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Part Number: [0465562545](#)
Status: **Active**
Description: 1.27mm (.050") by 1.27mm (.050") Pitch SEARAY* Slim Plug, 80 Circuits, 4.50mm (.196") Unmated Height, 4 Rows, With Pegs, Solder Charge™ Lead-free

Documents:

[3D Model](#) [Product Specification PS-45970-001 \(PDF\)](#)
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

Agency Certification

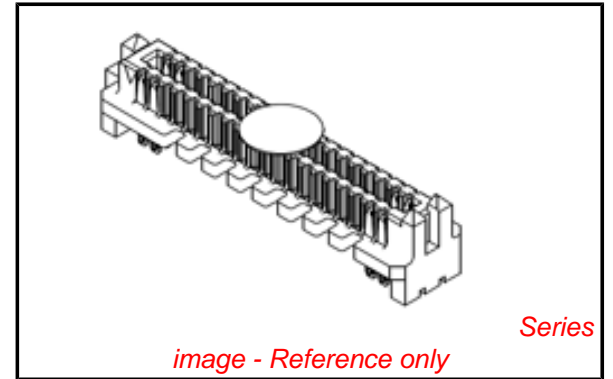
CSA LR19980
 UL E29179

General

Product Family PCB Headers
 Series [46556](#)
 Application Board-to-Board
 Product Name SEARAY*

Physical

Breakaway No
 Circuits (Loaded) 80
 Circuits (maximum) 80
 Circuits Detail 80
 Color - Resin Black
 Durability (mating cycles max) 100
 First Mate / Last Break No
 Flammability 94V-0
 Glow-Wire Compliant No
 Guide to Mating Part Yes
 Keying to Mating Part None
 Lock to Mating Part None
 Material - Metal Copper Alloy
 Material - Plating Mating Gold
 Material - Plating Termination Tin
 Material - Resin High Temperature Thermoplastic
 Number of Rows 4
 Orientation Vertical
 PCB Locator Yes
 PCB Retention Yes
 PCB Thickness Recommended (in) 0.062 In
 PCB Thickness Recommended (mm) 1.60 mm
 Packaging Type Embossed Tape on Reel
 Pitch - Mating Interface (in) 0.050 In
 Pitch - Mating Interface (mm) 1.27 mm
 Pitch - Term. Interface (in) 0.050 In
 Pitch - Term. Interface (mm) 1.27 mm
 Plating min: Mating (µin) 30
 Polarized to Mating Part Yes
 Polarized to PCB Yes
 Robotic Placement Pick and Place Cap
 Shrouded No
 Stackable No
 Surface Mount Compatible (SMC) Yes
 Temperature Range - Operating -55°C to +125°C
 Termination Interface: Style Surface Mount



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

[46556Series](#)

Mates With

[46557](#) SEARAY* Slim Receptacles

Electrical

Current - Maximum per Contact	1A
Voltage - Maximum	240V AC

Solder Process Data

Duration at Max. Process Temperature (seconds)	20
Lead-free Process Capability	Reflow Capable (SMT only)
Max. Cycles at Max. Process Temperature	3
Process Temperature max. C	260

Material Info**Reference - Drawing Numbers**

Product Specification	PS-45970-001
Sales Drawing	SD-46556-001

*SEARAY is a trademark of Samtec, Inc.

