

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number:

0459120007

Status:

Active

Overview:

Description:

12.90mm (.508") Pitch EXTreme PowerEdge™, Mixed Power/Signal Card Edge Connector, Double Sided, 3 Segments (Power, Power, Signal Sequence), Press-Fit

EU RoHS

ELV and RoHS

Compliant

REACH SVHC

Contains SVHC: No

Halogen-Free

Status

Halogen-Free

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.

Agency Certification	
CSA	LR19980
TUV	30482572
UL	E29179
General	
Product Family	Edge Card Connectors
Series	45912
Component Type	Edgecard to PCB
Overview	edge_card_connectors
Product Name	EXTreme PowerEdge™
Physical	
Circuits (Loaded)	12
Circuits (maximum)	12
Circuits Detail	2 Power, 2 Power, 8 Signal
Color - Resin	Black
Durability (mating cycles max)	250
Entry Angle	Vertical (Top Entry)
Flammability	94V-0
Keying to Mating Part	N/A
Material - Metal	High Performance Alloy (HPA), Phosphor Bronze
Material - Plating Mating	Gold
Material - Plating Termination	Tin
Material - Resin	High Temperature Thermoplastic
PC Tail Length (in)	0.177 In
PC Tail Length (mm)	4.50 mm
PCB Thickness Recommended (in)	0.093 In
PCB Thickness Recommended (mm)	2.40 mm
Packaging Type	Tray
Pitch - Mating Interface (in)	0.508 In
Pitch - Mating Interface (mm)	12.90 mm
Plating min: Mating (µin)	30
Plating min: Mating (µm)	0.75
Plating min: Termination (µin)	150
Plating min: Termination (µm)	3.75
Temperature Range - Operating	-40°C to +105°C
Termination Interface: Style	Through Hole - Compliant Pin
Electrical	
Current - Maximum per Contact	3A, 40A
Voltage - Maximum	250V

Material Info

Reference - Drawing Numbers	
Packaging Specification	PK-45714-001
Product Specification	PS-45719-001
Sales Drawing	SD-45912-001

This document was generated on 06/04/2010

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

6

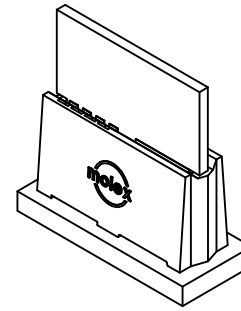
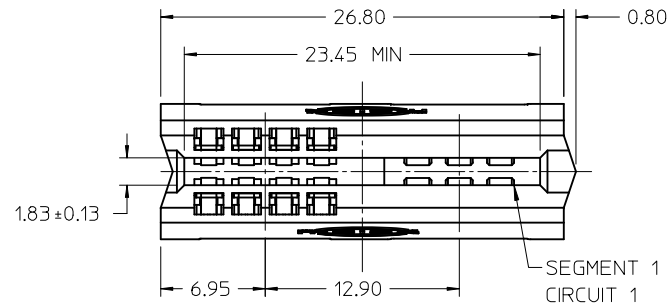
5

