

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number:

0330015022

Status:

Active

Overview:

[mx150_sealed_connector_system](#)

Description:

MX150™ Female Terminal, Silver (Ag) Plating, 18-20 AWG, Left Reel Payoff, Small Polarization Rib, Contact Material Thickness 0.30mm (.012")



Series

image - Reference only

Documents:

[Drawing \(PDF\)](#)

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

General

Product Family	Crimp Terminals
Series	33001
Comments	Left Reel Payoff, Small Polarization Rib
Crimp Quality Equipment	Yes
Overview	mx150_sealed_connector_system
Product Name	MX150™

Physical

Gender	Female
Material - Metal	High Performance Alloy (HPA)
Material - Plating Mating	Silver
Material - Plating Termination	Tin
Packaging Type	Reel
Plating min: Mating (µin)	30.4
Plating min: Mating (µm)	0.76
Plating min: Termination (µin)	100
Plating min: Termination (µm)	2.5
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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EU RoHS

ELV and RoHS

Compliant

REACH SVHC

Not Reviewed

Halogen-Free

Status

Not Reviewed

China RoHS



Need more information on product environmental compliance?

Email 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

[33001Series](#)

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.

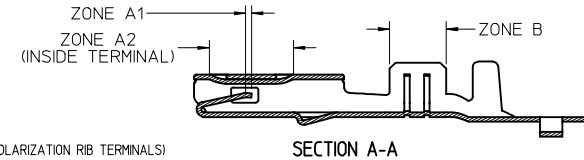
Global	
Description	Product #
Manual Extraction Tool	0638131500
FineAdjust™ Applicator	0639000800
FineAdjust™ Applicator	0639000900
Hand Crimp Tool, 18-22AWG	0638116000

Hand Crimp Tool,	<u>0638116100</u>
Metric 1.00 and 1.50	
Hand Crimp Tool,	<u>0638116200</u>
Metric 0.05 and 0.75	

This document was generated on 05/27/2010

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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 - 225 MICROMETERS

PRECIOUS LAYER: GOLD OR SILVER

GOLD: ELECTRODEPOSITED GOLD
THICKNESS: 0.76 MICROMETERS MINIMUM

SILVER: ELECTRODEPOSITED PURE SILVER (0.5% MAX IMPURITIES)
THICKNESS: 19 - 33 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: 125-225 MICROMETERS

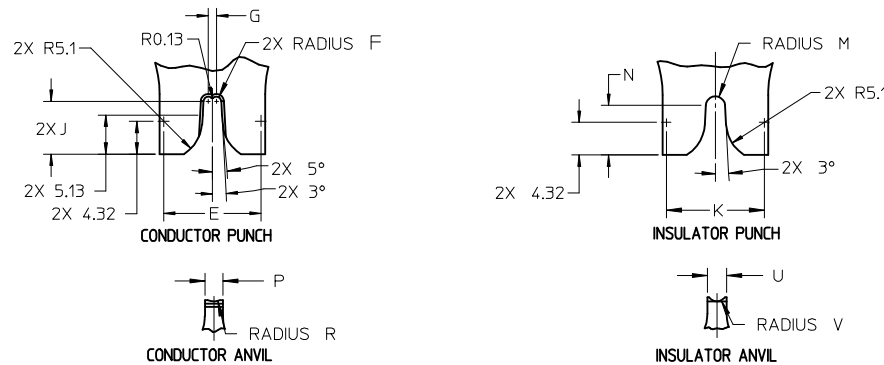
TIN LAYER: ELECTRODEPOSITED 100% TIN MATTE FINISH
THICKNESS: 250 - 400 MICROMETERS

2. TIN PLATING: (ENTIRE TERMINAL)

BASE LAYER: ELECTRODEPOSITED ADVANCED TIN BARRIER
THICKNESS: 0.25-100 MICROMETERS

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

DIMENSIONS FOR LARGE POLARIZATION RIB TERMINAL ONLY



CRIMP TOOL INFORMATION

SEE TABLE 2 FOR TABLED DIMENSIONS

NOTES: (UNLESS OTHERWISE SPECIFIED)

