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Part Number: [0330012005](#)
Status: **Active**
Overview: [mx150 sealed connector system](#)
Description: MX150™ Female Terminal, Select Gold (Au) Plating, 22 AWG, Right 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	33001
Comments	Right 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	Gold
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	22
Wire Size mm²	0.5

Electrical

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

Material Info

Reference - Drawing Numbers

Sales Drawing	SD-33012-002
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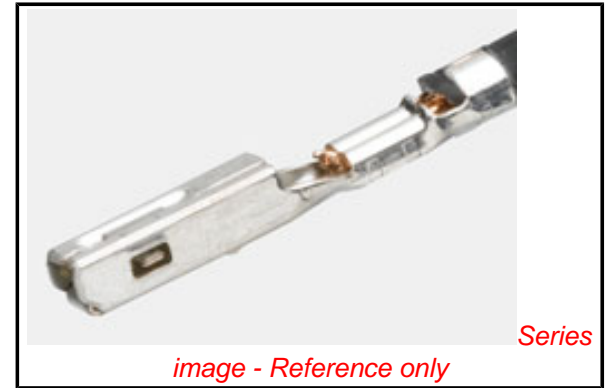


image - Reference only

Series

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
 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

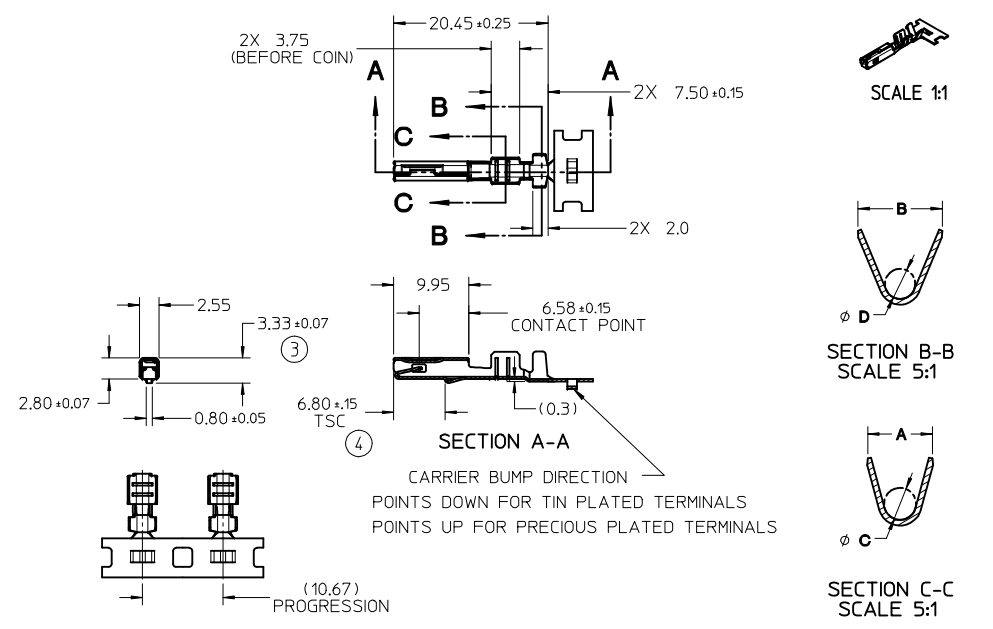
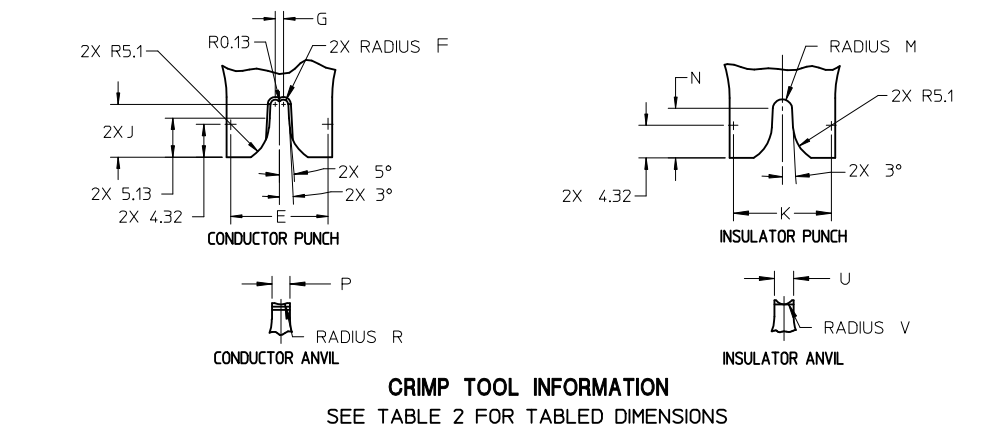
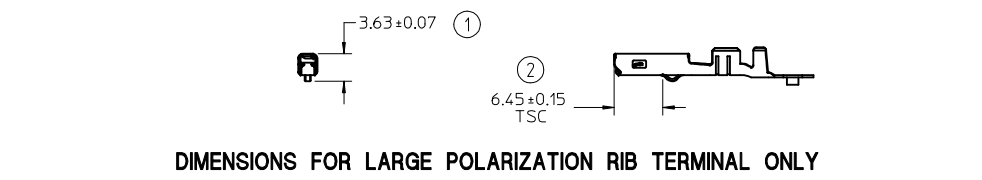
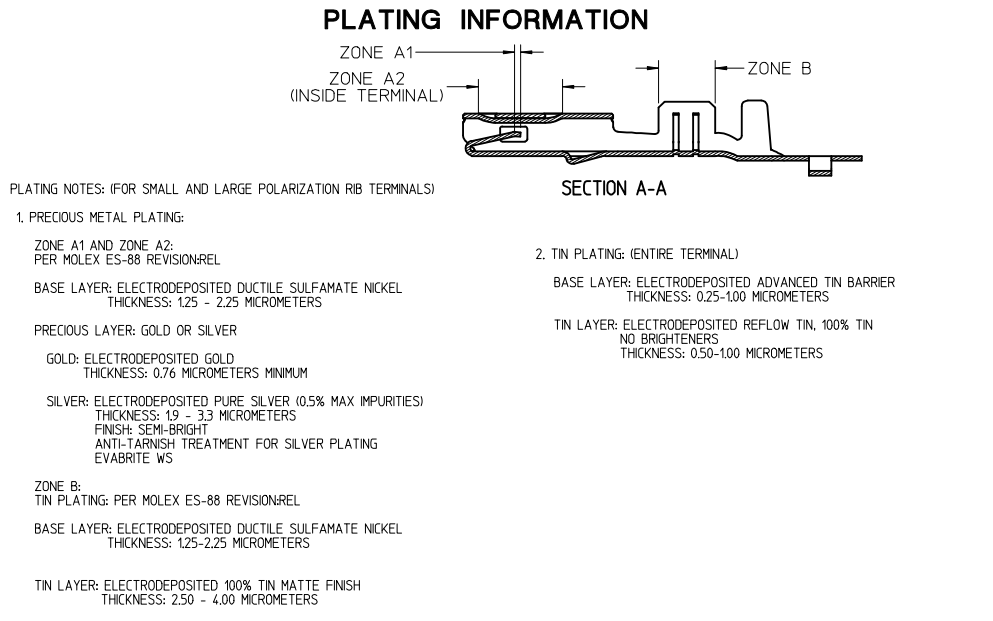
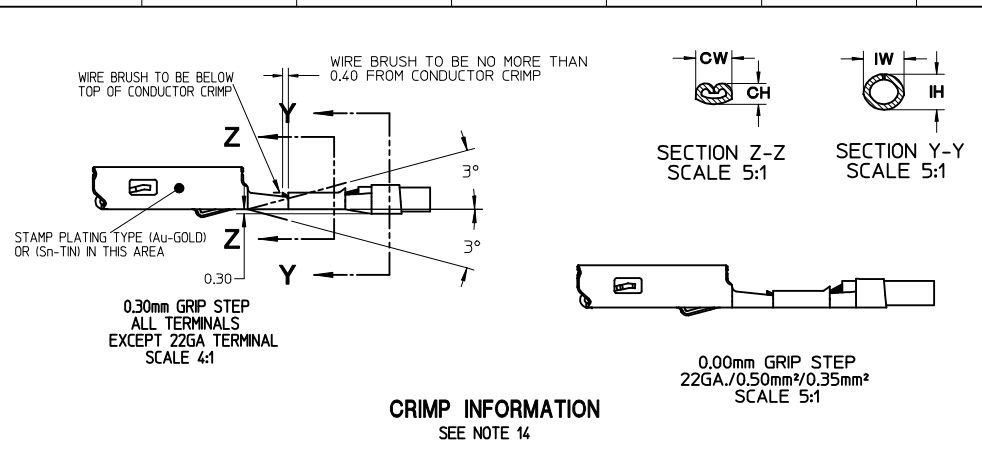
[33472](#) Dual Row Housing. [33476](#) Hybrid Housing. [33471](#) Single Row Housing

