfaces	Functional Surfaces (section 7.0)
Blush	All Surfaces	
Parting Line Flash	All Non-Functional Surfaces	Functional Surfaces (section 7.0)
Texture or Surface Roughness	Roughness on all Surfaces	
Color Variations	All Surfaces	
Skip or Void Plating	All Non-Functional Surfaces	Functional Surfaces (section 7.0)
Flaking	None	All Surfaces

Note:

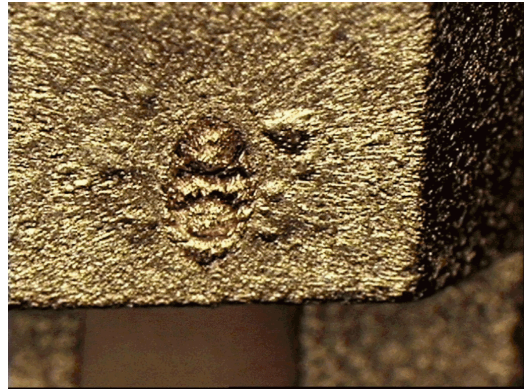
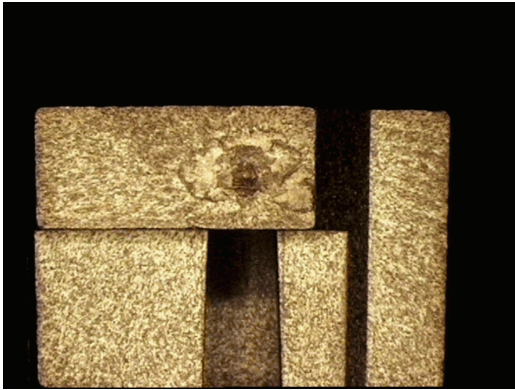
1) There shall not be more than 10 defects in a 100 mm² area.

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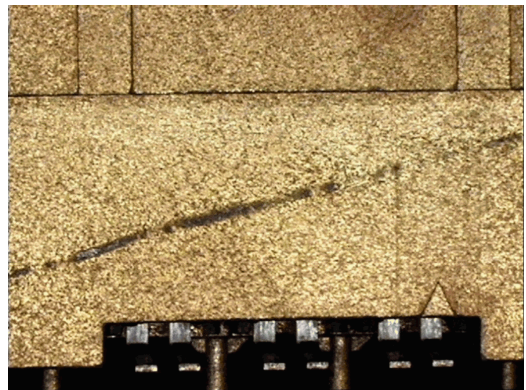


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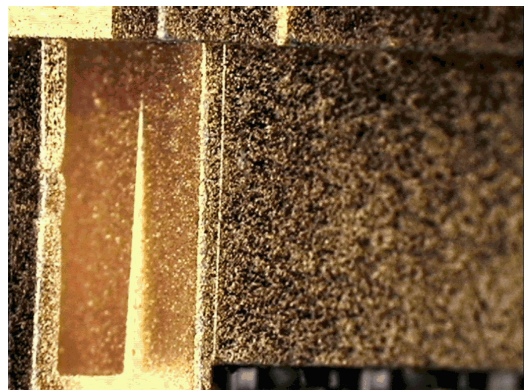
Examples of Acceptable Protrusions



Examples of Acceptable Discolorations



Examples of Acceptable Flow Marks/Knit Lines/Parting Lines



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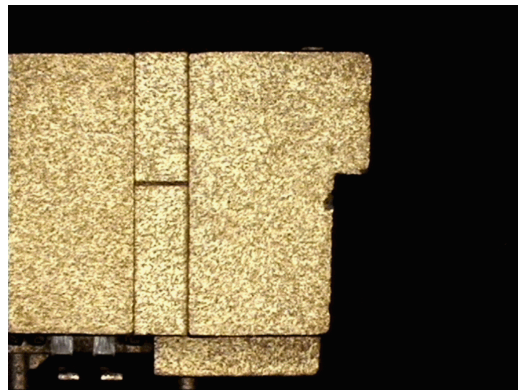
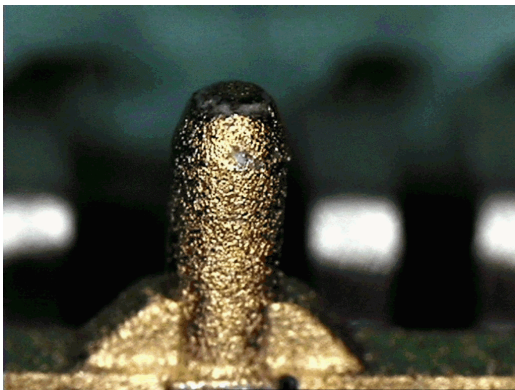


