

**PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION**

**Part Number:** [0330123002](#)  
**Status:** **Active**  
**Overview:** [mx150 sealed connector system](#)  
**Description:** MX150™ Female Terminal, Tin (Sn) Plating, 18-20 AWG, Left Reel Payoff, Small Polarization Rib, Contact Material Thickness 0.30mm (.012")

**Documents:**

[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

**General**

Product Family	Crimp Terminals
Series	<a href="#">33012</a>
Comments	Left Reel Payoff, Small Polarization Rib
Crimp Quality Equipment	Yes
Overview	<a href="#">mx150 sealed connector system</a>
Product Name	MX150™

**Physical**

Gender	Female
Material - Metal	High Performance Alloy (HPA)
Material - Plating Mating	Tin
Material - Plating Termination	Tin
Packaging Type	Reel
Plating min: Mating (µin)	20.00
Plating min: Mating (µm)	0.500
Plating min: Termination (µin)	20.00
Plating min: Termination (µm)	0.50
Termination Interface: Style	Crimp or Compression
Wire Insulation Diameter	2.60mm (.102") max.
Wire Size AWG	18, 20
Wire Size mm²	0.75, 1.00

**Electrical**

Current - Maximum per Contact	22A
Voltage - Maximum	250V

**Material Info**

**Reference - Drawing Numbers**

Sales Drawing	SD-33012-002
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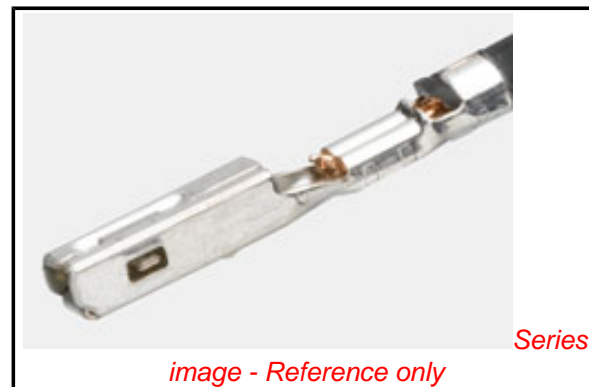


image - Reference only

**EU RoHS**

**ELV and RoHS  
Compliant**  
**REACH SVHC  
Contains SVHC: No**  
**Halogen-Free  
Status**

**China RoHS**



**Need more information on product  
environmental compliance?**

Email [productcompliance@molex.com](mailto:productcompliance@molex.com)  
 For a multiple part number RoHS Certificate of Compliance, [click here](#)

Please visit the [Contact Us](#) section for any non-product compliance questions.

**Search Parts in this Series**

[33012Series](#)

**Use With**

[33472](#) Dual Row Housing, [33476](#) Hybrid Housing, [33471](#) Single Row Housing

**Application Tooling | FAQ**

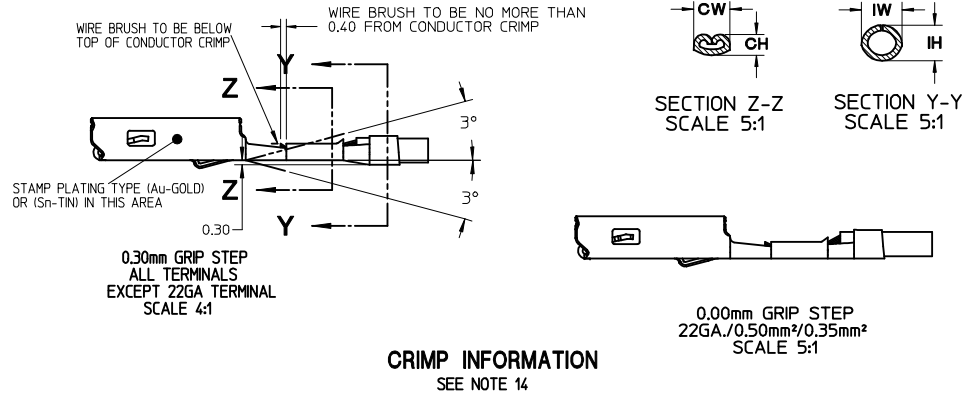
*Tooling specifications and manuals are found by selecting the products below. Crimp Height Specifications are then contained in the Application Tooling Specification document.*