This document was generated on 03/24/2010

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4

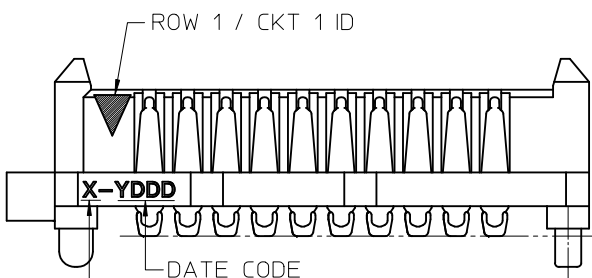
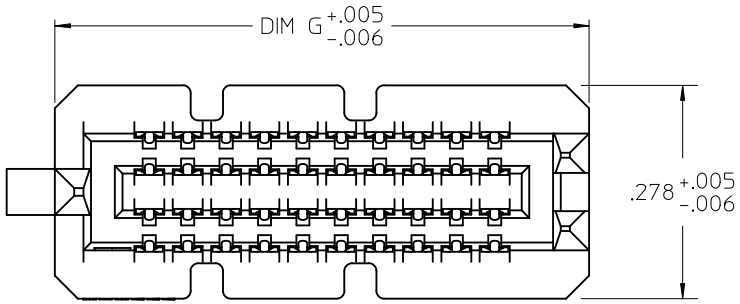
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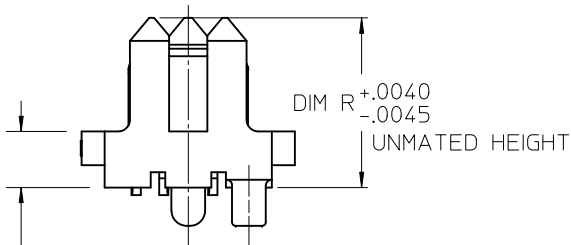
NOTES:

- 1. MATERIALS: HOUSING: LCP, UL94V-0, BLACK
CONTACTS: COPPER ALLOY
SOLDER CHARGE: SEE CHART
- 2. FINISH: ALL OPTIONS - SELECT GOLD IN CONTACT AREA: 30 MI MIN
OPTIONS 2.0 & 2.5: SELECT GOLD FLASH IN TAIL, 7 MI MIN
OPTIONS 3.0 THRU 7.0: SELECT TIN IN TAIL, 100 MI MIN
ALL OPTIONS - OVER NICKEL
- 3. PRODUCT SPECIFICATION: PS-45970-001
- 4. PACKAGING SPECIFICATION: PK-45970-002
- 5. MATES WITH SEARAY RECPT ASSEMBLY 46557
- 6. APPLICATION SPECIFICATION: AS-45970-001
- 7. COSMETIC SPECIFICATION: PS-45499-002 CLASS B
- 8. PART STATUS: CONTACT MOLEX

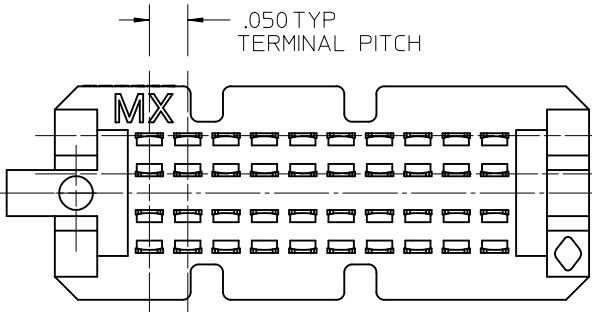


LEAD CODE:
1 = TIN
2 = TIN / LEAD

SEE TABLE
ACROSS ALL
SOLDER
CHARGES

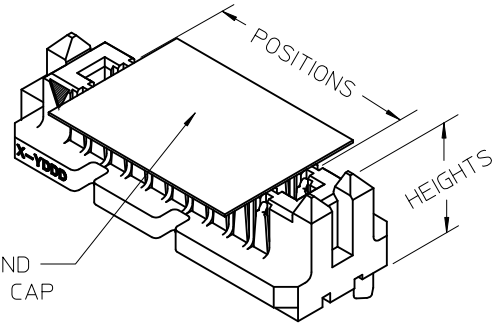


DIM P
REF ONLY
MATED STACK
HEIGHT
(MILLIMETERS)



.050 TYP
TERMINAL PITCH

PICK AND
PLACE CAP



POSITIONS	DIM G	
10	.696	.006
15	.946	.006
20	1.196	.006
25	1.446	.006
30	1.696	.006
35	1.946	.006
40	2.196	.006
45	2.446	.009
50	2.696	.009