1. MATING TERMINAL SHOWN ON SD-33000-001

2. 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

3. MEETS PERFORMANCE SPECIFICATION FOR CABLE TO TERMINAL
ELECTRICAL CRIMPS PER SAE/USCAR-21 (8/2001)

4. MEETS PERFORMANCE STANDARD FOR AUTOMOTIVE ELECTRICAL
CONNECTOR SYSTEMS FOR SAE/USCAR-2, REV. 4 (TEMP CLASS 3)
(4/2001)

5. MEETS ELECTRICAL CONNECTION SYSTEM DESIGN SPECIFICATION
(SDS) REV.11 (5/2002)

6. MEETS FIELD CORRELATED LIFE TEST (FCLT) PER
SAE/USCAR-20 (11/2001)

7. MEETS WIRING COMPONENT DESIGN GUIDELINES SAE/USCAR-12
REV 2 (12/2001)

8. TSC ON A DIMENSION TO BE INTERPRETED AS DISTANCE TO
A THEORETICAL SHARP CORNER AS IF THE RADIUS WERE NOT
PRESENT

9. DRAWING CONFORMS TO AVP-(T401/T406)-001 REVISION A
DATED 2/16/99

10. REFERENCE 97B5-14474-AAB FOR LARGE POLARIZATION RIB
CAVITY SPECIFICATION

11. INSERTION FORCE (TIN) AVG. FROM PV TESTING =
3.8N LARGE POLARIZATION RIB
3.5N SMALL POLARIZATION RIB
(REFERENCE)

12. ALL DIMENSIONS EXCEPT ①, ②, ③ & ④ ARE COMMON TO
BOTH SMALL AND LARGE POLARIZATION RIB TERMINALS

13. REFERENCE PK-31300-516 FOR REEL DIRECTION

14. REFERENCE CS-33012-002 FOR ADDITIONAL CRIMP INFORMATION

ENTER DESCRIPTION
EC NO: UAU2010-0107
DRAWN BY: DRINKER GUSON
CHKD BY: DHIR
APPR: BMOSER
2009/08/19
2009/08/20

QUALITY
SYMBOLS
▽=0
▽=0

REVISION
REV

GENERAL TOLERANCES
(UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± .005	± .0005
3 PLACES	± .005	± .0005
2 PLACES	± .010	± .0010
1 PLACE	± .03	± .0030
ANGULAR	± 3 °	

DIMENSION STYLE
MM ONLY

DRAWN BY: L. PULLIAM
DATE: 2005/06/21
CHECKED BY: A. DHIR
DATE: 2005/06/21
APPROVED BY: B. MOSER
DATE: 2005/06/22

MATERIAL NO.
SEE TABLE

SCALE
2:1

DESIGN UNITS
METRIC

THIRD ANGLE
PROJECTION

MX150
RECEPTACLE TERMINAL

MOLEX INCORPORATED

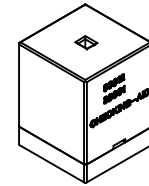
DOCUMENT NO.
SD-33012-002

SHEET NO.
1 OF 5

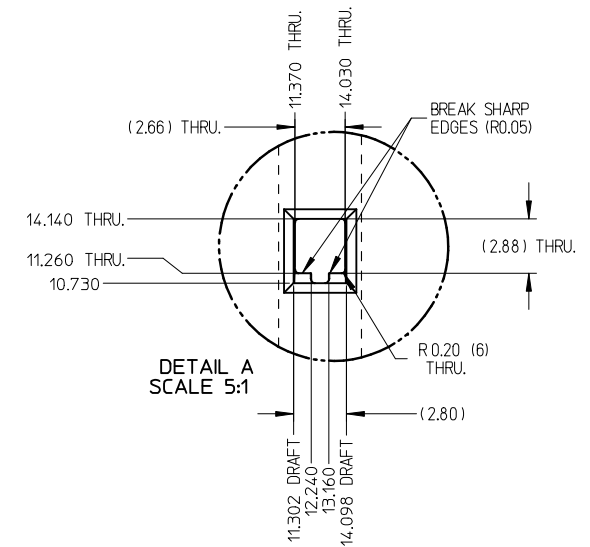
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX
INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

