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Jameco Part Number 800649

## FEATURES AND SPECIFICATIONS

**Features and Benefits**

- Patented new integral Terminal Position Assurance (TPA) on mated male and female terminal
- Virtually eliminates terminal backout
- Wire-to-wire and wire-to-board connector system
- Polarized housing assures proper mating
- Terminals are fully isolated in housing
- Positive latch reduces accidental disengagement from plug

**Reference Information**

Product Specification: PS-44441-9999

Packaging: Bag

UL File No.: E29179

CSA File No.: LR19980

Use With: [43375](#) terminalMates With: [43160](#) header and [43680](#) plug

Designed In: Inches

**Electrical**

Voltage: 1000V

Current: 18.0A\*

Insulation Resistance: 1000 MΩ min.

**Mechanical**

Contact Insertion Force: 2 lb max.

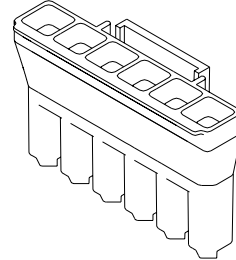
Contact Retention to Housing: 20 lb min.

**Physical**

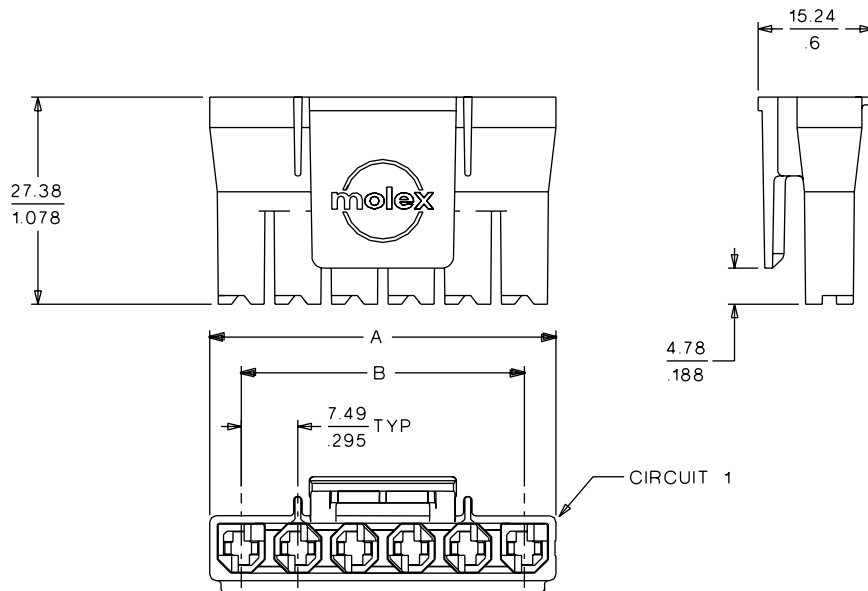
Housing: Nylon, 94V-0

Operating Temperature: -40 to +75°C

\* Depending on circuit size, wire gauge and PCB. Please refer to product specification.


**7.50mm (.295") Pitch  
Sabre™  
Receptacle**
**44441****Single Row**

## CATALOG DRAWING (FOR REFERENCE ONLY)



## ORDERING INFORMATION AND DIMENSIONS

Circuits	Order No.	Dimension	
		A	B
2	44441-2002	15.82 (.623)	7.49 (.295)
3	44441-2003	23.32 (.918)	14.99 (.590)
4	44441-2004	30.81 (1.213)	22.48 (.885)
5	44441-2005	38.30 (1.508)	29.97 (1.180)
6	44441-2006	45.80 (1.803)	37.47 (1.475)



PRODUCT SPECIFICATION  
SABRE

(.125/(3.18) X .020/(0.51) FLAT BLADE SYSTEM - TPA)

(FOR TIN PLATED BRASS TERMINALS AND UL94V-0 HOUSINGS ONLY)

1.0 SCOPE:

THIS SPECIFICATION COVERS THE 7.50 MM (.295 INCH) CENTERLINE TIN AND TIN/LEAD PLATED CONNECTOR SERIES TERMINATED WITH 18 TO 14 AWG WIRE USING CRIMP TECHNOLOGY.

