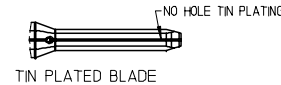
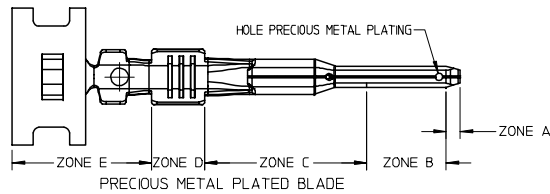
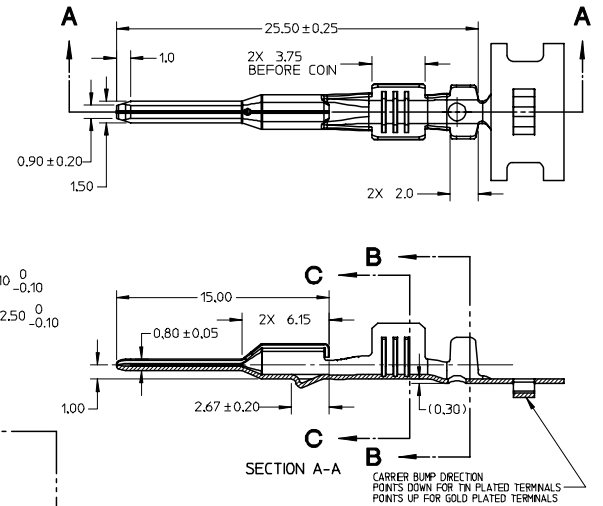
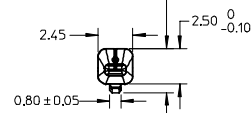
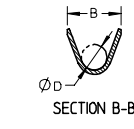
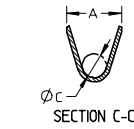
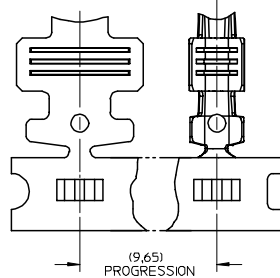
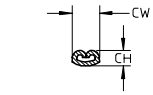
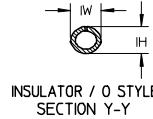
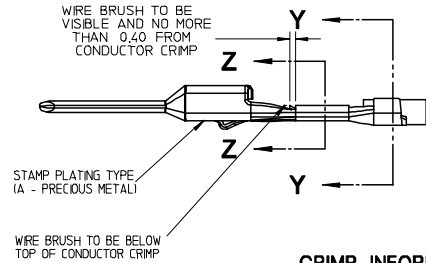