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
Hand Crimp Tool, 18-22AWG	0638116000



- 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-(T401/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

ENTER DESCRIPTION EC NO: UAU2010-0107 DRAWN BY: DRWINKFERGUSON CHKD BY: DHIR APPR: BMOSER 2009/08/19 2009/08/20	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE 2:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
		mm	INCH	DRAWN BY L. PULLIAM	DATE 2005/06/21	TITLE MX150 RECEPTACLE TERMINAL			
B1	REV	4 PLACES	± .005	± .005	CHECKED BY A. DHIR	DATE 2005/06/21	MOLEX MOLEX INCORPORATED		
		3 PLACES	± 0.10	± 0.10	APPROVED BY B. MOSER	DATE 2005/06/22			
		2 PLACES	± 0.3	± 0.3	MATERIAL NO. SEE TABLE		DOCUMENT NO. SD-33012-002	SHEET NO. 1 OF 5	
		1 PLACE	± 3°	± 3°	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				

TABLE 1 - TERMINAL CRIMP DIM. REFERENCE 9

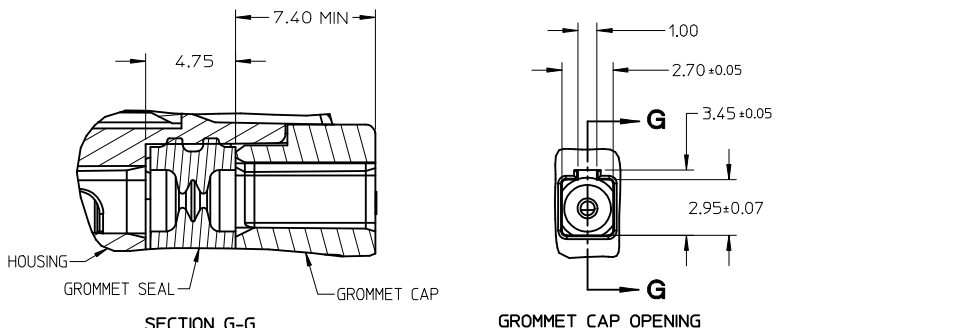
SMALL POLARIZATION RIB		FORN PART NO.	PLATING	WIRE SIZE (AWG)	WIRE SPECIFICATION	CONDUCTOR	CONDUCTOR	INSULATOR	INSULATOR	WIRE PULL FORCE (N)
RIGHT PAYOFF	LEFT PAYOFF					CH (SEC Z-Z) ± 0.05 mm	CW (SEC Z-Z) ± 0.10 mm	IH (SEC Y-Y) ± 0.10 mm	IW (SEC Y-Y) ± 0.10 mm	
33012-2001	33012-3001	7C3T-14474-EA	TIN	14	MIL-123A MIL-135A1	1.65 1.65	2.45 2.45	2.90 2.70	2.75 2.60	268 268
33012-2002	33012-3002	7C3T-14474-DA	TIN	16 18 20	MIL-123A SAE J1128 (IGXL) MIL-123A HFLOX WIRE ¹ SAE J1128 (IGXL)	1.35 1.25 1.15 1.15 1.15	2.45 2.15 2.15 2.15 2.15	2.40 2.00 1.90 1.90 2.00	2.60 2.30 2.10 2.10 2.30	222 157 128 135 105
33012-2003	33012-3003	7C3T-14474-CA	TIN	22	MIL-123A	1.00	1.60	1.85	1.90	88
33012-2001	33012-3001	7C3T-14474-EA	TIN	2.00mm ²	JASO D 611 (AVSSI)	1.60	2.45	2.90	2.75	231
33012-2002	33012-3002	7C3T-14474-DA	TIN	1.50mm ²	MIL-126A1	1.40	2.45	2.60	2.60	257
33012-2003	33012-3003	7C3T-14474-CA	TIN	1.00mm ²	MIL-126A1	1.30	2.15	2.00	2.30	211
33012-2003*	33012-3003*	7C3T-14474-CA*	TIN	0.75mm ²	MIL-126A1	1.25	2.15	1.95	2.10	142
33012-2003*	33012-3003*	7C3T-14474-CA*	TIN	0.50mm ²	MIL-126A1	1.10	1.60	1.80	1.90	111