4

3

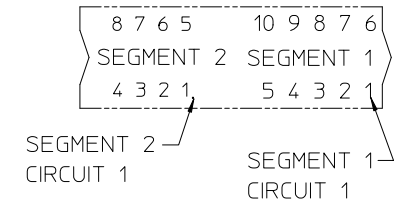
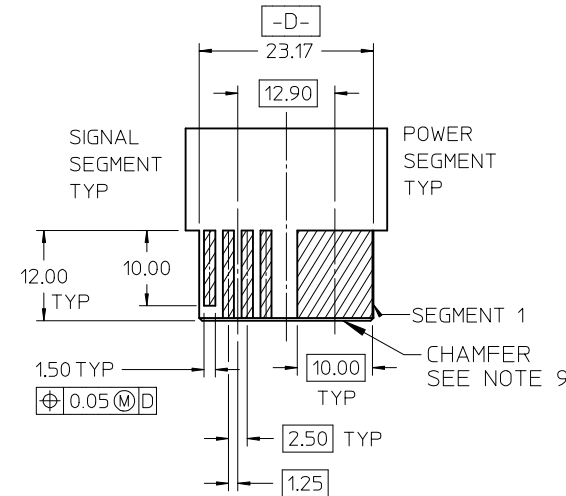
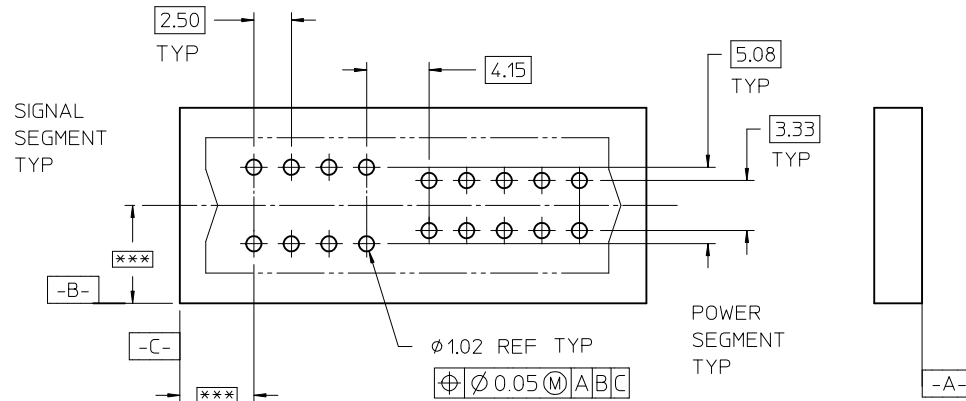
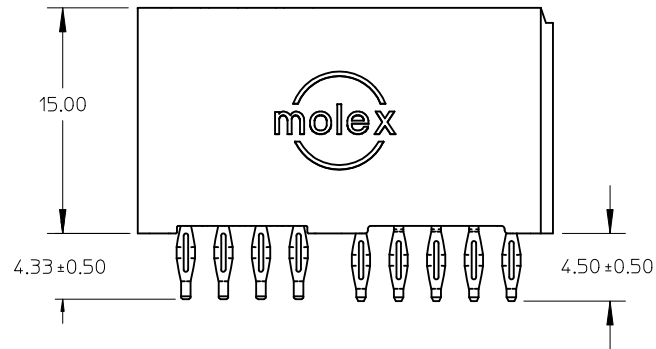
2

1



NOTES:

1. MATERIAL: HOUSING - LCP, UL94V-0, BLACK
MATERIAL: TERMINAL - COPPER ALLOY
2. FINISH: SELECT GOLD: 30 M.I. MIN IN CONTACT AREA
SELECT TIN: 150 M.I. MIN IN PC TAIL AREA
BOTH OVER NICKEL: 50 M.I. MIN
3. PRODUCT SPECIFICATION: PS-45719-001.
4. PACKAGING SPECIFICATION: PK-45714-001.
5. PCB THICKNESS: SEE CHART
6. EDGE CARD THICKNESS: 1.57±0.15
7. DIMENSIONS GIVEN ACROSS CENTERLINES ARE SYMMETRICAL ABOUT THOSE CENTERLINES WITHIN HALF THE TOTAL TOLERANCE.
8. PCB HOLE SPECIFICATION: SEE PS-45719-001
9. 0.50 X 45° CHAMFER ON LEADING EDGE, TYP 4 SIDES
10. PART IS RoHS COMPLIANT. SEE ES-45482-999 FOR LABEL REQUIREMENTS.
11. SEE SHEET 4 FOR OPTIONAL END LATCH VERSION.



MATERIAL NUMBER	SEGMENT 2	SEGMENT 1
45912-0001	SIGNAL	POWER
45912-0002	POWER	SIGNAL
SEE 45845	SIGNAL	SIGNAL
SEE 45714	POWER	POWER

PCB LAYOUT: COMPONENT SIDE
*** = TO BE DETERMINED BY CUSTOMER

DELETE SHT 4	2010/02/17
EC NO: UCP2010-2087	DRWN: JSCHAFER
2010/03/24	CHKD: SAMIEC
2010/03/25	APPR: APATEL
REV	DESCRIPTION
N	

QUALITY SYMBOLS

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± 0.25	± ---
1 PLACE	± 0.25	± ---
ANGULAR ±1/2°		
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		

DIMENSION STYLE
MM ONLY

DRAWN BY	DATE
SAMIEC	2005/04/14
CHECKED BY	DATE
SAMIEC	2005/04/14
APPROVED BY	DATE
MARGULIS	2005/04/14
MATERIAL NUMBER	SEE CHART
SIZE	A

SCALE
2:1DESIGN UNITS
METRIC

THIRD ANGLE PROJECTION

TITLE	
POWER EDGE ASSEMBLY POWER / SIGNAL MIXED VERTICAL CPI	
molex MOLEX INCORPORATED	
DOCUMENT NO.	SD-45912-001
SHEET NO.	1 OF 4