**Global**

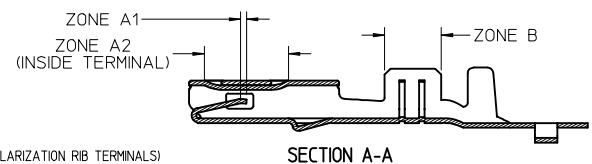
Description	Product #
Manual Extraction Tool	<a href="#">0638131500</a>
FineAdjust™ Applicator	<a href="#">0639000800</a>
FineAdjust™ Applicator	<a href="#">0639000900</a>
Hand Crimp Tool, 18-22AWG	<a href="#">0638116000</a>

This document was generated on 05/19/2010

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**PLATING INFORMATION**



PLATING NOTES: (FOR SMALL AND LARGE POLARIZATION RIB TERMINALS)

1. PRECIOUS METAL PLATING:

ZONE A1 AND ZONE A2:  
PER MOLEX ES-88 REVISION REL

BASE LAYER: ELECTRODEPOSITED DUCTILE SULFAMATE NICKEL  
THICKNESS: 125 - 2.25 MICROMETERS

PRECIOUS LAYER: GOLD OR SILVER

GOLD: ELECTRODEPOSITED GOLD  
THICKNESS: 0.76 MICROMETERS MINIMUM

SILVER: ELECTRODEPOSITED PURE SILVER (0.5% MAX IMPURITIES)  
THICKNESS: 19 - 3.3 MICROMETERS  
FINISH: SEMI-BRIGHT  
ANTI-TARNISH TREATMENT FOR SILVER PLATING  
EVABRITE WS

ZONE B:  
TIN PLATING: PER MOLEX ES-88 REVISION REL

BASE LAYER: ELECTRODEPOSITED DUCTILE SULFAMATE NICKEL  
THICKNESS: 125-2.25 MICROMETERS

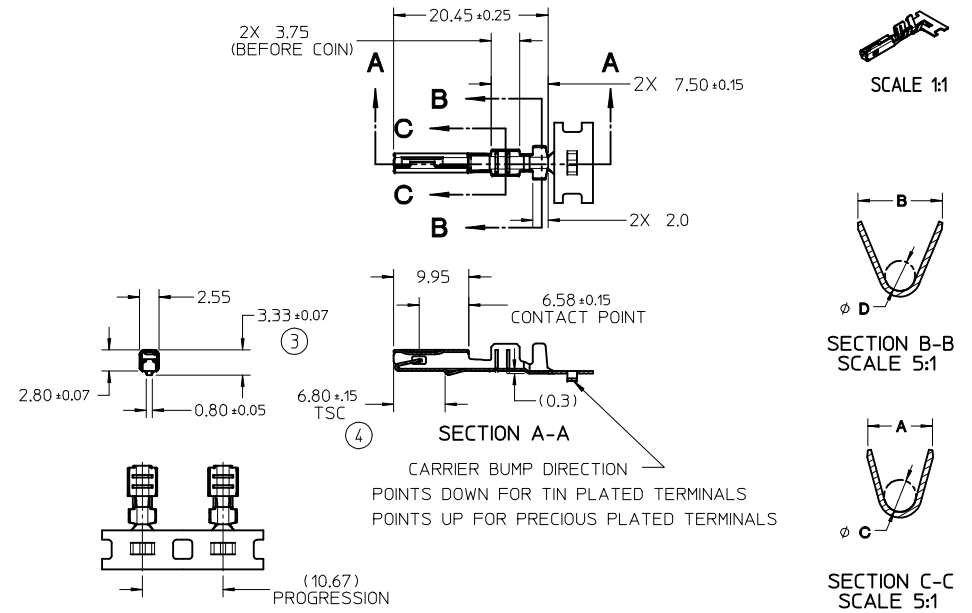
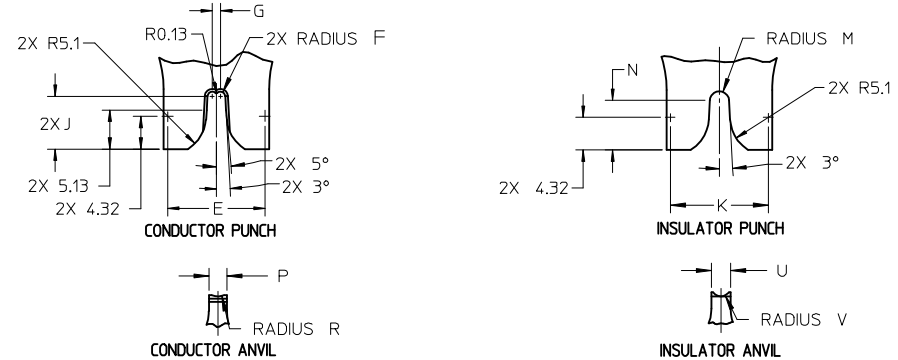
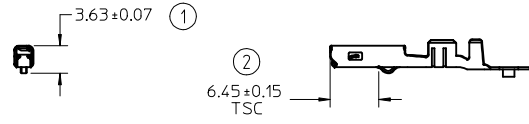
TIN LAYER: ELECTRODEPOSITED 100% TIN MATTE FINISH  
THICKNESS: 2.50 - 4.00 MICROMETERS