33012-2003*	33012-3003*	7C3T-14474-CA*	TIN	0.35mm ²	JASO D 611 (AVSSI)	1.10	1.60	1.85	1.90	125
33001-2003	33001-3003	7C3T-14474-HA	GOLD	0.35mm ²	WSK-1A348-A2	0.95	1.60	1.70	1.90	50
33001-2004	33001-3004	7C3T-14474-GA	GOLD	14 16 18	MIL-123A MIL-135A1 MIL-123A MIL-123A	1.65 1.65 1.35 1.25	2.45 2.45 2.45 2.15	2.90 2.70 2.40 2.00	2.75 2.60 2.60 2.30	268 268 222 157
33001-2004	33001-3004	7C3T-14474-GA	GOLD	20	SAE J1128 (IGXL) MIL-123A HFLOX WIRE ¹ SAE J1128 (IGXL)	1.25 1.15 1.15 1.15	2.15 2.15 2.15 2.15	2.40 1.90 2.10 2.00	2.60 1.28 1.35 1.05	158 128 135 105
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	2.75	231
33001-2004	33001-3004	7C3T-14474-GA	GOLD	1.50mm ²	MIL-126A1	1.40	2.45	2.60	2.60	257
33001-2004	33001-3004	7C3T-14474-GA	GOLD	1.00mm ²	MIL-126A1	1.30	2.15	2.00	2.30	211
33001-2005	33001-3005	7C3T-14474-FA	GOLD	0.75mm ²	MIL-126A1	1.25	2.15	1.95	2.10	142
33001-2005*	33001-3005*	7C3T-14474-FA*	GOLD	0.50mm ²	JASO D 611 (AVSSI)	1.10	1.60	1.85	1.90	111
33001-4001	33001-5001	7U5T-14474-UA	SILVER**	0.35mm ²	WSK-1A348-A2	0.95	1.60	1.70	1.90	50
33001-4001	33001-5001	7U5T-14474-UA	SILVER**	14 16 18	MIL-123A MIL-135A1 MIL-123A MIL-123A	1.65 1.65 1.35 1.25	2.45 2.45 2.45 2.15	2.90 2.70 2.60 2.30	2.75 2.60 2.60 2.10	268 268 222 157
33001-4002	33001-5002	7U5T-14474-TA	SILVER**	20	SAE J1128 (IGXL) MIL-123A HFLOX WIRE ¹ SAE J1128 (IGXL)	1.25 1.15 1.15 1.15	2.15 2.15 2.15 2.15	2.40 1.90 2.10 2.00	2.60 1.28 1.35 1.05	158 128 135 105
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	2.75	231
33001-4002	33001-5002	7U5T-14474-TA	SILVER**	1.50mm ²	MIL-126A1	1.40	2.45	2.60	2.60	257
33001-4002	33001-5002	7U5T-14474-TA	SILVER**	1.00mm ²	MIL-126A1	1.30	2.15	2.00	2.30	211
33001-4003	33001-5003	7U5T-14474-SA	SILVER**	0.75mm ²	MIL-126A1	1.25	2.15	1.95	2.10	142
33001-4003*	33001-5003*	7U5T-14474-SA*	SILVER**	0.50mm ²	MIL-126A1	1.10	1.60	1.80	1.90	111
33001-4003*	33001-5003*	7U5T-14474-SA*	SILVER**	0.35mm ²	JASO D 611 (AVSSI)	1.10	1.60	1.85	1.90	125
33001-4003*	33001-5003*	7U5T-14474-SA*	SILVER**	0.35mm ²	WSK-1A348-A2	0.95	1.60	1.70	1.90	50