		13		12		11		10		9		8		7		6		5		4		3		2		1			
TABLE 1 - TERMINAL CRIMP DIM. REFERENCE TABLE																													
		SUPPLIER PART NO.		FORD PART NO.		PLATING		WIRE SIZE (awg)		WIRE SPECIFICATION		CONDUCTOR CH (SEC Z-Y) ±0.05 mm		CONDUCTOR CW (SEC Z-Z) ±0.10 mm		INSULATOR IH (SEC Y-Y) ±0.10 mm		INSULATOR IW (SEC Y-Y) ±0.10 mm		WIRE PULL FORCE (N)									
SMALL POLARIZATION RIB																													
RIGHT PAYOFF		LEFT PAYOFF																											
33012-2001		33012-3001		7C3T-14474-EA		TIN		14		MIL-123A		1.65		2.45		2.90		2.75		268									
								16		MIL-135A1		1.65		2.45		2.70		2.60		268									
										MIL-123A		1.35		2.45		2.40		2.60		222									
								18		MIL-123A		1.25		2.15		2.00		2.30		157									
										SAE J1128 (IGXL)		1.25		2.15		2.40		2.60		158									
										MIL-123A		1.15		2.15		1.90		2.10		128									
										HIFLON WIRE ¹		1.15		2.15		1.90		2.10		135									
										SAE J1128 (IGXL)		1.15		2.15		2.00		2.30		105									
								22		MIL-123A		1.00		1.60		1.85		1.90		88									
										JASO D 611 (AVSSI)		1.60		2.45		2.90		2.75		231									
										150mm ² MIL-126A1		1.40		2.45		2.60		2.60		257									
										100mm ² MIL-126A1		1.30		2.15		2.00		2.30		211									
										0.75mm ² MIL-126A1		1.25		2.15		1.95		2.10		142									
										0.50mm ² MIL-126A1		1.10		1.60		1.80		1.90		111									
										JASO D 611 (AVSSI)		1.10		1.60		1.85		1.90		125									
										WSK-1A348-A2		0.95		1.60		1.70		1.90		50									
										14 MIL-123A		1.65		2.45		2.90		2.75		268									
										MIL-135A1		1.65		2.45		2.70		2.60		268									
										16 MIL-123A		1.35		2.45		2.40		2.60		222									
										MIL-123A		1.25		2.15		2.00		2.30		157									
										18 SAE J1128 (IGXL)		1.25		2.15		2.40		2.60		158									
										MIL-123A		1.15		2.15		1.90		2.10		128									
										HIFLON WIRE ¹		1.15		2.15		1.90		2.10		135									
										SAE J1128 (IGXL)		1.15		2.15		2.00		2.30		105									
										22 MIL-123A		1.00		1.60		1.85		1.90		88									