5

4

3

2

1

6

5

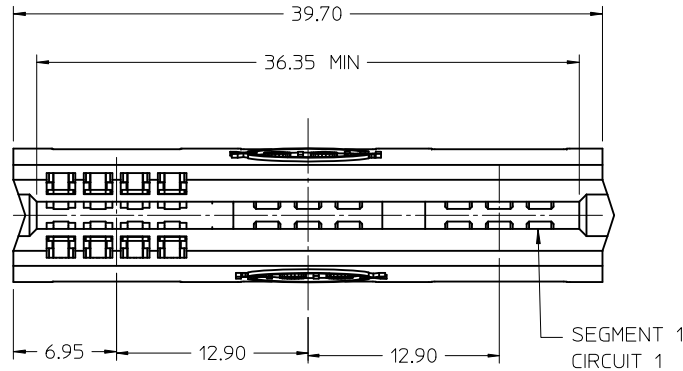
4

3

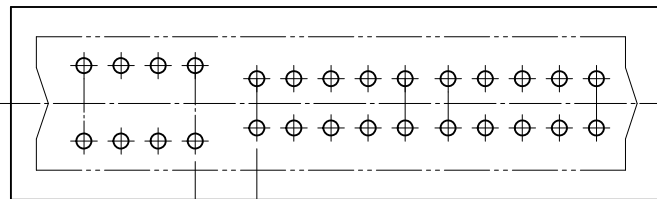
2

1

NOTE:
FINISH (FOR -1008 ONLY)
NICKEL (MATING AREA) 50-150 M.I.
Pd/Ni 100-200 M.I. IN MATING AREA
GOLD FLASH IN MATING AREA
TIN NICKEL (COMPLIANT OR TAIL AREA)
30-60 M.I. NICKEL UNDER 15-60 M.I. TIN



SIGNAL SEGMENT	POWER SEGMENT	POWER SEGMENT
8 7 6 5	10 9 8 7 6	10 9 8 7 6
SEGMENT 3	SEGMENT 2	SEGMENT 1
4 3 2 1	5 4 3 2 1	5 4 3 2 1



-B-

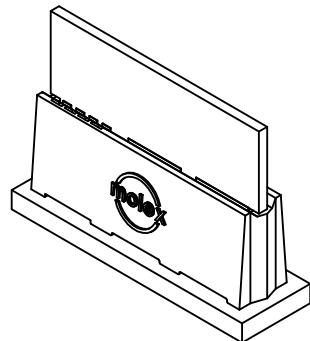
-C-

DIM S
DIM S BETWEEN SIGNAL SEG AND SIGNAL SEG: 5.40
DIM S BETWEEN POWER SEG AND POWER SEG: 2.90
DIM S BETWEEN SIGNAL SEG AND POWER SEG: 4.15

PCB LAYOUT: COMPONENT SIDE

MATERIAL NUMBER	SEGMENT 3	SEGMENT 2	SEGMENT 1	OPTIONAL VOID LOCATION
45912-0007	SIGNAL	POWER	POWER	
45912-0008	POWER	SIGNAL	POWER	
45912-1008 SEE NOTE	POWER	SIGNAL	POWER	
45912-1108	POWER	SIGNAL	POWER	SIGNAL SEG PIN 3
45912-2108	VOID	SIGNAL	POWER	SIGNAL SEG PIN 3
45912-0009	SIGNAL	SIGNAL	POWER	
45912-0010	SIGNAL	POWER	SIGNAL	
45912-0011	POWER	SIGNAL	SIGNAL	
45912-0012	POWER	POWER	SIGNAL	
SEE 45845	SIGNAL	SIGNAL	SIGNAL	
SEE 45714	POWER	POWER	POWER	

MATERIAL NUMBER: 45911-0007 SHOWN
SEE SHEET ONE FOR OTHER NOTES AND DIMENSIONS



EC NO: UCP2010-2087		2010/02/17	2010/03/24	2010/03/25	DESCRIPTION	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)			DIMENSION STYLE MM ONLY		SCALE 2:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
N	REV							mm	INCH	DRAWN BY SAMIEC	DATE 2005/04/14	TITLE POWER EDGE ASSEMBLY POWER / SIGNAL MIXED VERTICAL CPI				
		4 PLACES					± ---	± ---	CHECKED BY SAMIEC	DATE 2005/04/14						
		3 PLACES					± ---	± ---	APPROVED BY MARGULIS					MOLEX INCORPORATED		
		2 PLACES			± 0.25	± ---	DOCUMENT NO. SD-45912-001									
1 PLACE			± 0.25	± ---	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS							THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				
			ANGULAR ±1/2°							MATERIAL NUMBER SEE CHART						