LARGE POLARIZATION RIB										
RIGHT PAYOFF	LEFT PAYOFF	7U5T-14474-NA	SILVER**	0.50mm ²	MIL-126A1	1.10	1.60	1.80	1.90	111
33001-4023	33001-5023	7U5T-14474-NA	SILVER**	0.50mm ²	JASO D 611 (AVSSI)	1.10	1.60	1.85	1.90	125
33001-4023*	33001-5023*	7U5T-14474-NA*	SILVER**	0.35mm ²	WSK-1A348-A2	0.95	1.60	1.70	1.90	50

¹HFLOX 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

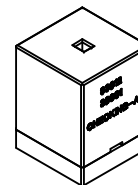
** SILVER PLATED TERMINALS NOT TO BE USED IN CONNECTOR SYSTEMS WITH CIRCUIT COUNTS HIGHER THAN 8 DUE TO HIGHER CONNECTOR MATE/UNMATE FORCE



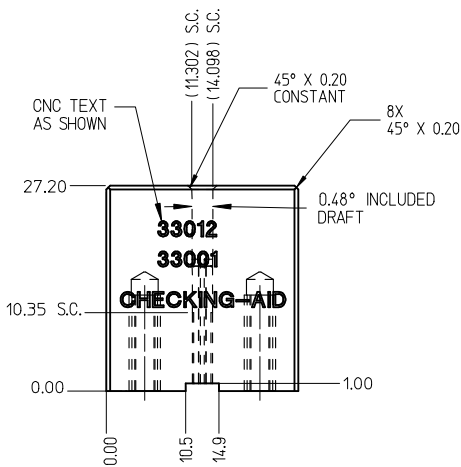
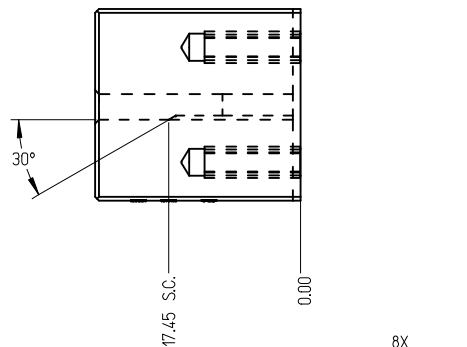
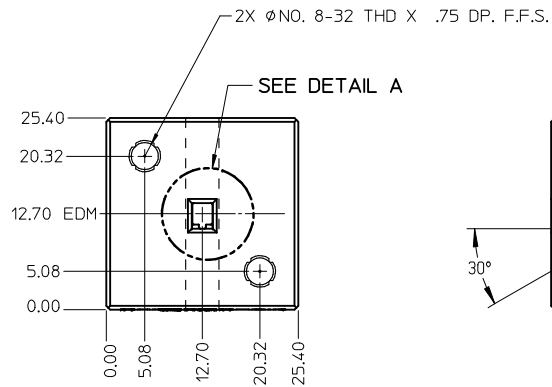
**GROMMET SEAL / CAP CONFIGURATION TO MODIFY
LARGE POLARIZATION RIB CAVITY TO ACCEPT
SMALL POLARIZATION RIB APPLICATIONS**

ENTER DESCRIPTION EC NO: UAU2010-0107 DRINKWATERGUSON 2009/08/18 CHKADA-DHIR 2009/08/19 APPR:BMOSER	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
		mm	INCH	MM ONLY	METRIC		
		DRAWN BY DATE L. PULLIAM 2005/06/21		TITLE MX150 RECEPTACLE TERMINAL			
CHECKED BY DATE A. DHIR 2005/06/21		APPROVED BY DATE B. MOSER 2005/06/22		DOCUMENT NO. SD-33012-002		SHEET NO. 2 OF 5	
MATERIAL NO. SEE TABLE		SIZE C		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION			

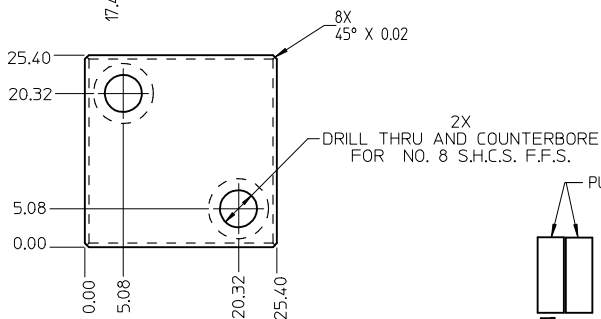
THIS CHECKING - AID IS FOR SMALL POLARIZATION RIB TERMINALS ONLY