TABLE 1 - TERMINAL CRIMP DIMENSIONS REFERENCE TABLE

SUPPLIER PART NO.	FORD PART NO.	PLATING	WIRE SIZE	WIRE SPECIFICATION	CONDUCTOR CH SECT 2.21 ±0.26 mm	CONDUCTOR CW SECT 2.20 ±0.26 mm	INSULATOR IH SECT 1.91 ±0.10 mm	INSULATOR IW SECT 1.91 ±0.10 mm	WIRE PULL FORCE (N)
33000-0001	33000-1001	Zn	14 awg	ML-123A	1.65	2.45	2.85	2.75	339
33000-0002	33000-1002	Zn	16 awg	ML-123A	1.65	2.45	2.80	2.60	215
33000-0002	33000-1002	Zn	18 awg	ML-123A	1.25	2.15	2.00	2.30	157
33000-0002	33000-1002	Zn	20 awg	SAE J128 (GXL)	1.25	2.15	2.30	2.60	158
33000-0002	33000-1002	Zn	22 awg	ML-123A	1.15	2.15	1.90	2.10	113
33000-0003	33000-1003	Zn	22 awg	SAE J128 (GXL)	1.15	2.15	2.00	2.30	105
33000-0001	33000-1001	Zn	2.0 mm	ML-123A	1.00	1.60	1.85	1.90	62
33000-0002	33000-1002	Zn	1.5 mm	JASO D 6H (AVSS)	1.60	2.45	2.85	2.75	233
33000-0002	33000-1002	Zn	1.0 mm	ML-126A1	1.40	2.45	2.65	2.80	177
33000-0002	33000-1002	Zn	0.75 mm	ML-126A1	1.30	2.15	2.00	2.30	162
33000-0003	33000-1003	Zn	0.5 mm	ML-126A1	1.25	2.15	1.95	2.30	145
33000-0003	33000-1003	Zn	0.5 mm	ML-126A1	1.10	1.60	1.80	1.90	82
33000-0003	33000-1003	Zn	0.35 mm	JASO D 6H (AVSS)	1.10	1.60	1.85	1.90	100
33000-0024	33000-1024	Zn	0.35 + 0.35	WSK-1A348-A2	0.95	1.60	1.70	1.90	50
33000-0024	33000-1024	Zn	0.35 + 0.50	ML-126A1	T80	T80	T80	T80	T80
33011-1002	33011-0002	Gold	14 awg	ML-123A	1.65	2.45	2.85	2.75	339
33011-1004	33011-0004	Gold	16 awg	ML-123A	1.65	2.45	2.80	2.60	215
33011-1004	33011-0004	Gold	18 awg	ML-123A	1.25	2.15	2.00	2.30	157
33011-1004	33011-0004	Gold	20 awg	SAE J128 (GXL)	1.25	2.15	2.30	2.60	158
33011-1004	33011-0004	Gold	22 awg	ML-123A	1.15	2.15	1.90	2.10	113
33011-1006	33011-0006	Gold	22 awg	SAE J128 (GXL)	1.15	2.15	2.00	2.30	105
33011-1002	33011-0002	Gold	2.0 mm	ML-123A	1.00	1.60	1.85	1.90	62
33011-1002	33011-0002	Gold	1.5 mm	JASO D 6H (AVSS)	1.60	2.45	2.85	2.75	233
33011-1002	33011-0002	Gold	1.0 mm	ML-126A1	1.40	2.45	2.65	2.80	177
33011-1002	33011-0002	Gold	0.75 mm	ML-126A1	1.30	2.15	2.00	2.30	162
33011-1004	33011-0004	Gold	0.75 mm	ML-126A1	1.25	2.15	1.95	2.30	145
33011-1006	33011-0006	Gold	0.5 mm	ML-126A1	1.10	1.60	1.80	1.90	82
33011-1006	33011-0006	Gold	0.5 mm	JASO D 6H (AVSS)	1.10	1.60	1.85	1.90	100
33011-1006	33011-0006	Gold	0.35 mm	WSK-1A348-A2	0.95	1.60	1.70	1.90	50

* UNSEALED APPLICATIONS ONLY



GENERAL NOTES; (UNLESS OTHERWISE SPECIFIED)

- MATING TERMINAL SHOWN ON SD-33012-001 AND SD-33012-002
- MATERIAL: ASTM B422, UNS C19025, HR04
THICKNESS: 0.30 mm ±0.01
TEMPER: FULL HARD (REF)
TENSILE: 496-572 MPA
PLATING: SEE PLATING NOTES
- MEETS CRIMP PERFORMANCE SPECIFICATION SAE/USCAR-21 (RELEASED: 08/25/01)
- MEETS PERFORMANCE STANDARD FOR AUTOMOTIVE ELECTRICAL CONNECTOR SYSTEMS SAE/USCAR-2 REV 3 (APRIL 2000)
- MEETS FIELD CORRELATED LIFE TEST SAE/USCAR-20 (NOVEMBER 2001)
- MEETS WIRING COMPONENT DESIGN GUIDELINES SAE/USCAR-12 REV 2 (DECEMBER 2001)
- MEETS ELECTRICAL CONNECTION SYSTEM DESIGN SPECIFICATION (ISDS) REV 11 (5/2002)
- REFERENCE PK-31300-516 FOR REEL DIRECTION

PLATING NOTES:

1. PRECIOUS METAL PLATED TERMINAL:

ZONE A: SHALL BE COMPLETELY COVERED WITH NICKEL TO PREVENT EXPOSED BASE METAL
REDUCED GOLD THICKNESS FROM ZONE B PERMITTED

