

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number:

0330015001

Status:

Active

Overview:

[mx150_sealed_connector_system](#)

Description:

MX150™ Female Terminal, Silver (Ag) Plating, 14-16 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	14, 16
Wire Size mm²	1.5

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

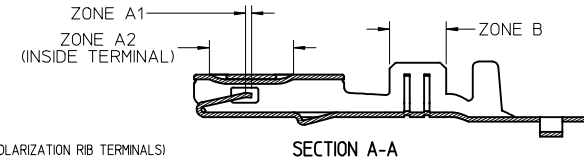
Tooling specifications and manuals are found by selecting the products below. Crimp Height Specifications are then contained in the Application Tooling Specification document.

Global	
Description	Product #
Manual Extraction Tool	0638131500
FineAdjust™ Applicator	0639000700
Hand Crimp Tool, 14-16AWG	0638115900
Hand Crimp Tool, Metric 1.00 and 1.50	0638116100

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

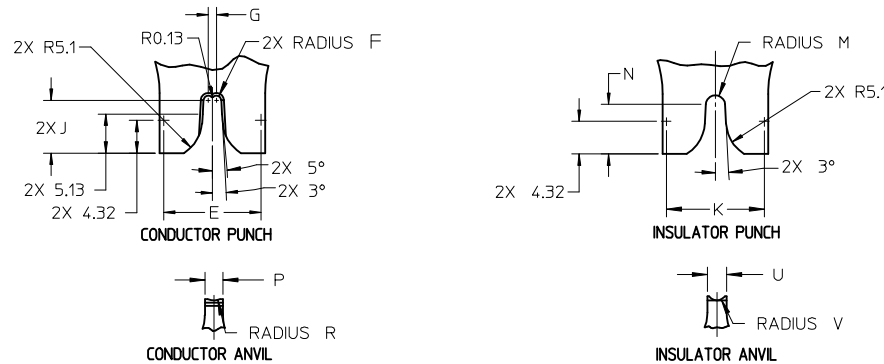
TIN LAYER: ELECTRODEPOSITED 100% TIN MATTE FINISH
THICKNESS: 250 - 400 MICROMETERS

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

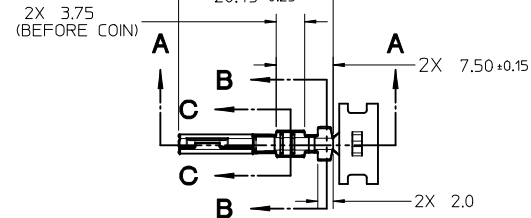
10. REFERENCE 97B5-14474-AAB FOR LARGE POLARIZATION RIB
CAVITY SPECIFICATION

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

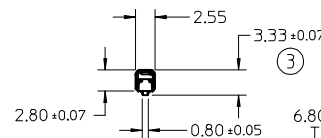
13. REFERENCE PK-31300-516 FOR REEL DIRECTION

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



SECTION A-A

CARRIER BUMP DIRECTION
POINTS DOWN FOR TIN PLATED TERMINALS
POINTS UP FOR PRECIOUS PLATED TERMINALS

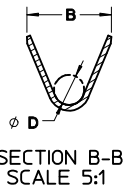


SECTION A-A

(10.67)
PROGRESSION



SCALE 1:1



SECTION B-B
SCALE 5:1



SECTION C-C
SCALE 5:1

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

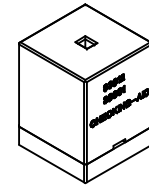
QUALITY SYMBOLS
▽=0
▽=0

GENERAL TOLERANCES (UNLESS SPECIFIED)			
	mm	INCH	
4 PLACES	± .005	± .0005	
3 PLACES	± .005	± .0005	
2 PLACES	± .010	± .0010	
1 PLACE	± .030	± .0030	
ANGULAR ± 3 °			