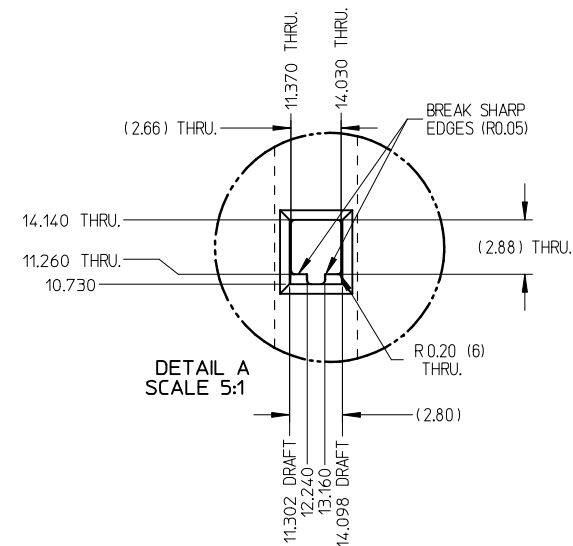
CHECKING - AID ASSEMBLY
SCALE 1:1



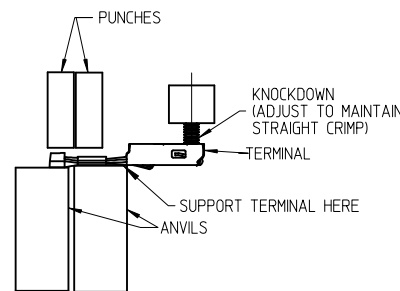
CHECKING - AID
UPPER



CHECKING - AID
LOWER



DETAIL A
SCALE 5:1

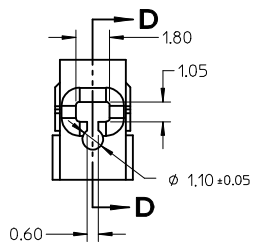
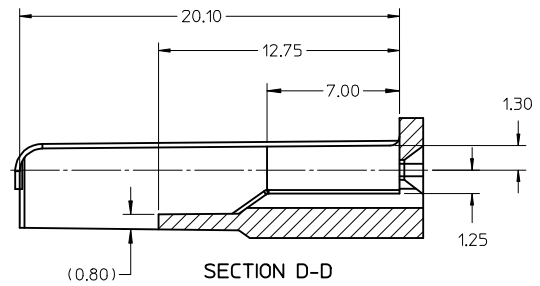
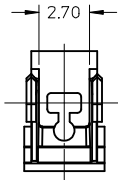


CRIMP REQUIREMENTS:

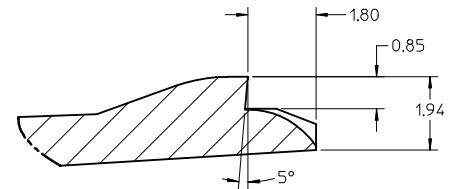
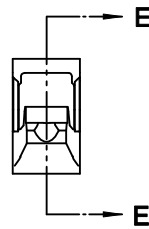
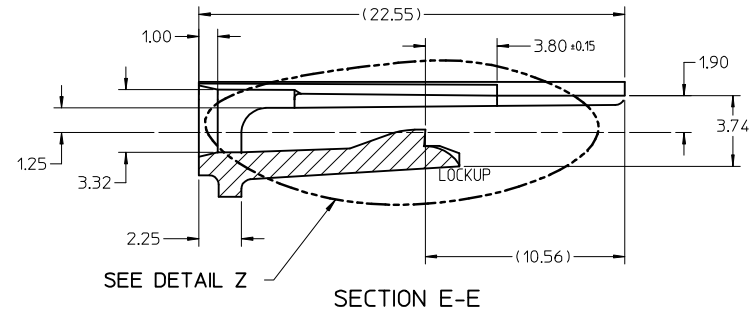
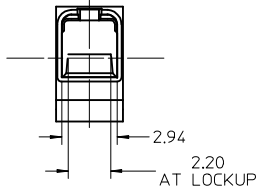
1. CRIMP STRAIGHTNESS MUST BE MAINTAINED
USE A KNOCKDOWN TOOL LOCATED AS SHOWN
TERMINAL BOX MUST NOT BE DEFORMED
2. AFTER CRIMPING, THE CRIMPED TERMINAL (AND UP TO 5 mm OF WIRE PAST THE INSULATOR CUTOFF TAB) MUST FIT FREELY INTO THE CHECKING-AID SHOWN ON THIS PAGE
3. FOR OTHER MECHANICAL REQUIREMENTS 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