ZONE B: PRECIOUS METAL PLATING PER MOLEX PLATING SPECIFICATION ES-88

BASE LAYER: ELECTRODEPOSITED DUCTILE SULFAMATE NICKEL
THICKNESS 1.25 - 2.25 MICROMETERS

GOLD LAYER: ELECTRODEPOSITED GOLD
THICKNESS 0.76 MICROMETERS MINIMUM

ZONE C: SHALL BE COMPLETELY COVERED WITH NICKEL TO PREVENT EXPOSED BASE METAL
REDUCED PLATING THICKNESS FROM ZONE B AND ZONE D PERMITTED

ZONE D: TIN PLATING PER MOLEX PLATING SPECIFICATION ES-88

BASE LAYER: ELECTRODEPOSITED DUCTILE SULFAMATE NICKEL
THICKNESS 1.25 - 2.25 MICROMETERS

TIN LAYER: ELECTRODEPOSITED 100% TIN, MATTE FINISH
THICKNESS 2.5 - 4.0 MICROMETERS

ZONE E: SHALL BE COMPLETELY COVERED WITH NICKEL TO PREVENT EXPOSED BASE METAL
REDUCED THICKNESS FROM ZONE D PERMITTED

2. TIN PLATED TERMINAL (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

ENTER DESCRIPTION EC NO: UAL2008-0161 DRAWN/PULL IAN 2007/09/24 CHKD: A. DHIR 2007/09/25 APPR: B.MOSER 2007/09/25	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED) mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.1 ± --- 1 PLACE ± 0.3 ± --- ANGULAR ± 3 °		DIMENSION STYLE MM ONLY DRAWN BY DATE L. PULL IAM 2006/01/31 CHECKED BY DATE A. DHIR 2006/02/01 APPROVED BY DATE B. MOSER 2006/02/02		SCALE 4:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION
		MATERIAL NO. SEE TABLE				DOCUMENT NO. SD-33000-001	SHEET NO. 1 OF 4	

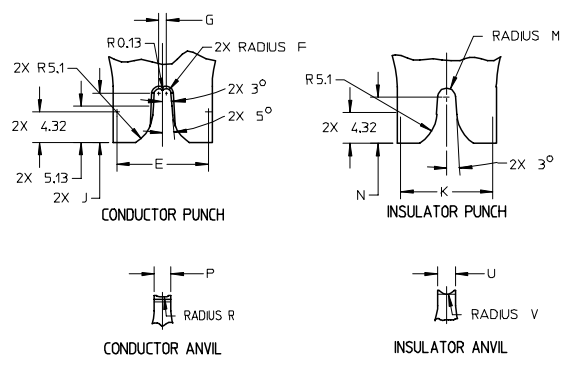
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