2.0 PRODUCT DESCRIPTION:

2.1 PRODUCT NAME AND PART NUMBER

PRODUCT NAME	PART NUMBER
Plug Housing, 2 circuit	43680-2002
Plug Housing, 3 circuit	43680-2003
Plug Housing, 4 circuit	43680-2004
Plug Housing, 5 circuit	43680-2005
Plug Housing, 6 circuit	43680-2006
Right Angle Header, 2 circuit	(SEE SDA-43160-***)
Right Angle Header, 3 circuit	(SEE SDA-43160-***)
Right Angle Header, 4 circuit	(SEE SDA-43160-***)
Right Angle Header, 5 circuit	(SEE SDA-43160-***)
Right Angle Header, 6 circuit	(SEE SDA-43160-***)
Vertical Header, 2 circuit	(SEE SDA-43160-***)
Vertical Header, 3 circuit	(SEE SDA-43160-***)
Vertical Header, 4 circuit	(SEE SDA-43160-***)
Vertical Header, 5 circuit	(SEE SDA-43160-***)
Vertical Header, 6 circuit	(SEE SDA-43160-***)
Receptacle Housing, 2 circuit	44441-2002
Receptacle Housing, 3 circuit	44441-2003
Receptacle Housing, 4 circuit	44441-2004
Receptacle Housing, 5 circuit	44441-2005
Receptacle Housing, 6 circuit	44441-2006
Male Tab Crimp Terminal, Small	43178-1002
Male Tab Crimp Terminal, Large	43178-2002
MALE TAB CRIMP TERMINAL, SIDE BY SIDE	43178-3002
Receptacle Terminal, Small	43375-0001
Receptacle Terminal, Large	43375-1001

2.2 DIMENSIONS, MATERIALS, PLATINGS, AND MARKINGS

SEE THE APPROPRIATE DRAWINGS FOR INFORMATION ON DIMENSIONS, MATERIALS, PLATINGS, AND MARKINGS.

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PSX-44441-9999

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PRODUCT SPECIFICATION  
SABRE

(.125/(3.18) X .020/(0.51) FLAT BLADE SYSTEM - TPA)

(FOR TIN PLATED BRASS TERMINALS AND UL94V-0 HOUSINGS ONLY)

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS:  
SEE THE DRAWINGS AND THE OTHER SECTIONS OF THIS SPECIFICATION FOR THE NECESSARY REFERENCED DOCUMENTS AND SPECIFICATIONS.

4.0 RATINGS:  
4.1 VOLTAGE: 600 VOLTS AC RMS  
4.2 CURRENT AND APPLICABLE WIRES:

WIRE SIZE	CURRENT	OUTSIDE INSULATION DIAMETER
14 AWG	18 AMPERES	4.57 MM (.180 INCHES)
16 AWG	TBD AMPERES	4.57 MM (.180 INCHES)
18 AWG	12 AMPERES	4.57 MM (.180 INCHES)

NOTE: THE CURRENT CAPACITY IS BASED ON EACH CIRCUIT POSITION BEING LOADED WITH THE GIVEN WIRE SIZE, AND THE RATED CURRENT APPLIED. THE CAPACITY FOR OTHER APPLICATIONS MAY BE HIGHER; CONTACT MOLEX FOR FURTHER INFORMATION.

4.3 TEMPERATURE:  
OPERATING: - 40 DEGREES C TO + 75 DEGREES C  
NONOPERATING: - 40 DEGREES C TO +100 DEGREES C

NOTE: THIS TEMPERATURE RATING IS A GUIDELINE. IF THERE IS A PRECEDENT FOR USING BRASS TERMINALS IN AN APPLICATION BEYOND THIS RATING, THEN THIS SYSTEM WILL LIKELY BE ACCEPTABLE; IN THAT CASE, RECOMMEND THAT TESTING BE PERFORMED.