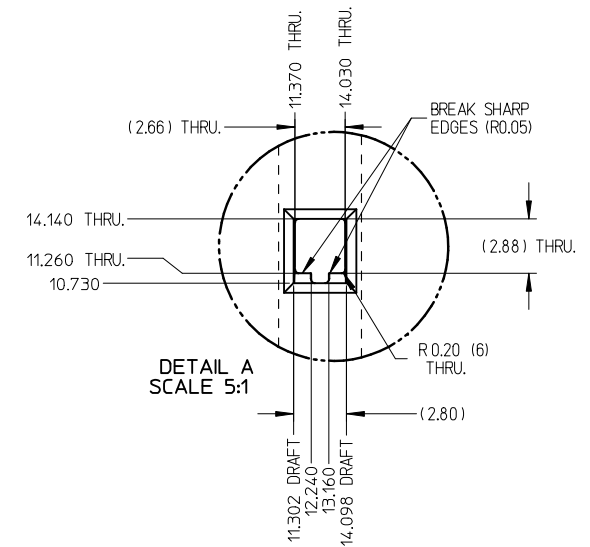
	DIMENSION STYLE	
	MM ONLY	
DRAWN BY	DATE	
L. PULLIAM	2005/06/21	
CHECKED BY	DATE	
A. DHIR	2005/06/21	
APPROVED BY	DATE	
B. MOSER	2005/06/22	
MATERIAL NO.		
SEE TABLE		
SIZE	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	