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

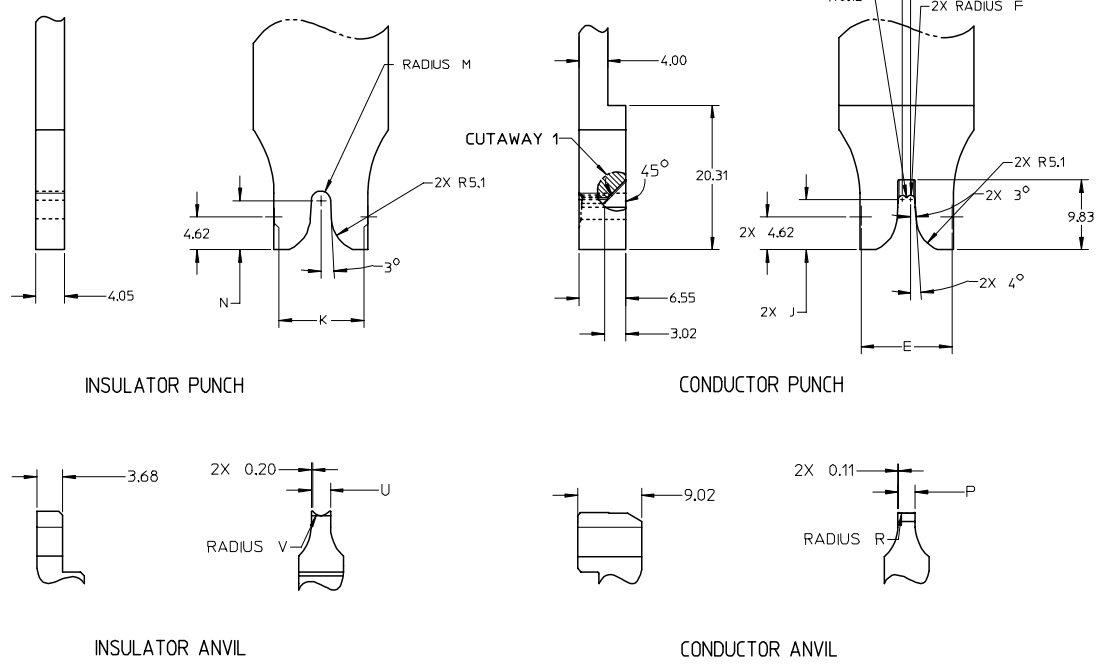
SUPPLIER PART NO.		FORD PART NO.	PLATING (STAMPING)	WIRE APPLICATION		A ±0.30	B ±0.30	C ±0.30	D ±0.30	E ±0.005	F ±0.005	G ±0.005	J ±0.005	K ±0.005	M ±0.005	N ±0.005	P ±0.005	R ±0.005	U ±0.005	V ±0.005	
RIGHT PAYOFF	LEFT PAYOFF			SAE (awg)	WIRE SPECIFICATION																WIRE SPECIFICATION
33000-0001	33000-1001	2LIT-14421-DA	TN	14	ML-123A/ML-135A1	2.0, 15	3.9	3.8	1.7	1.6	12.82	0.60	1.19	7.05	13.12	1.35	6.91	2.44	6.11	2.72	1.40
33000-0002	33000-1002	2LIT-14421-CA	TN	16	ML-123A	-	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
33000-0002	33000-1002	2LIT-14421-CA	TN	18	ML-123A	10, 0.75	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.65	1.13	6.66	2.14	1.93	2.23	1.15
33000-0002	33000-1002	2LIT-14421-CA	TN	20	ML-123A	-	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
33000-0002	33000-1002	2LIT-14421-CA	TN	22	SAE J1128 (GXL)	-	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.65	1.13	6.66	2.14	1.93	2.23	1.15
33000-0003	33000-1003	2LIT-14421-BA	TN	22	ML-123A	0.5	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
33000-0003*	33000-1003*	2LIT-14421-BA*	TN	-	-	0.35	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
33000-0024*	33000-1024*	4L2T-14421-AA*	TN	-	-	0.35 ± 0.35	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
33000-0024*	33000-1024*	4L2T-14421-AA*	TN	-	-	0.35 ± 0.50	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
33011-1002	33011-0002	2LIT-14421-GA	GOLD	14	ML-123A/ML-135A1	2.0, 15	3.9	3.8	1.7	1.6	12.82	0.60	1.19	7.05	13.12	1.35	6.91	2.44	6.11	2.72	1.40
33011-1004	33011-0004	2LIT-14421-FA	GOLD	16	ML-123A	-	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
33011-1004	33011-0004	2LIT-14421-FA	GOLD	18	ML-123A	10, 0.75	3.3	3.1	1.3	1.4	12.46	0.57	0.99	6.52	12.65	1.13	6.66	2.14	1.93	2.23	1.15
33011-1004	33011-0004	2LIT-14421-FA	GOLD	20	SAE J1128 (GXL)	-	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
33011-1004	33011-0004	2LIT-14421-FA	GOLD	22	ML-123A	-	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
33011-1006	33011-0006	2LIT-14421-EA	GOLD	22	ML-123A	0.5	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
33011-1006*	33011-0006*	2LIT-14421-EA*	GOLD	-	-	0.35	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