UPDATED NOTE 2
EC NO: UCP2010-2270
DRWN: TREGORI 2010/03/05
CHKD: JCOMERCI 2007/05/17
APPR: JCOMERCI 2010/03/05
REV
DESCRIPTION

GENERAL TOLERANCES (UNLESS SPECIFIED)	
mm	INCH
4 PLACES ± ---	± ---
3 PLACES ± ---	± .005
2 PLACES ± ---	± ---
1 PLACE ± ---	± ---
ANGULAR ± 1/2°	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	

DIMENSION STYLE INCH ONLY	
DRAWN BY	DATE
TGREGORI	2007/05/17
CHECKED BY	DATE
JCOMERCI	2007/05/17
APPROVED BY	DATE
JCOMERCI	2010/03/05
MATERIAL NO. SEE CHART	
SIZE	A

SCALE 4:1	DESIGN UNITS INCH	THIRD ANGLE PROJECTION
TITLE SEARAY SLIM PLUG ASSEMBLY .050 PITCH		
MOLEX INCORPORATED		
DOCUMENT NO. SD-46556-001	SHEET NO. 1 OF 4	

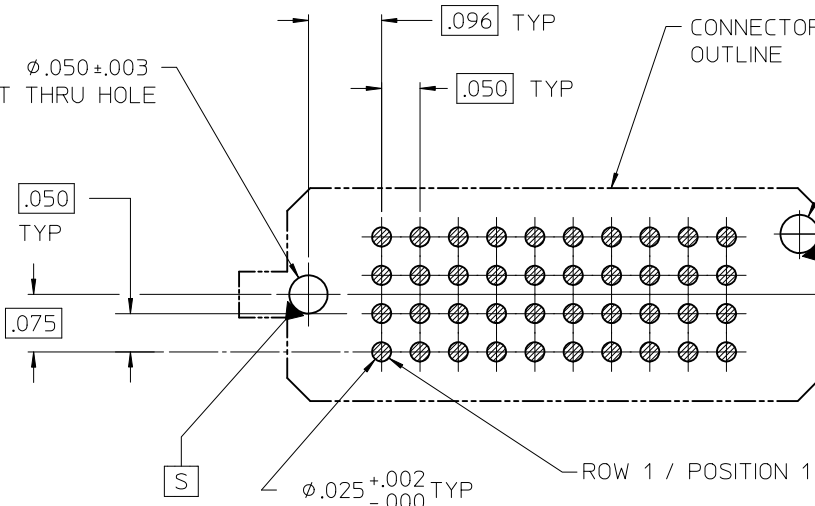
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$\phi .050 \pm .003$
NON-PLT THRU HOLE