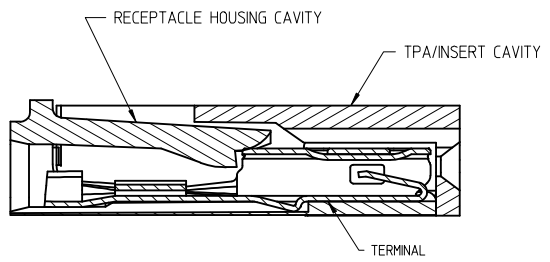
ENTER DESCRIPTION EC NO: UAU2010-0107 2009/08/18 DRINKFERGUSON 2009/08/19 CHKDA:DHIR 2009/08/19 APPR:BMOSER 2009/08/20	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY	SCALE 2:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
		4 PLACES ± mm ± INCH	DRAWN BY L. PULLIAM	DATE 2005/06/21	TITLE MX150 RECEPTACLE TERMINAL			
		3 PLACES ± 0.005	CHECKED BY A. DHIR	DATE 2005/06/21	MOLEX INCORPORATED			
		2 PLACES ± 0.10 1 PLACE ± 0.3 ANGULAR ± 3°	APPROVED BY B. MOSER	DATE 2005/06/22	MATERIAL NO. SEE TABLE	DOCUMENT NO. SD-33012-002	SHEET NO. 3 OF 5	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 ± 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

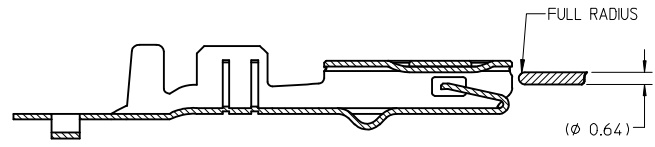
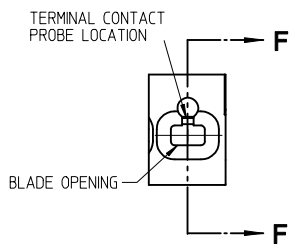


DETAIL Z
SCALE 20:1

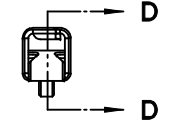


SECTION F-F

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	CHKD	APPD
B1	ENTER DESCRIPTION	2009/08/18	L. PULLIAM	A. DHIR	B. MOSER
	EC NO: UAU2010-0107	2009/08/19			
	DRWN: KFERGUSON	2009/08/19			
	CHKD: A. DHIR	2009/08/20			
	APPD: B. MOSER	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 ± 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
DOCUMENT NO.	SD-33012-002

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

TABLE 2 - TERMINAL GRIP/CRIMP TOOL DIM. REFERENCE TABLE

J	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																										
J	33012-2001	33012-3001	7C3T-1474-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						
I	33012-2002	33012-3002	7C3T-1474-DA	TIN	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						
					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						
					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						
H	33012-2003*	33012-3003*	7C3T-1474-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						
					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						
					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						
G	33001-2003	33001-3003	7C3T-1474-HA	GOLD	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						
					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						
H	33001-2005*	33001-3005*	7C3T-1474-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						
					-	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						
					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						
G	33001-4001	33001-5001	7U5T-1474-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						
					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						
F	33001-4003*	33001-5003*	7U5T-1474-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						
					-	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						
					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						
E	33012-2021	33012-3021	7C3T-1474-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						
					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						
D	33012-2023*	33012-3023*	7C3T-1474-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						
					-	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						
					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						
C	33001-2021	33001-3021	7C3T-1474-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																					