										JASO D 611 (AVSSI)		1.60		2.45		2.90		2.75		231									
										150mm ² MIL-126A1		1.40		2.45		2.60		2.60		257									
										100mm ² MIL-126A1		1.30		2.15		2.00		2.30		211									
										0.75mm ² MIL-126A1		1.25		2.15		1.95		2.10		142									
										0.50mm ² MIL-126A1		1.10		1.60		1.80		1.90		111									
										JASO D 611 (AVSSI)		1.10		1.60		1.85		1.90		125									
										WSK-1A348-A2		0.95		1.60		1.70		1.90		50									
LARGE POLARIZATION RIB																													
33012-2021		33012-3021		7C3T-14474-LA		TIN		14		MIL-123A		1.65		2.45		2.90		2.75		268									
								16		MIL-123A		1.35		2.45		2.40		2.60		222									
										MIL-123A		1.25		2.15		2.00		2.30		157									
										SAE J1128 (IGXL)		1.25		2.15		2.40		2.60		158									
										MIL-123A		1.15		2.15		1.90		2.10		128									
										HIFLON WIRE ¹		1.15		2.15		1.90		2.10		135									
										SAE J1128 (IGXL)		1.15		2.15		2.00		2.30		105									
										22 MIL-123A		1.00		1.60		1.85		1.90		88									
										JASO D 611 (AVSSI)		1.60		2.45		2.90		2.75		231									
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										0.75mm ² MIL-126A1		1.25		2.15		1.95		2.10		142									
										0.50mm ² MIL-126A1		1.10		1.60		1.80		1.90		111									
										JASO D 611 (AVSSI)		1.10		1.60		1.85		1.90		125									
										WSK-1A348-A2		0.95		1.60		1.70		1.90		50									
SECTION G-G																													
GROMMET SEAL / CAP CONFIGURATION TO MODIFY LARGE POLARIZATION RIB CAVITY TO ACCEPT SMALL POLARIZATION RIB APPLICATIONS																													
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GROMMET CAP																													
GROMMET CAP OPENING																													
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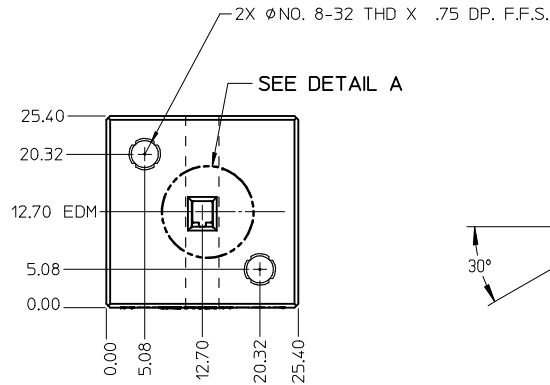
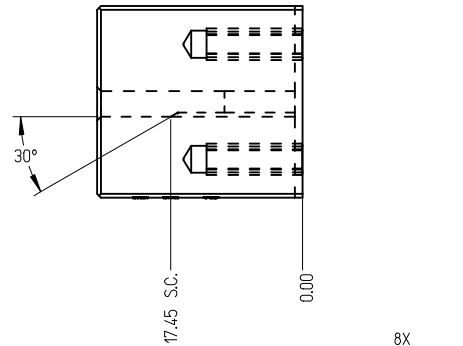
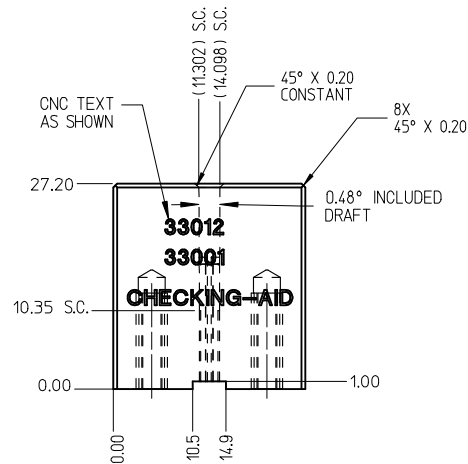
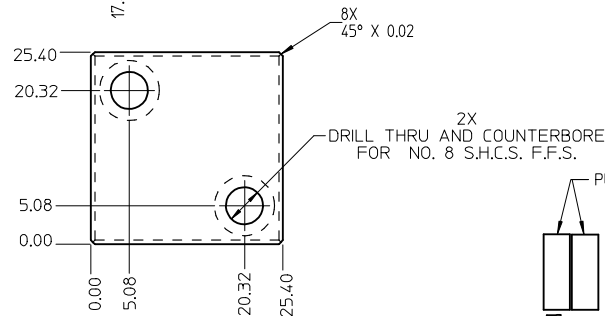
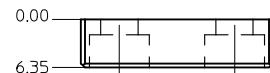
THIS CHECKING - AID IS FOR SMALL POLARIZATION RIB TERMINALS ONLY