.050
TYP

.075

.096 TYP

.050 TYP

CONNECTOR
OUTLINE

$\phi .050 \pm .003$
NON-PLT THRU HOLE
 $\phi \phi .003 X S$

.079

S

$\phi .025^{+.002}_{-.000}$ TYP
SOLDER PAD
 $\phi \phi .003 X SR$

ROW 1 / POSITION 1

RECOMMENDED PCB LAYOUT: COMPONENT SIDE
PCB THICKNESS: N/A
SOLDER SCREEN APERTURE: .035

R

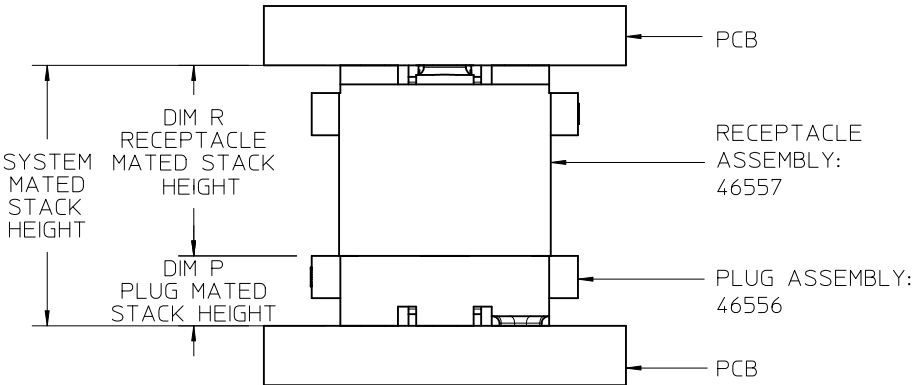
X

F

.005 MIN
SOLDER PASTE THICKNESS

		DIM R RECEPTACLE STACK HEIGHT					
		MM	5.0	6.0	6.5	7.5	8.0
DIM P PLUG STACK HEIGHT	2.0	7.0	8.0	8.5	9.5	10.0	11.0
	3.0	8.0	9.0	9.5	10.5	11.0	11.5
	3.5	8.5	9.5	10.0	11.0	11.0	11.5
	2.5	7.5	8.5	9.0	10.0	10.0	10.5
	4.5	9.5	10.5	11.0	12.0	12.0	12.5
	5.0	10.0	11.0	11.5	12.5	12.5	13.0
	7.0	12.0	13.0	13.5	14.5	14.5	15.0

STACK HEIGHTS GIVEN IN MM FOR REF ONLY



RECEPTACLE
ASSEMBLY:
46557

PLUG ASSEMBLY:
46556

A

SEE SHEET 1
EC NO: UCP2010-2270
DRWN: TGREGORI 2010/03/05
CHKD: JCOMERCI 2007/05/17
APPR: JCOMERCI 2010/03/05
DESCRIPTION
REV

	GENERAL TOLERANCES (UNLESS SPECIFIED)	
	mm	INCH
	4 PLACES	± ---
	3 PLACES	± .005
	2 PLACES	± ---
1 PLACE	± ---	
ANGULAR ±1/2°		

DRAFT WHERE APPLICABLE
MUST REMAIN
WITHIN DIMENSIONS

DIMENSION STYLE INCH ONLY	
DRAWN BY	DATE
TGREGORI	2007/05/17
CHECKED BY	DATE
JCOMERCI	2007/05/17
APPROVED BY	DATE
JCOMERCI	2010/03/05
MATERIAL NO.	

SCALE
4:1

DESIGN UNITS
INCH

THIRD ANGLE
PROJECTION

SEARAY SLIM
PLUG ASSEMBLY
.050 PITCH

molex

MOLEX INCORPORATED

DOCUMENT NO.

SD-46556-001

SHEET NO.

2 OF 4

SEE CHART

SIZE
A

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

	6	5	4	3	2	1	
DIM P	2.0 MM	3.0 MM	3.5 MM	2.5 MM	4.5 MM	5.0 MM	7.0 MM
DIM R: HOUSING HEIGHT:	.221	.260	.280	.241	.319	.339	.418
D POSITIONS	MATERIAL NO	MATERIAL NO	MATERIAL NO	MATERIAL NO	MATERIAL NO	MATERIAL NO	MATERIAL NO
10	46556-1145	46556-1245	46556-1345	46556-1445	46556-1545	46556-1645	46556-1745
20	46556-2145	46556-2245	46556-2345	46556-2445	46556-2545	46556-2645	46556-2745
30	46556-3145	46556-3245	46556-3345	46556-3445	46556-3545	46556-3645	46556-3745
40	46556-4145	46556-4245	46556-4345	46556-4445	46556-4545	46556-4645	46556-4745
50	46556-5145	46556-5245	46556-5345	46556-5445	46556-5545	46556-5645	46556-5745
C 15	46556-6145	46556-6245	46556-6345	46556-6445	46556-6545	46556-6645	46556-6745
25	46556-7145	46556-7245	46556-7345	46556-7445	46556-7545	46556-7645	46556-7745
35	46556-8145	46556-8245	46556-8345	46556-8445	46556-8545	46556-8645	46556-8745
45	46556-9145	46556-9245	46556-9345	46556-9445	46556-9545	46556-9645	46556-974