	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)				
J	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			
					18	MIL-123A	1.35	2.45	2.40	2.60	222			
	33012-2002	33012-3002	7C3T-14474-DA	TIN	18	SAE J1128 (IGXL)	1.25	2.15	2.40	2.60	157			
					20	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			
	33012-2003	33012-3003	7C3T-14474-CA	TIN	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			
	33012-2001	33012-3001	7C3T-14474-EA	TIN		2.00mm ²	MIL-126A1	1.40	2.45	2.60	257			
						150mm ²	MIL-126A1	1.30	2.15	2.00	211			
	33012-2002	33012-3002	7C3T-14474-DA	TIN		100mm ²	MIL-126A1	1.30	2.15	2.00	211			
						0.75mm ²	MIL-126A1	1.25	2.15	1.95	210			
							MIL-126A1	1.10	1.60	1.80	190			
	33012-2003	33012-3003	7C3T-14474-CA	TIN		0.50mm ²	JASO D 611 (AVSSI)	1.10	1.60	1.85	190			
	33012-2003*	33012-3003*	7C3T-14474-CA*	TIN		0.35mm ²	WSK-1A348-A2	0.95	1.60	1.70	190			
	33001-2003	33001-3003	7C3T-14474-HA	GOLD	14	MIL-123A	1.65	2.45	2.90	2.75	268			
					16	MIL-135A1	1.65	2.45	2.70	2.60	268			
					18	MIL-123A	1.35	2.45	2.40	2.60	222			
						MIL-123A	1.25	2.15	2.00	2.30	157			
					20	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			
	33001-2005	33001-3005	7C3T-14474-FA	GOLD	22	MIL-123A	1.00	1.60	1.85	1.90	88			
	33001-2003	33001-3003	7C3T-14474-HA	GOLD		2.00mm ²	JASO D 611 (AVSSI)	1.60	2.45	2.90	275			
						150mm ²	MIL-126A1	1.40	2.45	2.60	257			
	33001-2004	33001-3004	7C3T-14474-GA	GOLD		100mm ²	MIL-126A1	1.30	2.15	2.00	230			
						0.75mm ²	MIL-126A1	1.25	2.15	1.95	210			
							MIL-126A1	1.10	1.60	1.80	190			
	33001-2005	33001-3005	7C3T-14474-FA	GOLD		0.50mm ²	JASO D 611 (AVSSI)	1.10	1.60	1.85	190			
	33001-2005*	33001-3005*	7C3T-14474-FA*	GOLD		0.35mm ²	WSK-1A348-A2	0.95	1.60	1.70	190			
	33001-4001	33001-5001	7U5T-14474-UA	SILVER**	14	MIL-123A	1.65	2.45	2.90	2.75	268			
					16	MIL-135A1	1.65	2.45	2.70	2.60	268			
					18	MIL-123A	1.35	2.45	2.40	2.60	222			
						MIL-123A	1.25	2.15	2.00	2.30	157			
	33001-4002	33001-5002	7U5T-14474-TA	SILVER**	18	SAE J1128 (IGXL)	1.25	2.15	2.40	2.60	158			
					20	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			
	33001-4003	33001-5003	7U5T-14474-SA	SILVER**	22	MIL-123A	1.00	1.60	1.85	1.90	88			
	33001-4001	33001-5001	7U5T-14474-UA	SILVER**		2.00mm ²	JASO D 611 (AVSSI)	1.60	2.45	2.90	275			
						150mm ²	MIL-126A1	1.40	2.45	2.60	257			
	33001-4002	33001-5002	7U5T-14474-TA	SILVER**		100mm ²	MIL-126A1	1.30	2.15	2.00	230			
						0.75mm ²	MIL-126A1	1.25	2.15	1.95	210			
	33001-4003	33001-5003	7U5T-14474-SA	SILVER**		0.50mm ²	MIL-126A1	1.10	1.60	1.80	190			
							JASO D 611 (AVSSI)	1.10	1.60	1.85	190			
	33001-4003*	33001-5003*	7U5T-14474-SA*	SILVER**		0.35mm ²	WSK-1A348-A2	0.95	1.60	1.70	190			
E	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-135A1	1.65	2.45	2.70	2.60	268			
					18	MIL-123A	1.35	2.45	2.40	2.60	222			
						MIL-123A	1.25	2.15	2.00	2.30	157			
	33012-2022	33012-3022	7C3T-14474-KA	TIN	18	SAE J1128 (IGXL)	1.25	2.15	2.40	2.60	158			
					20	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			
	33012-2023	33012-3023	7C3T-14474-JA	TIN	22	MIL-123A	1.00	1.60	1.85	1.90	88			
	33012-2021	33012-3021	7C3T-14474-LA	TIN		2.00mm ²	JASO D 611 (AVSSI)	1.60	2.45	2.90	275			
						150mm ²	MIL-126A1	1.40	2.45	2.60	257			
	33012-2022	33012-3022	7C3T-14474-KA	TIN		100mm ²	MIL-126A1	1.30	2.15	2.00	230			
						0.75mm ²	MIL-126A1	1.25	2.15	1.95	210			
	33012-2023	33012-3023	7C3T-14474-JA	TIN		0.50mm ²	MIL-126A1	1.10	1.60	1.80	190			
							JASO D 611 (AVSSI)	1.10	1.60	1.85	190			
	33012-2023*	33012-3023*	7C3T-14474-JA*	TIN		0.35mm ²	WSK-1A348-A2	0.95	1.60	1.70	190			
	33001-2021	33001-3021	7C3T-14474-PA	GOLD	14	MIL-123A	1.65	2.45	2.90	2.75	268			
					16	MIL-135A1	1.65	2.45	2.70	2.60	268			
					18	MIL-123A	1.35	2.45	2.40	2.60	222			
						MIL-123A	1.25	2.15	2.00	2.30	157			
					20	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			
	33001-2023	33001-3023	7C3T-14474-MA	GOLD	22	MIL-123A	1.00	1.60	1.85	1.90	88			
	33001-2021	33001-3021	7C3T-14474-PA	GOLD		2.00mm ²	JASO D 611 (AVSSI)	1.60	2.45	2.90	275			
						150mm ²	MIL-126A1	1.40	2.45	2.60	257			
	33001-2022	33001-3022	7C3T-14474-NA	GOLD		100mm ²	MIL-126A1	1.30	2.15	2.00	230			
						0.75mm ²	MIL-126A1	1.25	2.15	1.95	210			
	33001-2023	33001-3023	7C3T-14474-MA	GOLD		0.50mm ²	MIL-126A1	1.10	1.60	1.80	190			
							JASO D 611 (AVSSI)	1.10	1.60	1.85	190			
	33001-2023*	33001-3023*	7C3T-14474-MA*	GOLD		0.35mm ²	WSK-1A348-A2	0.95	1.60	1.70	190			
	33001-4021	33001-5021	7U5T-14474-RA	SILVER**	14	MIL-123A	1.65	2.45	2.90	2.75	268			
					16	MIL-135A1	1.65	2.45	2.70	2.60	268			
					18	MIL-123A	1.35	2.45	2.40	2.60	222			
						MIL-123A	1.25	2.15	2.00	2.30	157			
					20	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			
	33001-4023	33001-5023	7U5T-14474-NA	SILVER**	22	MIL-123A	1.00	1.60	1.85	1.90	88			
	33001-4021	33001-5021	7U5T-14474-RA	SILVER**		2.00mm ²	JASO D 611 (AVSSI)	1.60	2.45	2.90	275			
						150mm ²	MIL-126A1	1.40	2.45	2.60	257			
						100mm ²	MIL-126A1	1.30	2.15	2.00	230			
	33001-4022	33001-5022	7U5T-14474-PA	SILVER**		0.75mm ²	MIL-126A1	1.25	2.15	1.95	210			