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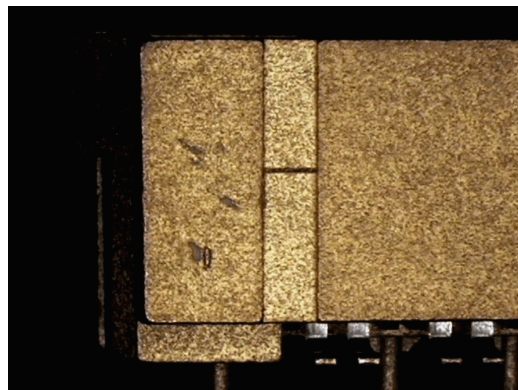
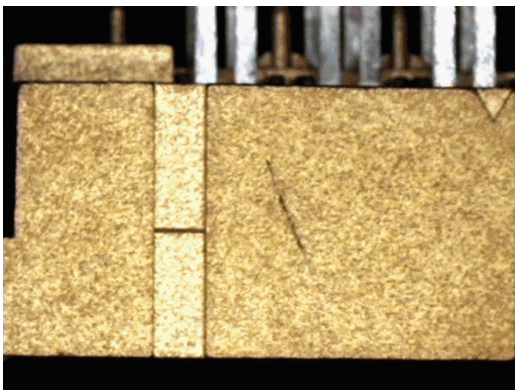
Examples of Acceptable Flow Marks/Knit Lines/Parting Lines



Examples of Acceptable Pits Less than 1.00mm



Examples of Acceptable Surface Scratches

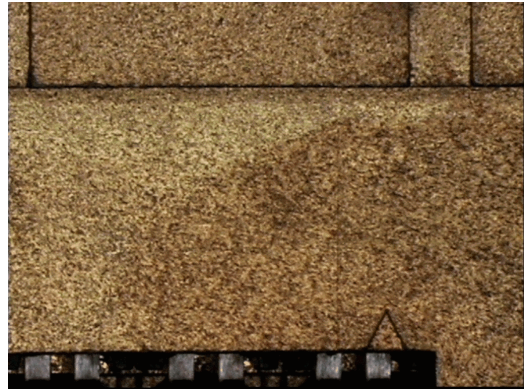
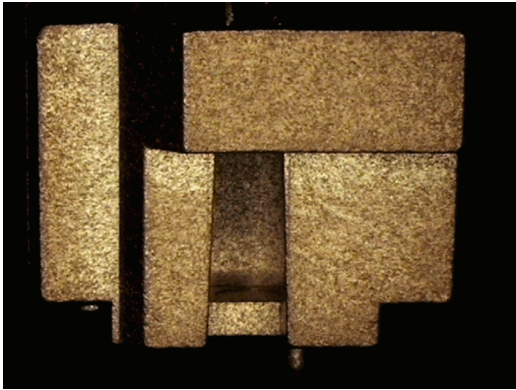


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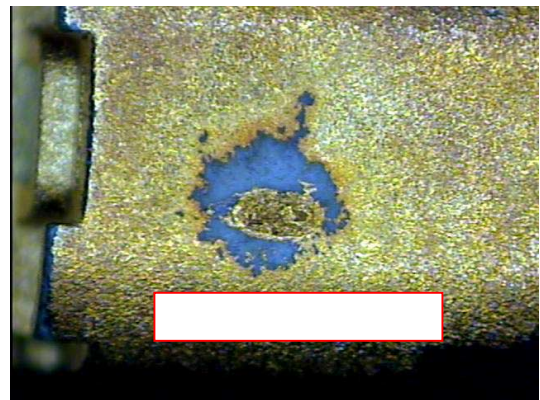
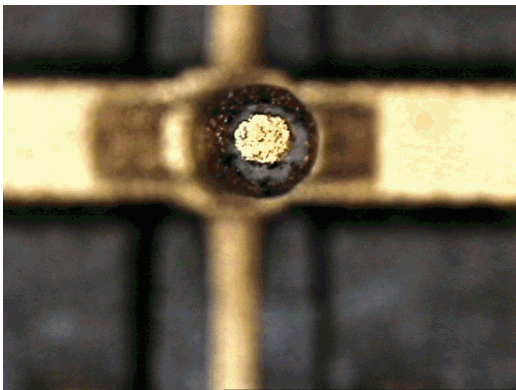


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Examples of Acceptable Blush/Color Variations