2. TIN PLATING: (ENTIRE TERMINAL)

BASE LAYER: ELECTRODEPOSITED ADVANCED TIN BARRIER  
THICKNESS: 0.25-1.00 MICROMETERS

TIN LAYER: ELECTRODEPOSITED REFLOW TIN, 100% TIN  
NO BRIGHTENERS  
THICKNESS: 0.50-1.00 MICROMETERS

**DIMENSIONS FOR LARGE POLARIZATION RIB TERMINAL ONLY**



- NOTES: (UNLESS OTHERWISE SPECIFIED)
- MATING TERMINAL SHOWN ON SD-33000-001
  - MATERIAL: ASTM B422, UNS C19025, HR04  
THICKNESS: 0.30 mm ±0.01  
TEMPER: FULL HARD (REF)  
TENSILE: 496 MIN MPA  
PLATING: SEE PLATING NOTES ABOVE
  - MEETS PERFORMANCE SPECIFICATION FOR CABLE TO TERMINAL ELECTRICAL CRIMPS PER SAE/USCAR-21 (8/2001)
  - MEETS PERFORMANCE STANDARD FOR AUTOMOTIVE ELECTRICAL CONNECTOR SYSTEMS FOR SAE/USCAR-2, REV. 4 (TEMP CLASS 3) (4/2001)
  - MEETS ELECTRICAL CONNECTION SYSTEM DESIGN SPECIFICATION (SDS) REV.11 (5/2002)
  - MEETS FIELD CORRELATED LIFE TEST (FCLT) PER SAE/USCAR-20 (11/2001)
  - MEETS WIRING COMPONENT DESIGN GUIDELINES SAE/USCAR-12 REV 2 (12/2001)
  - TSC ON A DIMENSION TO BE INTERPRETED AS DISTANCE TO A THEORETICAL SHARP CORNER AS IF THE RADIUS WERE NOT PRESENT
  - DRAWING CONFORMS TO AVP-(IT401/T406)-001 REVISION A DATED 2/16/99
  - REFERENCE 97B5-14474-AAB FOR LARGE POLARIZATION RIB CAVITY SPECIFICATION
  - INSERTION FORCE (TIN) AVG. FROM PV TESTING =  
3.8N LARGE POLARIZATION RIB  
3.5N SMALL POLARIZATION RIB (REFERENCE)
  - ALL DIMENSIONS EXCEPT ①, ②, ③ & ④ ARE COMMON TO BOTH SMALL AND LARGE POLARIZATION RIB TERMINALS
  - REFERENCE PK-31300-516 FOR REEL DIRECTION
  - REFERENCE CS-33012-002 FOR ADDITIONAL CRIMP INFORMATION