5.0 PERFORMANCE:  
5.1 ELECTRICAL PERFORMANCE  
5.2 MECHANICAL PERFORMANCE  
5.3 ENVIRONMENTAL PERFORMANCE

6.0 PACKAGING:  
PARTS SHALL BE PACKAGED TO PROTECT AGAINST DAMAGE DURING HANDLING, TRANSIT, AND STORAGE.

7.0 GAUGES AND FIXTURES:  
SKETCHES ARE PROVIDED AS REQUIRED.

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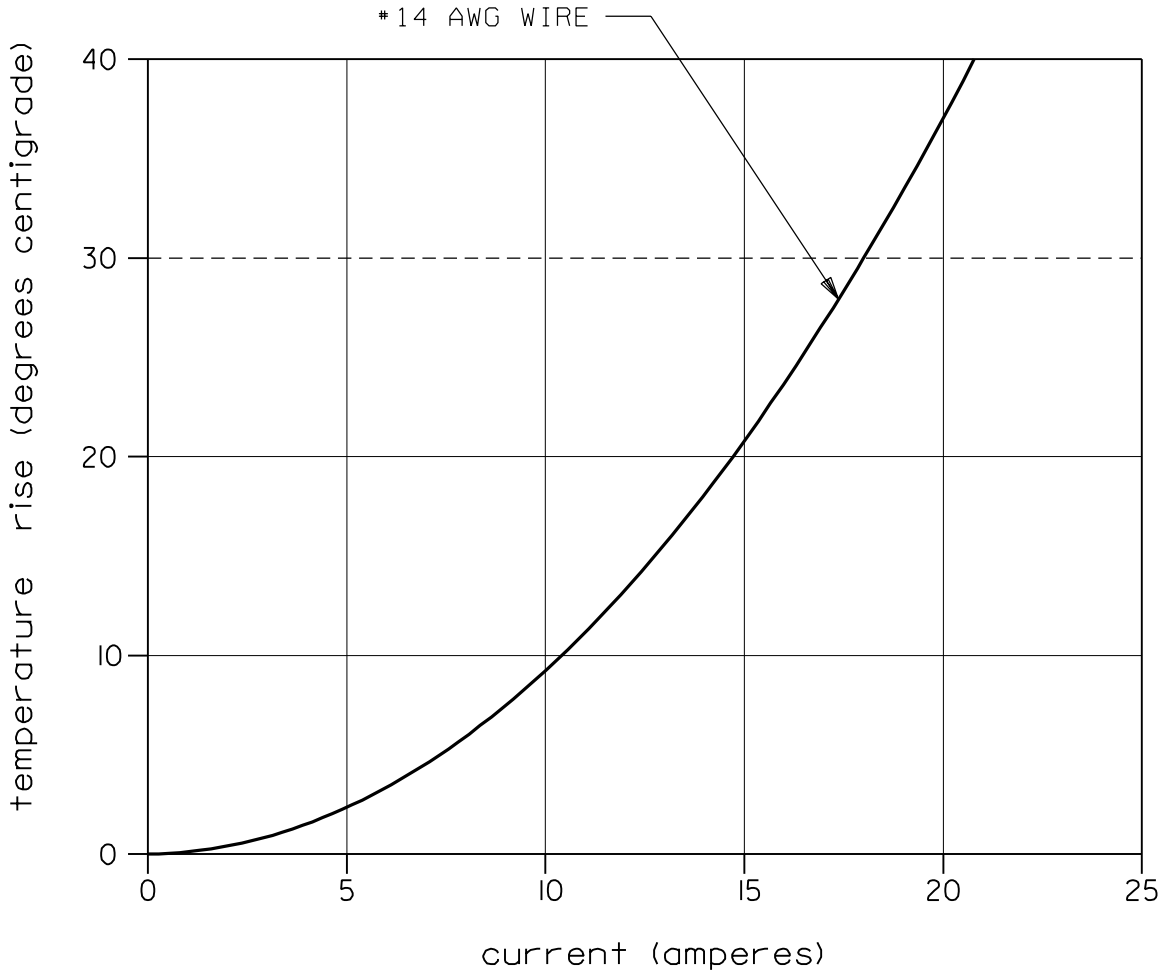
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(FOR TIN PLATED BRASS TERMINALS AND UL94V-0 HOUSINGS ONLY)

8.0 TEMPERATURE RISE VERSUS CURRENT:



THIS DATA IS FOR BRASS TERMINALS LOADED IN EACH OF THE THREE POSITIONS OF MATED PLUG AND RECEPTACLE HOUSINGS. ALL THREE CIRCUITS CARRY THE INDICATED CURRENT.