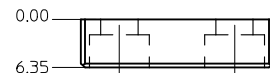
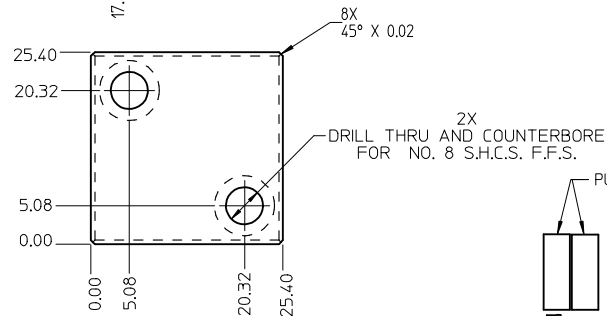
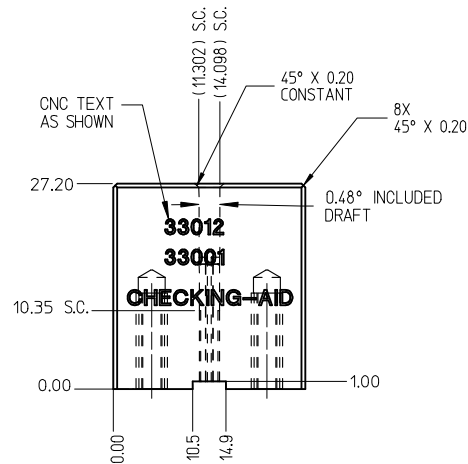
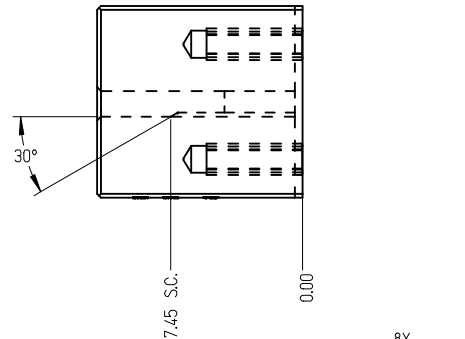
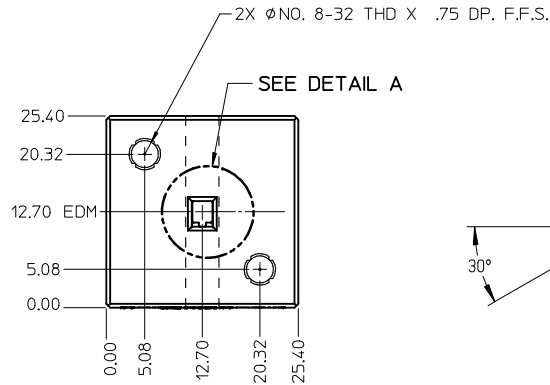
THIS CHECKING - AID IS FOR SMALL POLARIZATION RIB TERMINALS ONLY



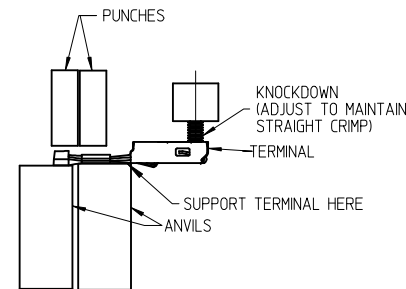
CHECKING - AID ASSEMBLY
SCALE 1:1



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

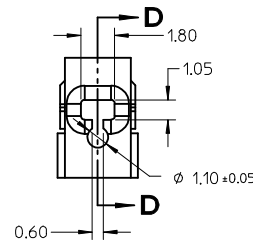
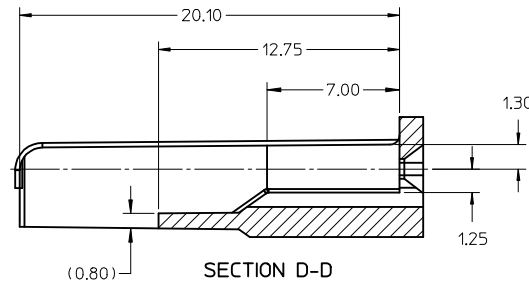
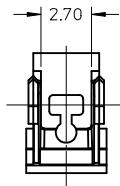
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DRUNKFERGUSON	2009/08/19
CHKDA:DHIR	2009/08/20
APPR:BMOSER	2009/08/20
REV	
B1	