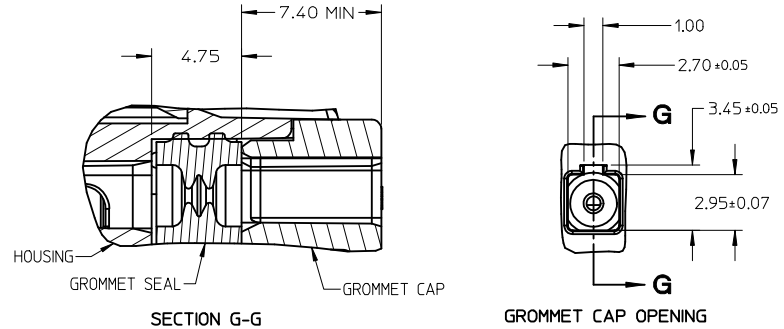
<b>ENTER DESCRIPTION</b> IEC NO: UAU2010-0107 DR: WINKFERGUSON CHKD: A.DHIR APPR: B.MOSER 2009/08/19 2009/08/20	<b>QUALITY SYMBOLS</b> ▽=0 ▽=0	<b>GENERAL TOLERANCES (UNLESS SPECIFIED)</b>		<b>DIMENSION STYLE</b> MM ONLY	<b>SCALE</b> 2:1	<b>DESIGN UNITS</b> METRIC	THIRD ANGLE PROJECTION																		
		<table border="1"> <tr> <th>mm</th> <th>INCH</th> </tr> <tr> <td>4 PLACES ± ---</td> <td>± ---</td> </tr> <tr> <td>3 PLACES ± 0.005</td> <td>± ---</td> </tr> <tr> <td>2 PLACES ± 0.10</td> <td>± ---</td> </tr> <tr> <td>1 PLACE ± 0.3</td> <td>± ---</td> </tr> </table>	mm	INCH	4 PLACES ± ---	± ---	3 PLACES ± 0.005	± ---	2 PLACES ± 0.10	± ---	1 PLACE ± 0.3	± ---	<table border="1"> <tr> <th>DATE</th> <th>BY</th> </tr> <tr> <td>2005/06/21</td> <td>L. PULLIAM</td> </tr> <tr> <td>2005/06/21</td> <td>A. DHIR</td> </tr> <tr> <td>2005/06/22</td> <td>B. MOSER</td> </tr> </table>	DATE	BY	2005/06/21	L. PULLIAM	2005/06/21	A. DHIR	2005/06/22	B. MOSER	<b>MX150 RECEPTACLE TERMINAL</b>		<b>MOLEX INCORPORATED</b>	SHEET NO. 1 OF 5
		mm	INCH																						
4 PLACES ± ---	± ---																								
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DATE	BY																								
2005/06/21	L. PULLIAM																								
2005/06/21	A. DHIR																								
2005/06/22	B. MOSER																								
<b>ANGULAR</b> ± 3°	SEE TABLE	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		DOCUMENT NO. SD-33012-002	MOLEX																				

TABLE 1 - TERMINAL CRIMP DIM. REFERENCE 9

Table with columns for SMALL POLARIZATION RIB and LARGE POLARIZATION RIB. Each section includes columns for supplier part no., Ford part no., plating, wire size, wire specification, conductor dimensions, and wire pull force.

LARGE POLARIZATION RIB table with columns for right/left payoff, wire size, material, and dimensions.