* UNSEALED APPLICATIONS ONLY

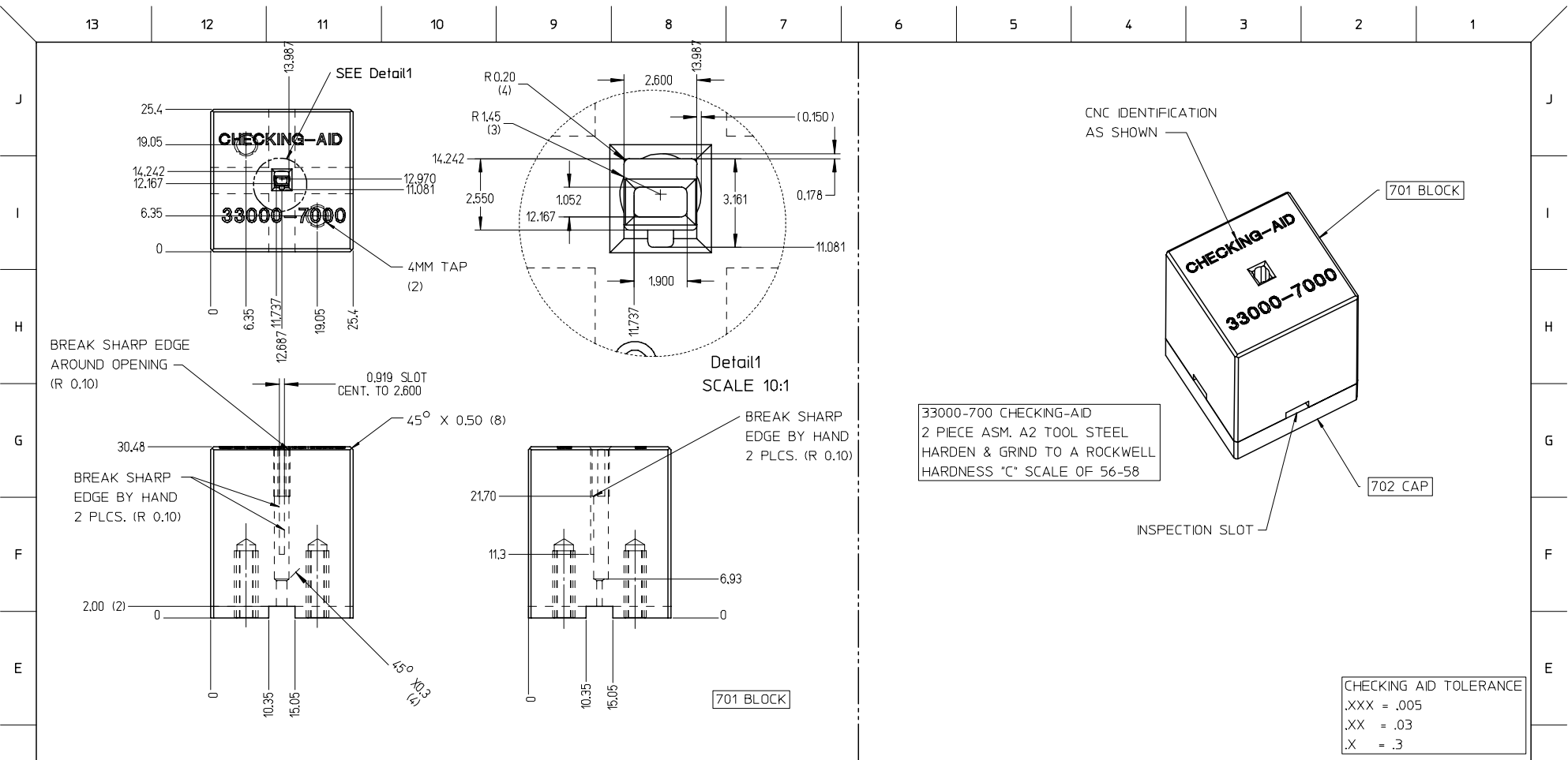
CRIMP TOOL INFORMATION EXCEPT 14 GA



14 GA CRIMP TOOLING

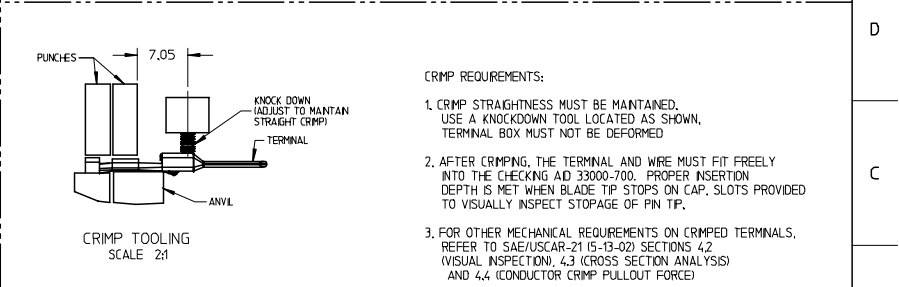
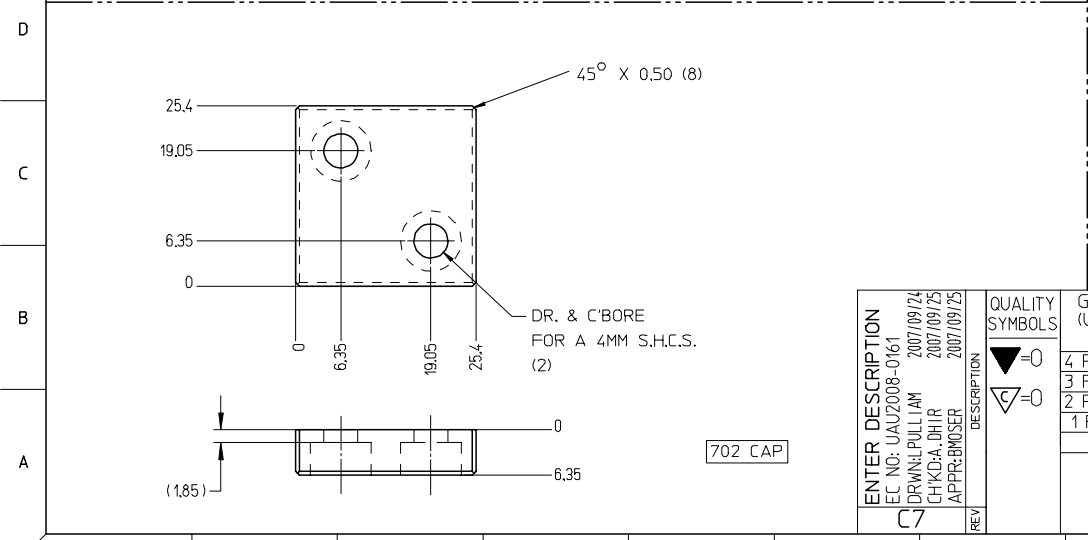


ENTER DESCRIPTION EC NO: UAU2008-0161 DRAWN/PULL I AM 2007/09/24 CHKD: A. DHIR 2007/09/25 APPR: B. MOSER 2007/09/25 REV: C7	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED) mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.1 ± --- 1 PLACE ± 0.3 ± --- ANGULAR ± 3 °	DIMENSION STYLE MM ONLY DRAWN BY DATE L. PULL I AM 2006/01/31 CHECKED BY DATE A. DHIR 2006/02/01 APPROVED BY DATE B. MOSER 2006/02/02	SCALE 2:1 DESIGN UNITS METRIC THIRD ANGLE PROJECTION	TITLE MX150 1.5MM BLADE TERMINAL
	MATERIAL NO. SEE TABLE		DOCUMENT NO. SD-33000-001		SHEET NO. 2 OF 4
	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				
	MOLEX INCORPORATED				