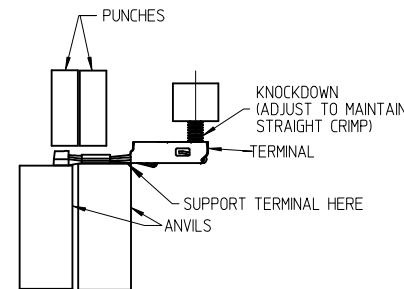
CHECKING - AID ASSEMBLY
SCALE 1:1



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

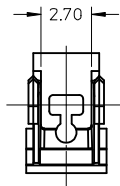
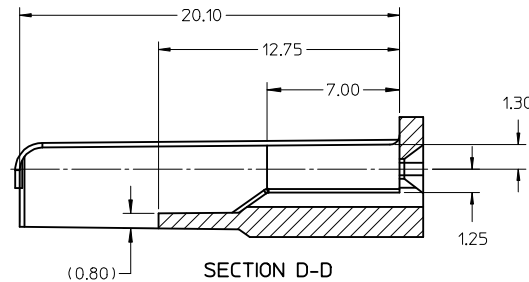
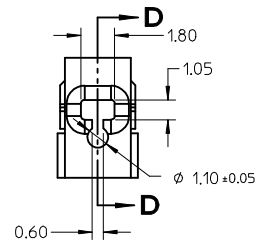
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EC NO: UAU2010-0107 2009/08/18
DRUNKFERGUSON 2009/08/19
CHKDA:DHIR 2009/08/20
APPR:BMOSER 2009/08/20
REV
B1

QUALITY
SYMBOLS
▽=0
▽=0

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

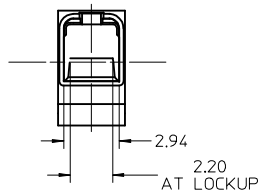
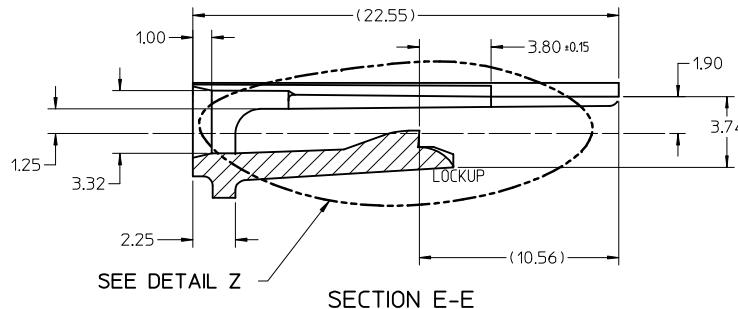
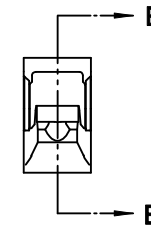
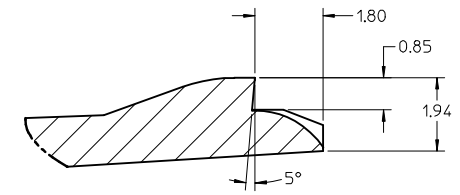
DIMENSION STYLE MM ONLY	
DRAWN BY	DATE
L. PULLIAM	2005/06/21
CHECKED BY	DATE
A. DHIR	2005/06/21
APPROVED BY	DATE
B. MOSER	2005/06/22
MATERIAL NO. SEE TABLE	
SIZE	C

SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
2:1	METRIC	
MX150 RECEPTACLE TERMINAL		
MOLEX INCORPORATED		
DOCUMENT NO. SD-33012-002	SHEET NO. 3 OF 5	

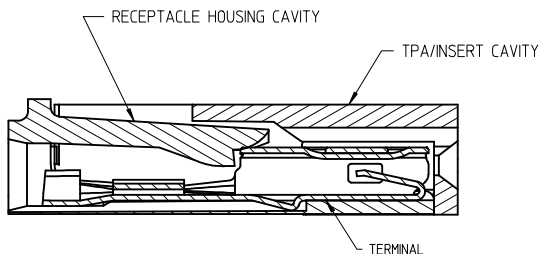


NOTES: UNLESS OTHERWISE SPECIFIED

1. TOLERANCES: LINEAR ± 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

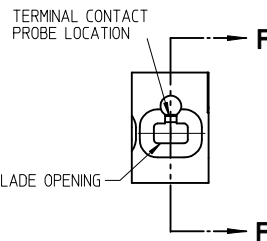
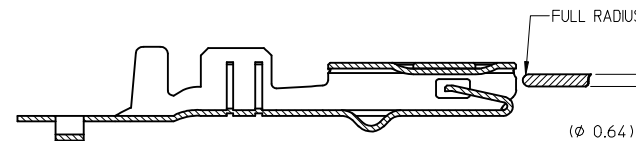