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PRODUCT SPECIFICATION  
SABRE

(.125/(3.18) X .020/(0.51) FLAT BLADE SYSTEM - TPA)

(FOR TIN PLATED BRASS TERMINALS AND UL94V-0 HOUSINGS ONLY)

5.1 ELECTRICAL PERFORMANCE

ITEM	TEST CONDITION	REQUIREMENT
CONTACT RESISTANCE (LOW LEVEL)	MATE CONNECTORS WITH A MAXIMUM VOLTAGE OF 20 MV AND A CURRENT OF 100 MA.	3.0 MOHMS MAX (INITIAL)
INSULATION RESISTANCE	MATE CONNECTORS WITH A VOLTAGE OF 500 VDC BETWEEN ADJACENT TERMINALS AND BETWEEN TERMINALS AND GROUND.	1000 MEGOHMS MIN (INITIAL)
DIELECTRIC WITHSTANDING VOLTAGE	MATE CONNECTORS WITH A VOLTAGE OF 5000 VAC FOR 1 MIN.	NO BREAKDOWN

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PRODUCT SPECIFICATION  
SABRE

(.125/(3.18) X .020/(0.51) FLAT BLADE SYSTEM - TPA)

(FOR TIN PLATED BRASS TERMINALS AND UL94V-0 HOUSINGS ONLY)

5.2 MECHANICAL PERFORMANCE

ITEM	TEST CONDITION	REQUIREMENT
		MAX MIN
CONNECTOR MATING & UN-MATING FORCE	INSERT AND WITHDRAW CONNECTORS AT A RATE OF 25 +/- 6 MM (1 +/- .250 INCHES) PER MIN.	INSERT WITHDRAW (3.0 LBS) (0.5 LBS) PER TERMINAL
TERMINAL RETENTION FORCE IN HOUSING	AXIAL PULL OUT FORCE ON THE TERMINAL IN THE HOUSING AT AT A RATE OF 25 +/- 6 MM (1 +/- .25 INCHES) PER MIN. (RECEPTACLE TERMINAL)	15 LBS MIN (TPA NOT ACTIVATED) 25 LBS MIN (WITH TPA ACTIVATED)
TERMINAL RETENTION FORCE IN HOUSING	AXIAL PULL OUT FORCE ON THE TERMINAL IN THE HOUSING AT AT A RATE OF 25 +/- 6 MM (1 +/- .25 INCHES) PER MIN. (MALE TAB CRIMP TERMINAL)	30 LBS MIN (TPA NOT ACTIVATED) 30 LBS MIN (WITH TPA ACTIVATED)
DURABILITY	MATE CONNECTOR 25 CYCLES AT A MAXIMUM RATE OF 10 CYCLES PER MIN. PRIOR TO THE ENVIRONMENTAL TESTS.	CONTACT RESISTANCE: 3.0 MOHMS MAX
VIBRATION	AMPLITUDE: 1.50 MM (.060 INCHES) PEAK TO PEAK SWEEP: 10-55-10 HZ IN ONE MIN. DURATION: 2 HOURS IN EACH X-Y-Z AXIS	CONTACT RESISTANCE: 5.0 MOHMS MAX NO DISCONTINUITY GREATER THAN ONE MICROSECOND
MECHANICAL SHOCK	50 G IN THE FORM OF THREE SAW TOOTH WAVEFORM SHOCKS IN EACH X-Y-Z AXIS.	CONTACT RESISTANCE: 5.0 MOHMS MAX NO DISCONTINUITY GREATER THAN ONE MICROSECOND

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SABRE

(.125/(3.18) X .020/(0.51) FLAT BLADE SYSTEM - TPA)

(FOR TIN PLATED BRASS TERMINALS AND UL94V-0 HOUSINGS ONLY)

5.2 MECHANICAL PERFORMANCE (CONTINUED)

ITEM	TEST CONDITION	REQUIREMENT
WIRE PULL OUT FORCE (AXIAL)	APPLY AN AXIAL PULL OUT FORCE ON THE WIRE AT A RATE OF 25 +/- 6 MM (1 +/- .250 INCHES)	AWG MIN FORCE
		14 50 LBS
		16 45 LBS
		18 30 LBS
TERMINAL INSERTION FORCE	APPLY AN AXIAL INSERTION FORCE ON THE TERMINAL AT A RATE OF 25 +/- 6 MM (1 +/- .250) PER MIN.	1.0 LBS MAX