33000-700 CHECKING-AID
 2 PIECE ASM. A2 TOOL STEEL
 HARDEN & GRIND TO A ROCKWELL
 HARDNESS "C" SCALE OF 56-58

CHECKING AID TOLERANCE
 .XXX = .005
 .XX = .03
 .X = .3



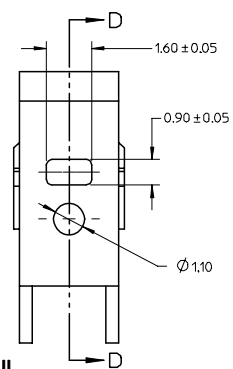
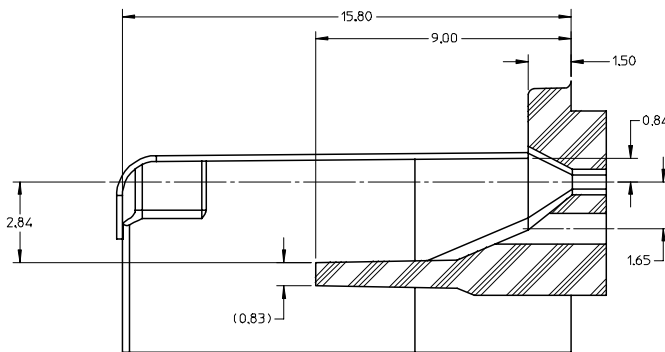
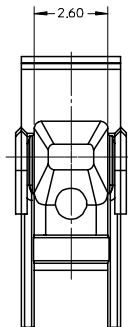
- CRIMP REQUIREMENTS:
1. CRIMP STRAIGHTNESS MUST BE MAINTAINED. USE A KNOCKDOWN TOOL LOCATED AS SHOWN. TERMINAL BOX MUST NOT BE DEFORMED
 2. AFTER CRIMPING, THE TERMINAL AND WIRE MUST FIT FREELY INTO THE CHECKING AID 33000-700. PROPER INSERTION DEPTH IS MET WHEN BLADE TIP STOPS ON CAP. SLOTS PROVIDED TO VISUALLY INSPECT STOPPAGE OF PIN TIP.
 3. FOR OTHER MECHANICAL REQUIREMENTS ON CRIMPED TERMINALS, REFER TO SAE/JEFCAR-21 (5-13-02) SECTIONS 4.2 (VISUAL INSPECTION), 4.3 (CROSS SECTION ANALYSIS) AND 4.4 (CONDUCTOR CRIMP PULLOUT FORCE)

ENTER DESCRIPTION EC NO: UAU2008-0161 DRAWN/PULL I AM 2007/09/24 CHK'D: A. DHIR 2007/09/25 APPR: B.MOSER 2007/09/25 REVISIONS 1 2	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED) <table border="1"> <tr> <th></th> <th>mm</th> <th>INCH</th> </tr> <tr> <td>4 PLACES</td> <td>± .005</td> <td>± .0002</td> </tr> <tr> <td>3 PLACES</td> <td>± .002</td> <td>± .0001</td> </tr> <tr> <td>2 PLACES</td> <td>± 0.1</td> <td>± .004</td> </tr> <tr> <td>1 PLACE</td> <td>± 0.3</td> <td>± .012</td> </tr> </table> ANGULAR ± 3 °		mm	INCH	4 PLACES	± .005	± .0002	3 PLACES	± .002	± .0001	2 PLACES	± 0.1	± .004	1 PLACE	± 0.3	± .012	DIMENSION STYLE MM ONLY	SCALE 2:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION
			mm	INCH																	
	4 PLACES		± .005	± .0002																	
	3 PLACES		± .002	± .0001																	
2 PLACES	± 0.1	± .004																			
1 PLACE	± 0.3	± .012																			
DRAWN BY L. PULLIAM DATE 2006/01/31	CHECKED BY A. DHIR DATE 2006/02/01	APPROVED BY B. MOSER DATE 2006/02/02	MATERIAL NO. SEE TABLE	DOCUMENT NO. SD-33000-001	TITLE MX150 1.5MM BLADE TERMINAL	SHEET NO. 3 OF 4															
MOLEX INCORPORATED			THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION																		