DETAIL Z
SCALE 20:1

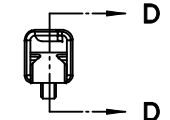


SECTION F-F

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	APP
B1	ENTER DESCRIPTION	2009/08/18	DRW:KFERGUSON	CHKD:A.DHIR
		2009/08/19		APPR:BMOSE

QUALITY SYMBOLS
$\nabla=0$
$\nabla=0$

GENERAL TOLERANCES (UNLESS SPECIFIED)		
	mm	INCH
4 PLACES	± .005	± .0002
3 PLACES	± 0.005	± .0001
2 PLACES	± 0.10	± .004
1 PLACE	± 0.3	± .012
ANGULAR ± 3 °		

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

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

13	12	11	10	9	8	7	6	5	4	3	2	1									
TABLE 2 - TERMINAL GRIP/CRIMP TOOL DIM. REFERENCE TABLE																					
SUPPLIER PART NO.		FORD PART NO.	PLATING (STAMPING)	WIRE APPLICATION		WIRE SPECIFICATION	A±0.30	B±0.30	C±0.30	D±0.30	E±0.005	F±0.005	G±0.005	J±0.005	K±0.005	M±0.005	N±0.005	P±0.005	R±0.005	U±0.005	V±0.005
SMALL POLARIZATION RIB				SAE	METRIC																
RIGHT PAYOFF	LEFT PAYOFF																				
33012-2001	33012-3001	7C3T-14474-EA	TIN	14	2.0	MIL-123A JASO D 611 (AVSS)	3.9	4.4	1.7	1.6	12.82	0.6	1.19	7.05	13.12	1.35	6.91	2.44	6.11	2.72	1.40
				14	-	MIL-135A1	3.9	4.4	1.7	1.6	12.82	0.6	1.19	7.05	12.96	1.28	6.51	2.44	6.11	2.52	1.30
				16	1.5	MIL-123A/MIL-126A1	3.9	4.4	1.7	1.6	12.82	0.6	1.19	7.05	12.96	1.28	6.51	2.44	6.11	2.52	1.30
				18	1.0	MIL-123A/MIL-126A1	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.65	1.13	6.46	2.14	1.93	2.23	1.15
33012-2002	33012-3002	7C3T-14474-DA	TIN	18	-	SAE J1128 (IGXL)	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.96	1.28	6.51	2.14	1.93	2.52	1.30
				20	0.75	MIL-123A/MIL-126A1	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.42	1.03	6.36	2.14	1.93	2.04	1.05
				20	-	SAE J1128 (IGXL)	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.65	1.13	6.46	2.14	1.93	2.23	1.15
33012-2003	33012-3003	7C3T-14474-CA	TIN	22	0.5	MIL-123A/MIL-126A1 JASO D 611 (AVSS)	2.5	2.6	0.9	1.0	11.97	0.42	0.72	6.57	12.24	0.93	6.31	1.60	1.44	1.84	0.95
33012-2003*	33012-3003*	7C3T-14474-CA*	TIN	-	0.35	WSK-1A348-A2	2.5	2.6	0.9	1.0	11.97	0.42	0.72	6.57	12.24	0.93	6.31	1.60	1.44	1.84	0.95
33001-2003	33001-3003	7C3T-14474-HA	GOLD	14	2.0	MIL-123A JASO D 611 (AVSS)	3.9	4.4	1.7	1.6	12.82	0.6	1.19	7.05	13.12	1.35	6.91	2.44	6.11	2.72	1.40
				14	-	MIL-135A1	3.9	4.4	1.7	1.6	12.82	0.6	1.19	7.05	12.96	1.28	6.51	2.44	6.11	2.52	1.30
				16	1.5	MIL-123A/MIL-126A1	3.9	4.4	1.7	1.6	12.82	0.6	1.19	7.05	12.96	1.28	6.51	2.44	6.11	2.52	1.30
				18	1.0	MIL-123A/MIL-126A1	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.65	1.13	6.46	2.14	1.93	2.23	1.15