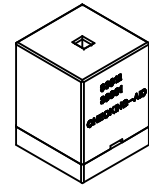
1 HIFLON WIRE: CORE WIRE: STAINLESS STEEL, SUS #0.14, 7 STRANDS. SURROUNDING WIRE: NICKEL (Ni) PLATED COPPER (Cu) #0.14, 30 STRANDS. INSULATOR: PTFE. \* 0.35mm² WIRE MUST NOT BE USED IN MX150 SEALED CONNECTOR SYSTEMS. \*\* SILVER PLATED TERMINALS NOT TO BE USED IN CONNECTOR SYSTEMS WITH CIRCUIT COUNTS HIGHER THAN 8 DUE TO HIGHER CONNECTOR MATE/UNMATE FORCE.



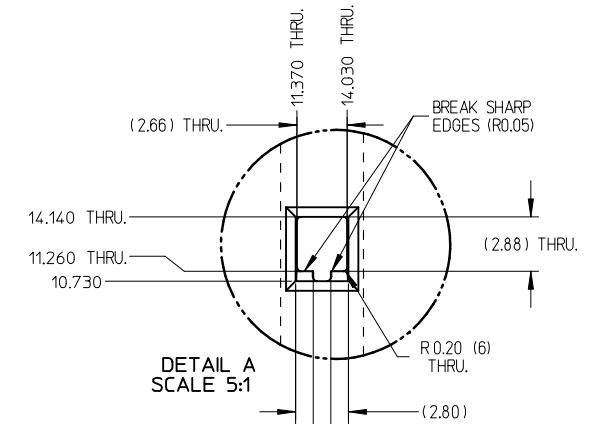
GROMMET SEAL / CAP CONFIGURATION TO MODIFY LARGE POLARIZATION RIB CAVITY TO ACCEPT SMALL POLARIZATION RIB APPLICATIONS

Technical drawing header and title block including: ENTER DESCRIPTION, EC NO., QUALITY SYMBOLS, GENERAL TOLERANCES, DIMENSION STYLE MM ONLY, SCALE, DESIGN UNITS METRIC, THIRD ANGLE PROJECTION, TITLES MX150 RECEPTACLE TERMINAL and MOLEX INCORPORATED, MATERIAL NO. SEE TABLE, DOCUMENT NO. SD-33012-002, SHEET NO. 2 OF 5, and a disclaimer: THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION.

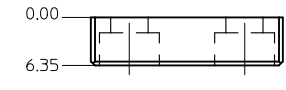
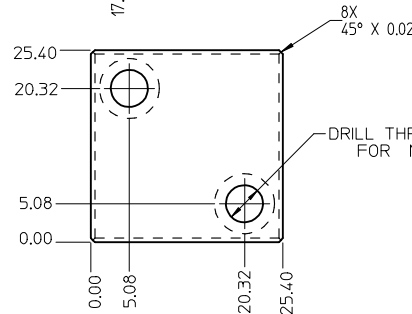
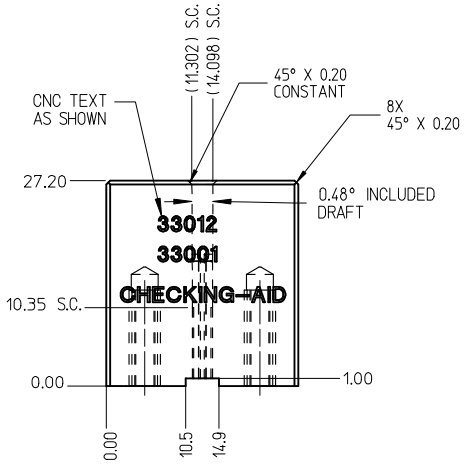
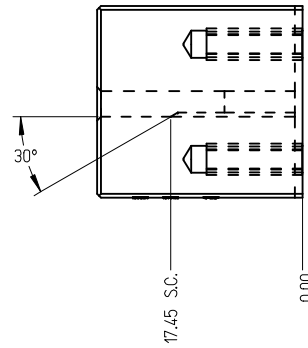
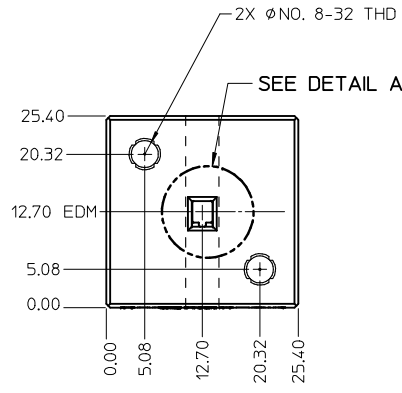
THIS CHECKING - AID IS FOR SMALL POLARIZATION RIB TERMINALS ONLY