NOTES:

- THIS SHEET CONTAINS THE FOLLOWING OPTIONS
SOLDER CHARGE: TIN

SEE SHEET 1 EC NO: UCP2010-2270 DRWN: TGREGOR I 2010/03/05 CHKD: JCOMERC I 2007/05/17 APPR: JCOMERC I 2010/03/05	DESCRIPTION REV	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE INCH ONLY		SCALE 1:1	DESIGN UNITS INCH	THIRD ANGLE PROJECTION		
			mm	INCH	DRAWN BY	DATE	TITLE SEARAY SLIM PLUG ASSEMBLY .050 PITCH			
		4 PLACES	± ---	± ---	TGREGOR I	2007/05/17				
		3 PLACES	± ---	± .005	CHECKED BY	DATE	MOLEX INCORPORATED			
		2 PLACES	± ---	± ---	JCOMERC I	2007/05/17				
1 PLACE	± ---	± ---	APPROVED BY	DATE	MATERIAL NO. SEE CHART		DOCUMENT NO. SD-46556-001		SHEET NO. 3 OF 4	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		ANGULAR ±1/2°		SIZE A		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				

	6	5	4	3	2	1	
DIM P	2.0 MM	3.0 MM	3.5 MM	2.5 MM	4.5 MM	5.0 MM	7.0 MM
DIM R: HOUSING HEIGHT:	.221	.260	.280	.241	.319	.339	.418
D POSITIONS	MATERIAL NO	MATERIAL NO	MATERIAL NO	MATERIAL NO	MATERIAL NO	MATERIAL NO	MATERIAL NO
10	46556-1147	46556-1247	46556-1347	46556-1447	46556-1547	46556-1647	46556-1747
20	46556-2147	46556-2247	46556-2347	46556-2447	46556-2547	46556-2647	46556-2747
30	46556-3147	46556-3247	46556-3347	46556-3447	46556-3547	46556-3647	46556-3747
40	46556-4147	46556-4247	46556-4347	46556-4447	46556-4547	46556-4647	46556-4747
50	46556-5147	46556-5247	46556-5347	46556-5447	46556-5547	46556-5647	46556-5747
C 15	46556-6147	46556-6247	46556-6347	46556-6447	46556-6547	46556-6647	46556-6747
25	46556-7147	46556-7247	46556-7347	46556-7447	46556-7547	46556-7647	46556-7747
35	46556-8147	46556-8247	46556-8347	46556-8447	46556-8547	46556-8647	46556-8747
45	46556-9147	46556-9247	46556-9347	46556-9447	46556-9547	46556-9647	46556-9747

NOTES:
1. THIS SHEET CONTAINS THE FOLLOWING OPTIONS
SOLDER CHARGE: TIN / LEAD

SEE SHEET 1 EC NO: UCP2010-2270 DRWN: TGREGOR I 2010/03/05 CHKD: JCOMERC I 2007/05/17 APPR: JCOMERC I 2010/03/05	DESCRIPTION REV	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE INCH ONLY		SCALE 1:1	DESIGN UNITS INCH	THIRD ANGLE PROJECTION			
			mm	INCH	DRAWN BY TGREGOR I	DATE 2007/05/17	TITLE SEARAY SLIM PLUG ASSEMBLY .050 PITCH				
		4 PLACES	± ---	± ---	CHECKED BY JCOMERC I	DATE 2007/05/17					
		3 PLACES	± ---	± .005	APPROVED BY JCOMERC I		DATE 2010/03/05	 MOLEX INCORPORATED DOCUMENT NO. SD-46556-001			
		2 PLACES	± ---	± ---	MATERIAL NO.		DATE				
1 PLACE	± ---	± ---	ANGULAR ±1/2°		DATE	SHEET NO. 4 OF 4					
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			SIZE A		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						