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Part Number: [0465564745](#)
Status: **Active**
Description: 1.27mm (.050") by 1.27mm (.050") Pitch SEARAY* Slim Plug, 160 Circuits, 7.00mm (.275") 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) 160
 Circuits (maximum) 160
 Circuits Detail 160
 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



Series

image - Reference only

EU RoHS

ELV and RoHS Compliant

REACH SVHC

Not Reviewed

Halogen-Free

Status

Not Reviewed

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.

China RoHS



Search Parts in this Series

[46556Series](#)

Mates With

[46557 SEARAY* Receptacle](#)

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**

Application Specification	AS-45970-001, AS-45970-002, AS-45970-990
Packaging Specification	PK-45970-002
Product Specification	PS-45970-001
Sales Drawing	SD-46556-001
Test Summary	TS-45970-001

*SEARAY is a trademark of Samtec, Inc.

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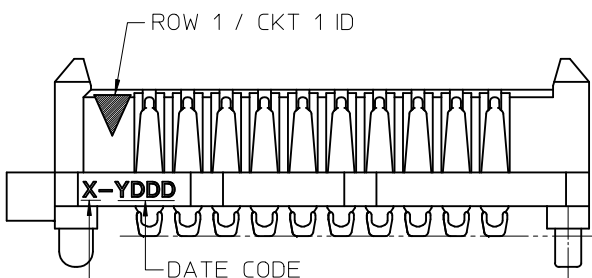
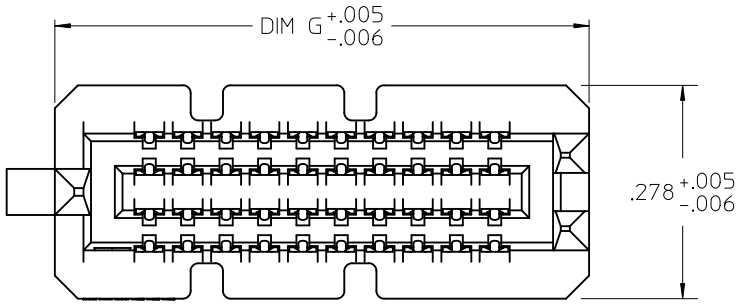
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2

1

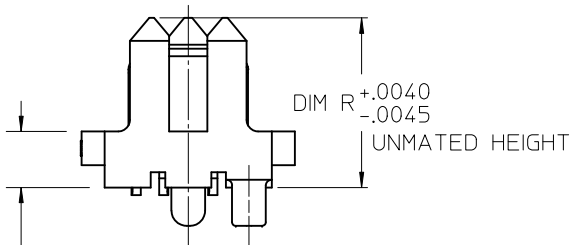
NOTES:

- 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

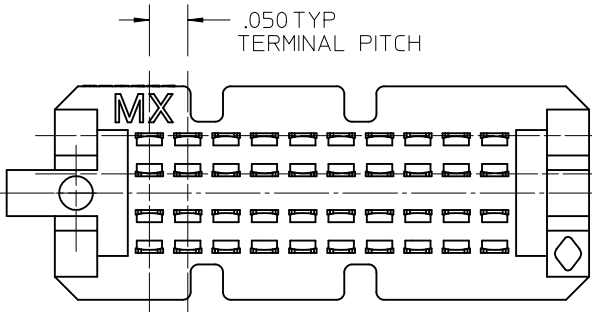


LEAD CODE:
1 = TIN
2 = TIN / LEAD

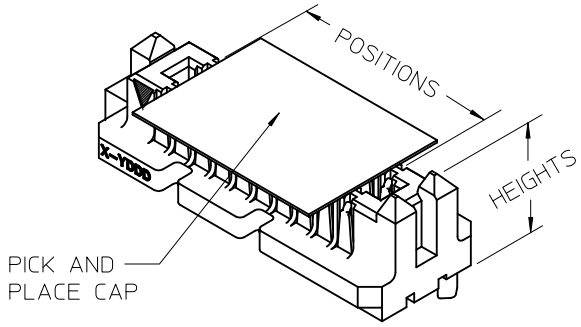
SEE TABLE
ACROSS ALL
SOLDER
CHARGES



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

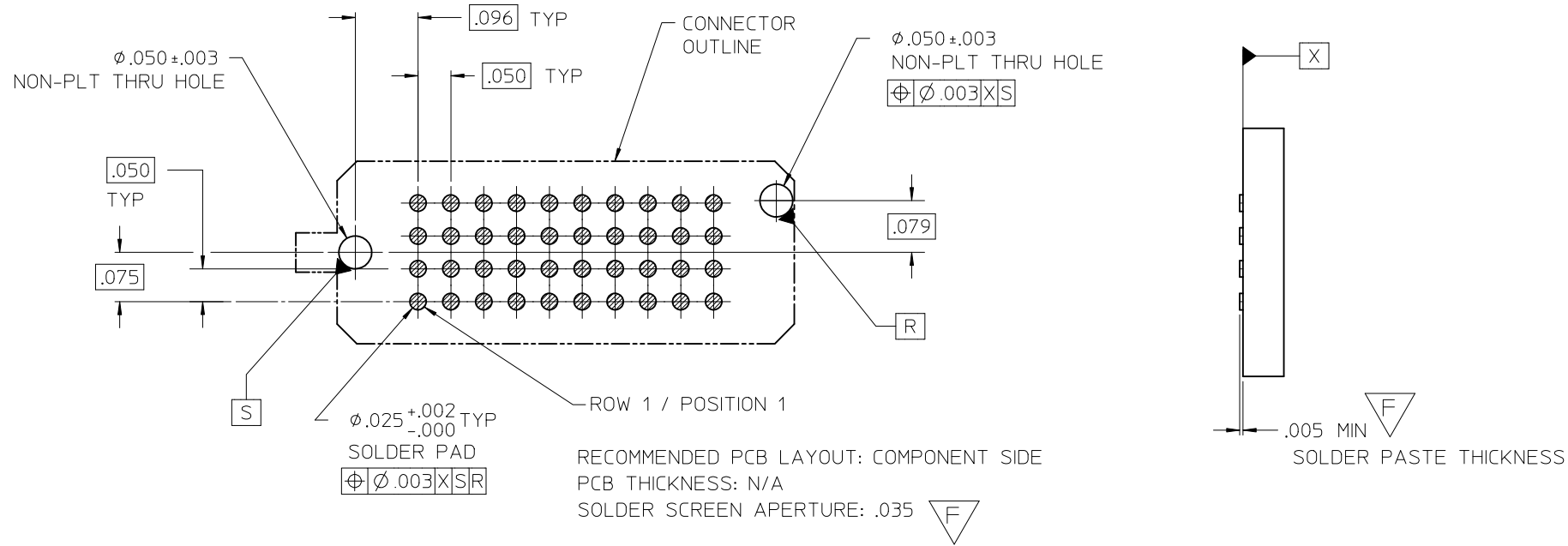
SCALE 4:1	DESIGN UNITS INCH	THIRD ANGLE PROJECTION
TITLE SEARAY SLIM PLUG ASSEMBLY .050 PITCH		
MOLEX INCORPORATED		
DOCUMENT NO. SD-46556-001	SHEET NO. 1 OF 4	

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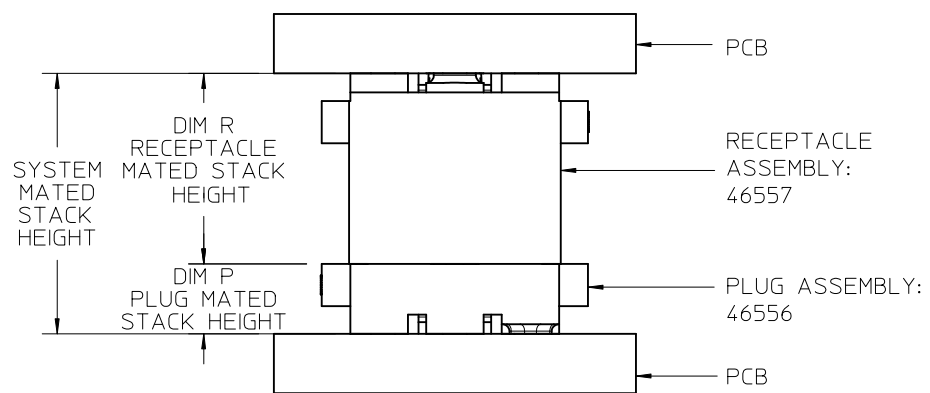
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2



		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	11.5	12.0
	2.5	7.5	8.5	9.0	10.0	10.5	11.0
	4.5	9.5	10.5	11.0	12.0	12.5	13.0
	5.0	10.0	11.0	11.5	12.5	13.0	13.5
	7.0	12.0	13.0	13.5	14.5	15.0	15.5

STACK HEIGHTS GIVEN IN MM FOR REF ONLY



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

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± .005	± .0005
3 PLACES	± .005	± .0005
2 PLACES	± .005	± .0005
1 PLACE	± .005	± .0005

ANGULAR ±1/2°

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE
INCH ONLY

DRAWN BY DATE
 TGREGOR I 2007/05/17

CHECKED BY DATE
 JCOMERC I 2007/05/17

APPROVED BY DATE
 JCOMERC I 2010/03/05

MATERIAL NO.
SEE CHART

SCALE
4:1

DESIGN UNITS
INCH

THIRD ANGLE PROJECTION

TITLE
**SEARAY SLIM
 PLUG ASSEMBLY
 .050 PITCH**


molex MOLEX INCORPORATED

DOCUMENT NO.
SD-46556-001

SHEET NO.
2 OF 4

	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:
1. 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 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		3 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						

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