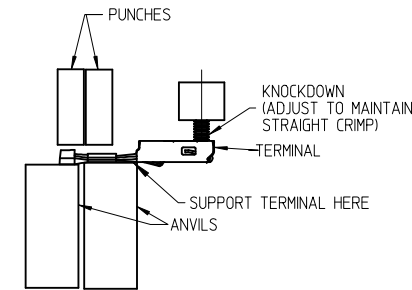
CHECKING - AID ASSEMBLY  
SCALE 1:1



DETAIL A  
SCALE 5:1



CHECKING - AID  
LOWER



CRIMP REQUIREMENTS:

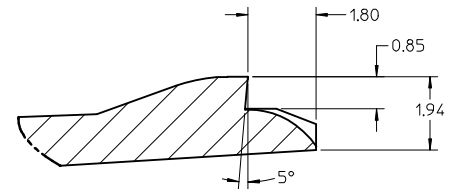
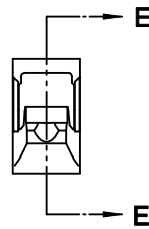
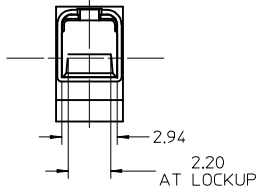
1. CRIMP STRAIGHTNESS MUST BE MAINTAINED  
USE A KNOCKDOWN TOOL LOCATED AS SHOWN  
TERMINAL BOX MUST NOT BE DEFORMED
2. AFTER CRIMPING, THE CRIMPED TERMINAL (AND UP TO 5 mm OF WIRE PAST THE INSULATOR CUTOFF TAB) MUST FIT FREELY INTO THE CHECKING-AID SHOWN ON THIS PAGE
3. FOR OTHER MECHANICAL REQUIREMENTS ON CRIMPED TERMINALS, REFER TO SAE/USCAR-21 (5-13-02) SECTIONS 4.2 (VISUAL INSPECTION), 4.2 (CROSS SECTION ANALYSIS) AND 4.4 (CONDUCTOR CRIMP PULLOUT FORCE)

UPPER & LOWER  
CHECKING-AID  
A2 TOOL STEEL  
HARDEN & GRIND  
ROCKWELL "C" 56-58

<b>ENTER DESCRIPTION</b> EC NO: UAU2010-0107 DRINKFERGUSON 2009/08/18 CHKDA:DHIR 2009/08/19 APPR:BMOSER 2009/08/20	<b>QUALITY SYMBOLS</b> ▽=0 ▽=0	<b>GENERAL TOLERANCES (UNLESS SPECIFIED)</b>		<b>DIMENSION STYLE</b> MM ONLY	<b>SCALE</b> 2:1	<b>DESIGN UNITS</b> METRIC	THIRD ANGLE PROJECTION	
		4 PLACES ± mm ± INCH 3 PLACES ± 0.005 ± --- ± --- 2 PLACES ± 0.10 ± --- ± --- 1 PLACE ± 0.3 ± --- ± --- ANGULAR ± 3 °	DRAWN BY DATE L. PULLIAM 2005/06/21	CHECKED BY DATE A. DHIR 2005/06/21	APPROVED BY DATE B. MOSER 2005/06/22	TITLE MX150 RECEPTACLE TERMINAL		MATERIAL NO. SEE TABLE
REV B1	SIZE C	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						