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SABRE

(.125/(3.18) X .020/(0.51) FLAT BLADE SYSTEM - TPA)

(FOR TIN PLATED BRASS TERMINALS AND UL94V-0 HOUSINGS ONLY)

5.3 ENVIRONMENTAL PERFORMANCE

ITEM	TEST CONDITION	REQUIREMENT
THERMAL SHOCK	MATED CONNECTORS TO BE EXPOSED TO 10 CYCLES OF: TEMPERATURE DURATION DEGREES C MIN. -40 +0/-3 30 +3/-0 +105 +3/-0 30 +3/-0	APPEARANCE: NO DAMAGE  CONTACT RESISTANCE: 3.0 MOHMS MAX
THERMAL AGING	MATED CONNECTORS TO BE EXPOSED 240 HOURS AT 105 +/- 2 DEGREES C	APPEARANCE: NO DAMAGE  CONTACT RESISTANCE 5.0 MOHMS MAX
HUMIDITY (STEADY STATE)	MATED CONNECTORS TO BE EXPOSED TO A TEMPERATURE OF 40 +/- 2 DEGREES C WITH A RELATIVE HUMIDITY OF 90 TO 95% FOR 96 HOURS.	APPEARANCE: NO DAMAGE  CONTACT RESISTANCE 5.0 MOHMS MAX  DIELECTRIC STRENGTH: NO BREAKDOWN  INSULATION RESISTANCE: 1000 MEGOHMS MIN
HUMIDITY (CYCLIC)	MATED CONNECTORS TO BE EXPOSED TO TEMPERATURE/HUMIDITY CYCLING BETWEEN +25 C AND +65 C AT 95% RH, -10 C WITH HUMIDITY NOT CONTROLLED. [MIL-STD-1344A METHOD 1002.2] [TYPE II]	APPEARANCE: NO DAMAGE  CONTACT RESISTANCE 5.0 MOHMS MAX  DIELECTRIC STRENGTH: NO BREAKDOWN  INSULATION RESISTANCE: 100 MEGOHMS MIN

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PRODUCT SPECIFICATION  
SABRE

(.125/(3.18) X .020/(0.51) FLAT BLADE SYSTEM - TPA)

(FOR TIN PLATED BRASS TERMINALS AND UL94V-0 HOUSINGS ONLY)

5.3 ENVIRONMENTAL PERFORMANCE (CONTINUED)

ITEM	TEST CONDITION	REQUIREMENT
TEMPERATURE RISE, AND CURRENT CYCLING	MATE THE CONNECTORS AND MEASURE THE TEMPERATURE RISE AT THE RATED CURRENT AFTER 96 HOURS. THEN 45 MINUTES ON AND 15 MINUTES OFF FOR 500 HOURS.	MAX TEMPERATURE RISE: 30 DEGREES C
SOLDERABILITY	SOLDER TIME 3 +/- 0.5 SECONDS SOLDER TEMPERATURE: 230 +/- 5 DEGREES C (A-43160-**** ONLY)	95% OF THE IMMERSED AREA MUST SHOW NO VOIDS, OR PIN HOLES
SALT SPRAY	48 HOURS EXPOSURE TO A SALT SPRAY FROM A 5% SOLUTION AT 35 DEGREES C.	CONTACT RESISTANCE: 10 MOHMS MAX
INFRARED PROCESSING	245 +/- 3 DEGREES C FOR FOUR MINUTES, THEN ALLOW TO COOL TO ROOM TEMPERATURE. REPEAT THREE TIMES (A-43160-**** ONLY)	APPEARANCE: NO DAMAGE