33001-2004	33001-3004	7C3T-14474-GA	GOLD	18	-	SAE J1128 (IGXL)	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.96	1.28	6.51	2.14	1.93	2.52	1.30
				20	0.75	MIL-123A/MIL-126A1	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.42	1.03	6.36	2.14	1.93	2.04	1.05
				20	-	SAE J1128 (IGXL)	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.65	1.13	6.46	2.14	1.93	2.23	1.15
33001-2005	33001-3005	7C3T-14474-FA	GOLD	22	0.5	MIL-123A/MIL-126A1 JASO D 611 (AVSS)	2.5	2.6	0.9	1.0	11.97	0.42	0.72	6.57	12.24	0.93	6.31	1.60	1.44	1.84	0.95
33001-2005*	33001-3005*	7C3T-14474-FA*	GOLD	-	0.35	WSK-1A348-A2	2.5	2.6	0.9	1.0	11.97	0.42	0.72	6.57	12.24	0.93	6.31	1.60	1.44	1.84	0.95
33001-4001	33001-5001	7U5T-14474-UA	SILVER	14	2.0	MIL-123A JASO D 611 (AVSS)	3.9	4.4	1.7	1.6	12.82	0.6	1.19	7.05	13.12	1.35	6.91	2.44	6.11	2.72	1.40
				14	-	MIL-135A1	3.9	4.4	1.7	1.6	12.82	0.6	1.19	7.05	12.96	1.28	6.51	2.44	6.11	2.52	1.30
				16	1.5	MIL-123A/MIL-126A1	3.9	4.4	1.7	1.6	12.82	0.6	1.19	7.05	12.96	1.28	6.51	2.44	6.11	2.52	1.30
				18	1.0	MIL-123A/MIL-126A1	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.65	1.13	6.46	2.14	1.93	2.23	1.15
33001-4002	33001-5002	7U5T-14474-TA	SILVER	18	-	SAE J1128 (IGXL)	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.96	1.28	6.51	2.14	1.93	2.52	1.30
				20	0.75	MIL-123A/MIL-126A1	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.42	1.03	6.36	2.14	1.93	2.04	1.05
				20	-	SAE J1128 (IGXL)	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.65	1.13	6.46	2.14	1.93	2.23	1.15
33001-4003	33001-5003	7U5T-14474-SA	SILVER	22	0.5	MIL-123A/MIL-126A1 JASO D 611 (AVSS)	2.5	2.6	0.9	1.0	11.97	0.42	0.72	6.57	12.24	0.93	6.31	1.60	1.44	1.84	0.95
33001-4003*	33001-5003*	7U5T-14474-SA*	SILVER	-	0.35	WSK-1A348-A2	2.5	2.6	0.9	1.0	11.97	0.42	0.72	6.57	12.24	0.93	6.31	1.60	1.44	1.84	0.95
LARGE POLARIZATION RIB																					
33012-2021	33012-3021	7C3T-14474-LA	TIN	14	2.0	MIL-123A JASO D 611 (AVSS)	3.9	4.4	1.7	1.6	12.82	0.6	1.19	7.05	13.12	1.35	6.91	2.44	6.11	2.72	1.40
				14	-	MIL-135A1	3.9	4.4	1.7	1.6	12.82	0.6	1.19	7.05	12.96	1.28	6.51	2.44	6.11	2.52	1.30
				16	1.5	MIL-123A/MIL-126A1	3.9	4.4	1.7	1.6	12.82	0.6	1.19	7.05	12.96	1.28	6.51	2.44	6.11	2.52	1.30
				18	1.0	MIL-123A/MIL-126A1	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.65	1.13	6.46	2.14	1.93	2.23	1.15
33012-2022	33012-3022	7C3T-14474-KA	TIN	18	-	SAE J1128 (IGXL)	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.96	1.28	6.51	2.14	1.93	2.52	1.30
				20	0.75	MIL-123A/MIL-126A1	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.42	1.03	6.36	2.14	1.93	2.04	1.05
				20	-	SAE J1128 (IGXL)	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.65	1.13	6.46	2.14	1.93	2.23	1.15