QUALITY SYMBOLS	
▽=0	
▽=0	

GENERAL TOLERANCES (UNLESS SPECIFIED)	
	mm
4 PLACES	± .005
3 PLACES	± .005
2 PLACES	± .010
1 PLACE	± .030
ANGULAR ± 3 °	

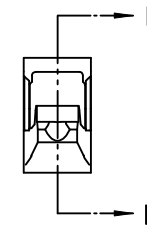
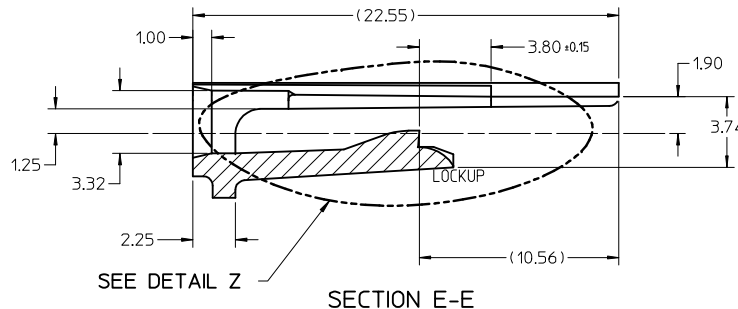
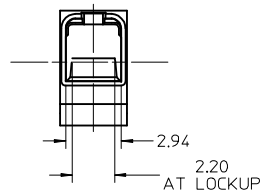
DIMENSION STYLE	
MM ONLY	
DRAWN BY	L. PULLIAM
DATE	2005/06/21
CHECKED BY	A. DHIR
DATE	2005/06/21
APPROVED BY	B. MOSER
DATE	2005/06/22
MATERIAL NO.	SEE TABLE
SIZE	C

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

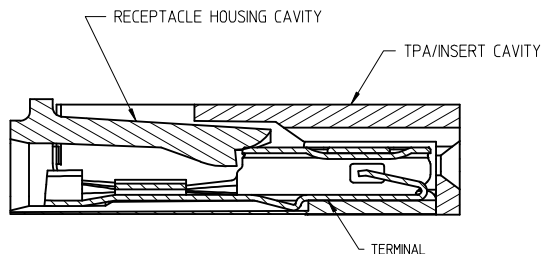


NOTES: UNLESS OTHERWISE SPECIFIED

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

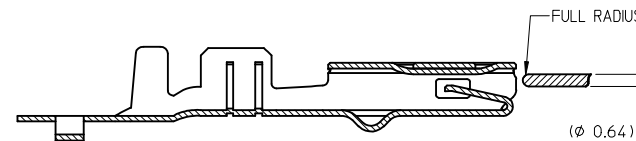
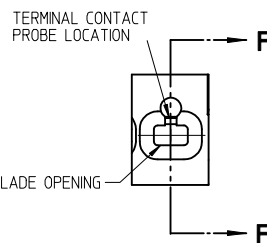


DETAIL Z
SCALE 20:1

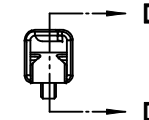


SECTION F-F

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
B1	ENTER DESCRIPTION EC NO: UAU2010-0107 DRWN:FERGUSON 2009/08/18 CHKD:ADHIR 2009/08/19 APPR:BMOSER 2009/08/20

QUALITY
SYMBOLS
=0
=0

GENERAL TOLERANCES
(UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± 0.10	± 0.004
3 PLACES	± 0.005	± 0.0002
2 PLACES	± 0.10	± 0.004
1 PLACE	± 0.3	± 0.012
ANGULAR $\pm 3^\circ$		

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
5:1

DESIGN UNITS
METRIC

THIRD ANGLE
PROJECTION

MX150
RECEPTACLE TERMINAL

MOLEX INCORPORATED

DOCUMENT NO.
SD-33012-002

SHEET NO.
4 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 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																					
RIGHT PAYOFF	LEFT PAYOFF																				
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