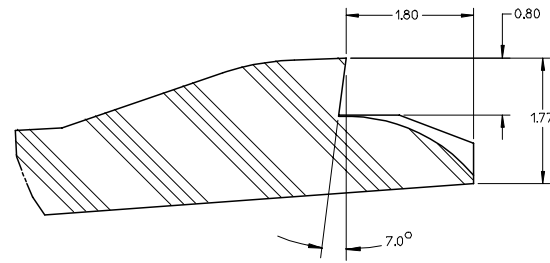
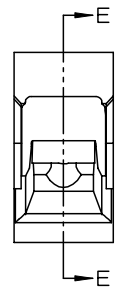
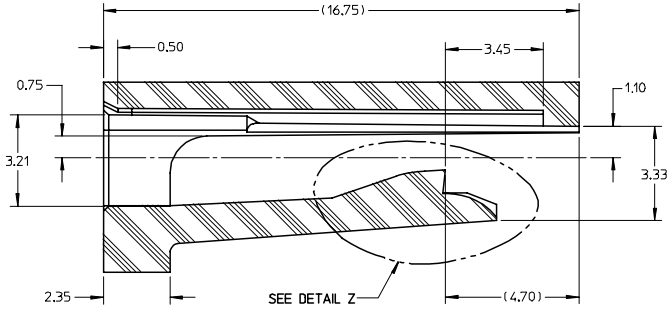
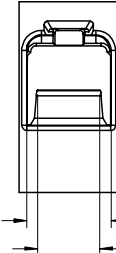
13 12 11 10 9 8 7 6 5 4 3 2 1

J
I
H
G
F
E
D
C
B
A

J
I
H
G
F
E
D
C
B
A

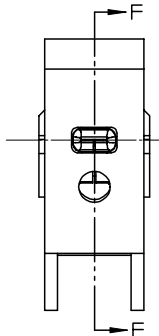
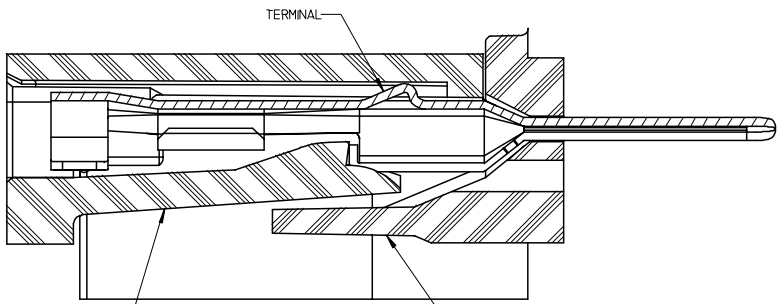
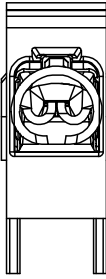


SECTION D-D TPA/INSERT DETAIL



DETAIL Z SCALE 20:1

HOUSING DETAIL



BLADE TERMINAL HOUSING CAVITY SECTION F-F TPA/INSERT CAVITY

BLADE CAVITY ASSEMBLY VIEWS

- NOTES: (UNLESS OTHERWISE SPECIFIED)
1. TOLERANCES: LINEAR ± 0.10
ANGULAR 3°
 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 BLADE TERMINAL PART NUMBERS (EXCEPT P/N'S FOR UNSEALED APPLICATIONS) SPECIFIED ELSEWHERE ON THIS DRAWING

ENTER DESCRIPTION EC NO: UAU2008-0161 DRAWN/PULL I AM 2007/09/24 CHK'D: A. DHIR 2007/09/25 APPR: B. MOSER 2007/09/25 REV: C7	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE 8:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION			
		4 PLACES \pm --- \pm --- 3 PLACES \pm --- \pm --- 2 PLACES ± 0.1 \pm --- 1 PLACE ± 0.3 \pm ---	mm INCH	DRAWN BY L. PULLIAM	DATE 2006/01/31	TITLE MX150 1.5MM BLADE TERMINAL					
		ANGULAR $\pm 3^\circ$		CHECKED BY A. DHIR	DATE 2006/02/01	APPROVED BY B. MOSER					
				MATERIAL NO. SEE TABLE	DATE 2006/02/02	MOLEX INCORPORATED		DOCUMENT NO. SD-33000-001	SHEET NO. 4 OF 4		

12 11 10 9 8 7 6 5 4 3 2 1