Examples of Acceptable Skip/Void Plating

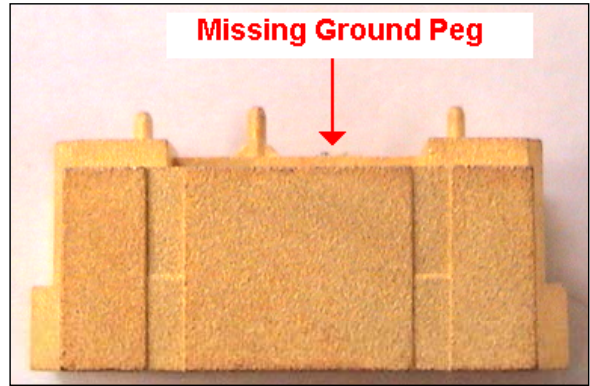
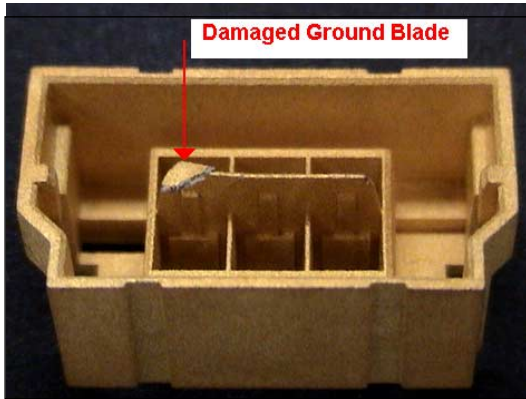


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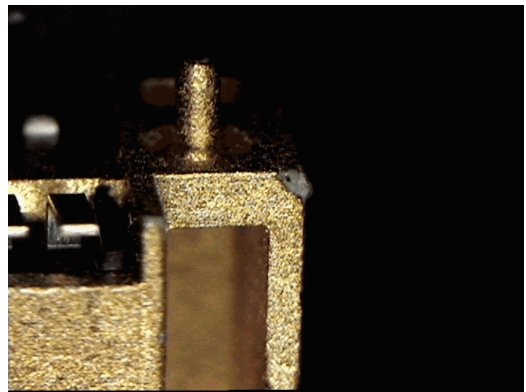
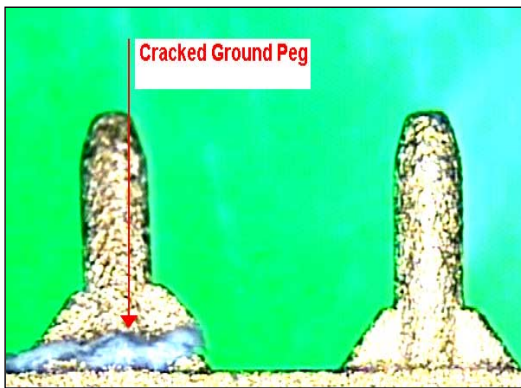


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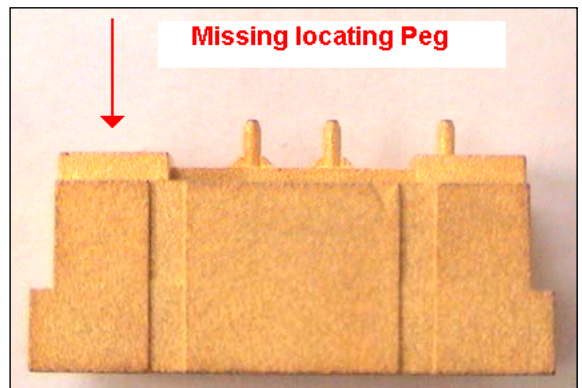
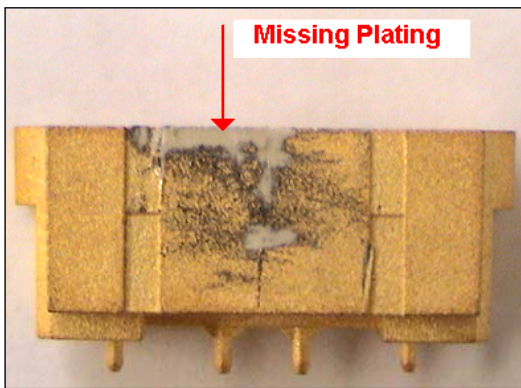
Examples of Unacceptable Defects



Examples of Unacceptable Defects



Examples of Unacceptable Defects



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7.0 Functional Areas

Functional areas are defined as any area in which an electrical interface is established, a solder joint is created, or any other function of the part which could potentially be impacted by the plating in that area.

8.0 Non-Functional Areas

Non-Functional areas are defined as all surfaces that are not important to the mechanical or electrical performance of the part.

9.0 Product Marking

Parts will be legibly marked so that the date code is visible on plating.

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