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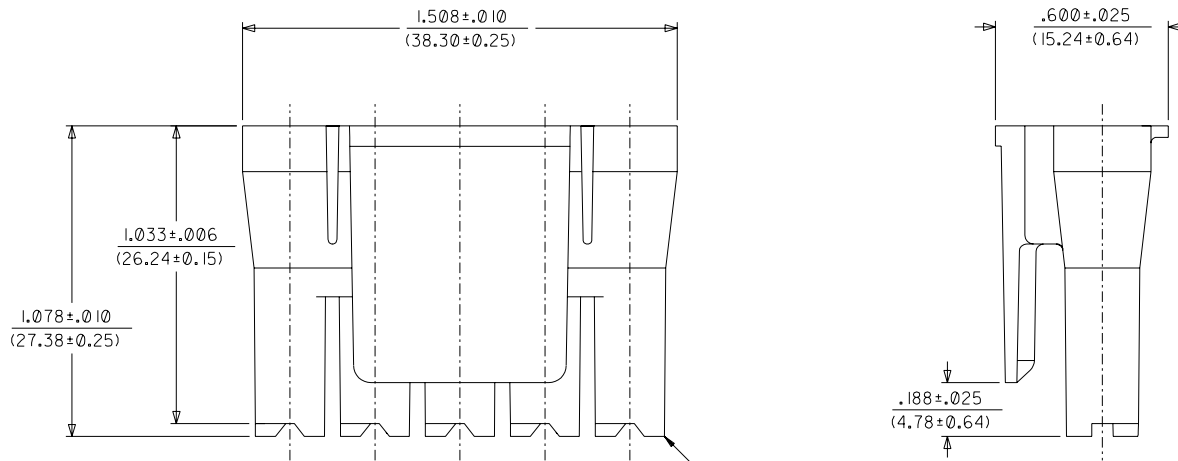
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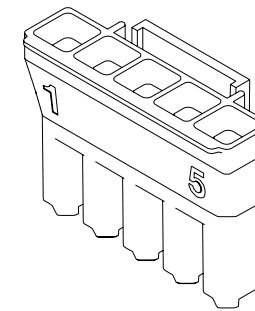
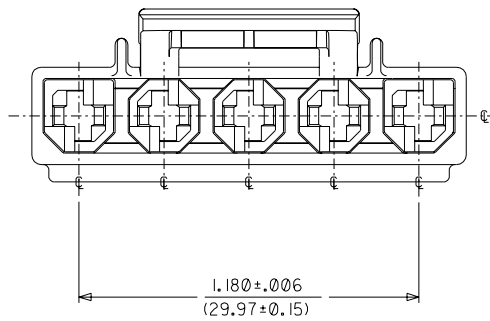
NOTES:

1. MATERIAL: SEE CHART.
2. THIS CONNECTOR HOUSING FOR USE WITH 43375-\*\*\*\*\* TERMINALS.
3. THIS CONNECTOR HOUSING WILL MATE TO A-43160-\*\*\*\*\*5, 43180-\*\*\*\*5, AND 43680-\*\*\*\*5 HOUSINGS.
4. PRODUCT SPECIFICATION: PSX-44441-9999.
5. PACKAGING: PK-44441-001.

ITEM NUMBER	MATERIAL	COLOR
44441-2005	UL94V-0 NYLON	BLACK
44441-1005	UL94V-2 NYLON	NATURAL (TRANSLUCENT)



CIRCUIT 1



44441-005  
(NO SCALE)

C1	ADD V-2 VERSION UCP 2004-2000 BW 9-20-04
C	REVISED PER UCR1999-0340 98/11/25 LENZ
B2	REVISED PER ECN* U71442 97/05/21 KBP
B1	REVISED PER ECR *U70915 MARANTO 97/02/06
B	REVISED PER ECR *U70564 MARANTO 97/01/15
A1	REVISED PER ECN* U70029 96/07/12 KSM
A	REMOVE "X" PER ECN* U60363 95/09/18 MAB
I	X-RELEASE ECR U5 0548 GXC 95/01/09

DIMENSIONS SHOWN (METRIC) INCH		UNLESS OTHERWISE SPECIFIED TOLERANCES: ANGULAR ± 1/2°		REVISE ONLY ON CAD SYSTEM	
INCH	METRIC	INCH	METRIC	FILE NAME	SHEET NO.
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2 PLACE ± .01	± 0.13	2 PLACE ± .01	± 0.13	DATE	95/01/09
1 PLACE ---	± 0.25	1 PLACE ---	± 0.25	MOLEX INCORPORATED	
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APP'D. BY: RAS	SCALE: 3: 1	FILE NAME: 54444151 DGN	DRWG. NO.: SD-44441-005	DIV. CP	