33012-2023	33012-3023	7C3T-14474-JA	TIN	22	0.5	MIL-123A/MIL-126A1 JASO D 611 (AVSS)	2.5	2.6	0.9	1.0	11.97	0.42	0.72	6.57	12.24	0.93	6.31	1.60	1.44	1.84	0.95
33012-2023*	33012-3023*	7C3T-14474-JA*	TIN	-	0.35	WSK-1A348-A2	2.5	2.6	0.9	1.0	11.97	0.42	0.72	6.57	12.24	0.93	6.31	1.60	1.44	1.84	0.95
33001-2021	33001-3021	7C3T-14474-PA	GOLD	14	2.0	MIL-123A JASO D 611 (AVSS)	3.9	4.4	1.7	1.6	12.82	0.6	1.19	7.05	13.12	1.35	6.91	2.44	6.11	2.72	1.40
				14	-	MIL-135A1	3.9	4.4	1.7	1.6	12.82	0.6	1.19	7.05	12.96	1.28	6.51	2.44	6.11	2.52	1.30
				16	1.5	MIL-123A/MIL-126A1	3.9	4.4	1.7	1.6	12.82	0.6	1.19	7.05	12.96	1.28	6.51	2.44	6.11	2.52	1.30
				18	1.0	MIL-123A/MIL-126A1	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.65	1.13	6.46	2.14	1.93	2.23	1.15
33001-2022	33001-3022	7C3T-14474-NA	GOLD	18	-	SAE J1128 (IGXL)	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.96	1.28	6.51	2.14	1.93	2.52	1.30
				20	0.75	MIL-123A/MIL-126A1	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.42	1.03	6.36	2.14	1.93	2.04	1.05
				20	-	SAE J1128 (IGXL)	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.65	1.13	6.46	2.14	1.93	2.23	1.15
33001-2023	33001-3023	7C3T-14474-MA	GOLD	22	0.5	MIL-123A/MIL-126A1 JASO D 611 (AVSS)	2.5	2.6	0.9	1.0	11.97	0.42	0.72	6.57	12.24	0.93	6.31	1.60	1.44	1.84	0.95
33001-2023*	33001-3023*	7C3T-14474-MA*	GOLD	-	0.35	WSK-1A348-A2	2.5	2.6	0.9	1.0	11.97	0.42	0.72	6.57	12.24	0.93	6.31	1.60	1.44	1.84	0.95
33001-4021	33001-5021	7U5T-14474-RA	SILVER	14	2.0	MIL-123A JASO D 611 (AVSS)	3.9	4.4	1.7	1.6	12.82	0.6	1.19	7.05	13.12	1.35	6.91	2.44	6.11	2.72	1.40
				14	-	MIL-135A1	3.9	4.4	1.7	1.6	12.82	0.6	1.19	7.05	12.96	1.28	6.51	2.44	6.11	2.52	1.30
				16	1.5	MIL-123A/MIL-126A1	3.9	4.4	1.7	1.6	12.82	0.6	1.19	7.05	12.96	1.28	6.51	2.44	6.11	2.52	1.30
				18	1.0	MIL-123A/MIL-126A1	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.65	1.13	6.46	2.14	1.93	2.23	1.15
33001-4022	33001-5022	7U5T-14474-PA	SILVER	18	-	SAE J1128 (IGXL)	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.96	1.28	6.51	2.14	1.93	2.52	1.30
				20	0.75	MIL-123A/MIL-126A1	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.42	1.03	6.36	2.14	1.93	2.04	1.05
				20	-	SAE J1128 (IGXL)	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.65	1.13	6.46	2.14	1.93	2.23	1.15
33001-4023	33001-5023	7U5T-14474-NA	SILVER	22	0.5	MIL-123A/MIL-126A1 JASO D 611 (AVSS)	2.5	2.6	0.9	1.0	11.97	0.42	0.72	6.57	12.24	0.93	6.31	1.60	1.44	1.84	0.95
33001-4023*	33001-5023*	7U5T-14474-NA*	SILVER	-	0.35	WSK-1A348-A2	2.5	2.6	0.9	1.0	11.97	0.42	0.72	6.57	12.24	0.93	6.31	1.60	1.44	1.84	0.95