- NOTES: UNLESS OTHERWISE SPECIFIED
1. TOLERANCES: LINEAR  $\pm 0.10$   
ANGULAR  $\pm 3^\circ$
  2. ALL DRAFT WITHIN TOLERANCE.
  3. MAX RADII ON ALL CORNERS SHOWN SHARP: 0.10
  4. MAX FLASH PERMISSIBLE: 0.1
  5. EJECTOR PIN MARKS PERMISSIBLE IF FLUSH TO 0.25 BELOW SURFACE.
  6. MATERIAL: HOUSING/FINGER SPECIFICATION ENGINEERED FOR MATERIAL WITH THE FOLLOWING PROPERTIES:  
A. FLEXURAL MODULUS = 4,500 TO 9,400 MPa  
PER ASTM TEST D790  
B. ELONGATION AT YIELD = 2.3% OR BETTER  
PER ASTM TEST D638 TYPE V
  7. CAVITY SPEC FOR USE ONLY WITH MOLEX RECEPTACLE TERMINAL PART NUMBERS SPECIFIED ELSEWHERE ON THIS DRAWING

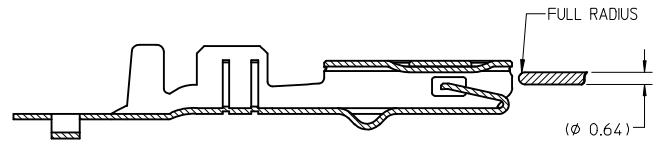
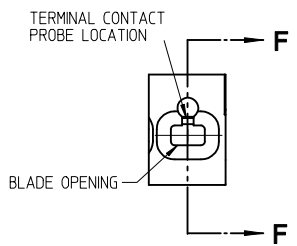


DETAIL Z  
SCALE 20:1



SECTION F-F

RECEPTACLE CAVITY ASSEMBLED VIEWS  
FOR SMALL POLARIZATION RIB APPLICATIONS  
FIG. 1



SECTION D-D  
FOR LARGE POLARIZATION RIB APPLICATIONS  
FIG. 2

PROBING DOWN THE THROAT MUST USE THIS TERMINAL PROBE

PROBE PIN DETAILS:  
MANUFACTURER: LONE STAR INDUSTRIAL  
PART NUMBER: LS054R-403-N-4.6  
PIN DIAMETER: 0.025 IN (0.64mm)  
TIP SHAPE: SPHERICAL  
TEL: 915-779-7255

PREFERRED PROBING LOCATION IS NOT ON SPRING MEMBER

IF ELECTRICAL CONTINUITY PROBE TOUCHES SPRING MEMBER USE PROBING AS SHOWN IN FIG. 2

REV	DESCRIPTION	DATE	BY
B1	ENTER DESCRIPTION	2009/08/18	DRWIN:KEERGUSON
	EC NO: UAU2010-0107	2009/08/19	CHKD:A.DHIR
	APPR:BMOSER	2009/08/20	

QUALITY SYMBOLS
◀=0
▽=0

GENERAL TOLERANCES (UNLESS SPECIFIED)	
mm	INCH
4 PLACES ± 0.10	± 0.005
3 PLACES ± 0.005	± 0.0005
2 PLACES ± 0.10	± 0.005
1 PLACE ± 0.3	± 0.012
ANGULAR ± 3°	

DIMENSION STYLE	
MM ONLY	
DRAWN BY	DATE
L. PULLIAM	2005/06/21
CHECKED BY	DATE
A. DHIR	2005/06/21
APPROVED BY	DATE
B. MOSER	2005/06/22
MATERIAL NO.	
SEE TABLE	

SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
5:1	METRIC	
MX150 RECEPTACLE TERMINAL		
MOLEX INCORPORATED		
DOCUMENT NO.	SHEET NO.	
SD-33012-002	4 OF 5	

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