6

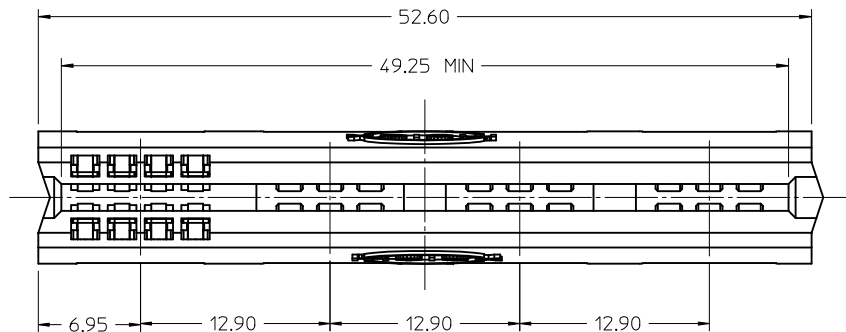
5

4

3

2

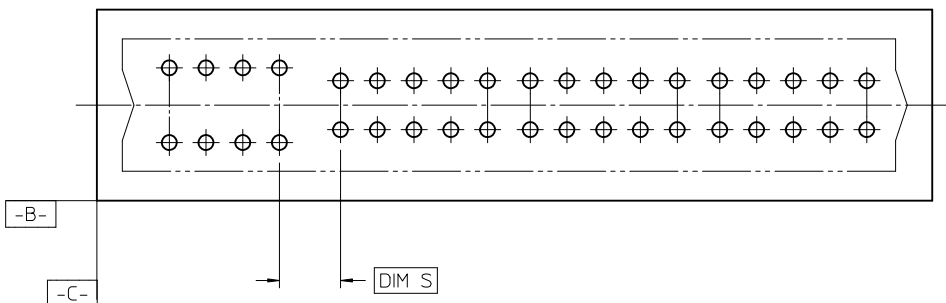
1



MATERIAL NUMBER 45912-0025 SHOWN
SEE SHEET ONE FOR OTHER NOTES AND DIM.

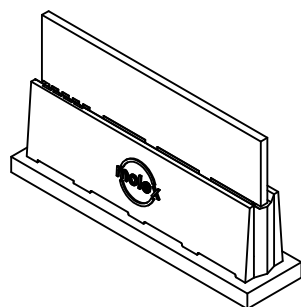
8 7 6 5	10 9 8 7 6	10 9 8 7 6	10 9 8 7 6
SEGMENT 4	SEGMENT 3	SEGMENT 2	SEGMENT 1
4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1

MATERIAL NUMBER	SEGMENT 4	SEGMENT 3	SEGMENT 2	SEGMENT 1
45912-0025	SIGNAL	POWER	POWER	POWER
45912-0026	POWER	SIGNAL	POWER	POWER
45912-0027	SIGNAL	SIGNAL	POWER	POWER
45912-0028	SIGNAL	POWER	SIGNAL	POWER
45912-0029	POWER	SIGNAL	SIGNAL	POWER
45912-0030	POWER	POWER	SIGNAL	POWER
45912-0031	SIGNAL	SIGNAL	SIGNAL	POWER
45912-0032	SIGNAL	POWER	POWER	SIGNAL
45912-0033	POWER	SIGNAL	POWER	SIGNAL
45912-0034	SIGNAL	SIGNAL	POWER	SIGNAL
45912-0035	SIGNAL	POWER	SIGNAL	SIGNAL
45912-0036	POWER	SIGNAL	SIGNAL	SIGNAL
45912-0037	POWER	POWER	SIGNAL	SIGNAL
45912-0038	POWER	POWER	POWER	SIGNAL



DIM S BETWEEN SIGNAL SEG AND SIGNAL SEG: 5.40
DIM S BETWEEN POWER SEG AND POWER SEG: 2.90
DIM S BETWEEN SIGNAL SEG AND POWER SEG: 4.15

PCB LAYOUT: COMPONENT SIDE



EC NO: UCP2010-2087		2010/02/17		QUALITY SYMBOLS	DESCRIPTION	GENERAL TOLERANCES (UNLESS SPECIFIED)			DIMENSION STYLE MM ONLY		SCALE 2:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
							mm	INCH	DRAWN BY	DATE	TITLE			
						4 PLACES	± ---	± ---	SAMIEC	2005/04/14	POWER EDGE ASSEMBLY POWER / SIGNAL MIXED VERTICAL CPI			
						3 PLACES	± ---	± ---	CHECKED BY	DATE				
						2 PLACES	± 0.25	± ---	SAMIEC	2005/04/14				
						1 PLACE	± 0.25	± ---	APPROVED BY	DATE	MOLEX MOLEX INCORPORATED			
				ANGULAR ±1/2°			MARGULIS	2005/04/14						
				DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			MATERIAL NUMBER		DOCUMENT NO.		SHEET NO.			
							SEE CHART		SD-45912-001		3			
REV							SIZE A	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						

5

4

3

2

1