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Part Number: [0459713515](#)
Status: **Active**
Description: 1.27mm (.050") by 1.27mm (.050") Pitch SEARAY* Receptacle, 300 Circuits, 8.00mm (.314") Unmated Height, 10 Rows, With Pegs, Solder Charge™

Documents:

[3D Model](#) [Product Specification PS-45970-002 \(PDF\)](#)
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)
[Product Specification PS-45970-001 \(PDF\)](#)

Agency Certification

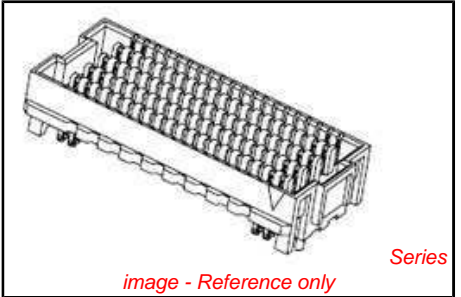
CSA LR19980
UL E29179

General

Product Family PCB Receptacles
Series 45971
Application Board-to-Board
Product Name SEARAY*

Physical

Circuits (Loaded) 300
Circuits (maximum) 300
Circuits Detail 300
Color - Resin Black
Durability (mating cycles max) 100
Flammability 94V-0
Glow-Wire Compliant No
Guide to Mating Part No
Keying to Mating Part None
Lock to Mating Part No
Material - Metal Copper Alloy
Material - Plating Mating Gold
Material - Plating Termination Tin
Material - Resin High Temperature Thermoplastic
Number of Rows 10
Orientation Vertical
PC Tail Length (in) 0.086 In
PC Tail Length (mm) 2.18 mm
PCB Locator Yes
PCB Retention Yes
PCB Thickness Recommended (in) 0.062 In
PCB Thickness Recommended (mm) 1.57 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
Plating min: Mating (µm) 0.75
Plating min: Termination (µin) 100
Plating min: Termination (µm) 2.5
Polarized to Mating Part Yes
Polarized to PCB Yes
Robotic Placement Pick and Place Cap
Stackable No



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
[45971Series](#)

Mates With
[45970 SEARAY* Plug](#)

Surface Mount Compatible (SMC)	Yes
Temperature Range - Operating	-55°C to +125°C
Termination Interface: Style	Surface Mount

Electrical

Current - Maximum per Contact	2.7A
Grounding to PCB	No
Voltage - Maximum	240V AC

Solder Process Data

Duration at Max. Process Temperature (seconds)	3
Lead-free Process Capability	Reflow Capable (SMT only)
Max. Cycles at Max. Process Temperature	1
Process Temperature max. C	260

Material Info

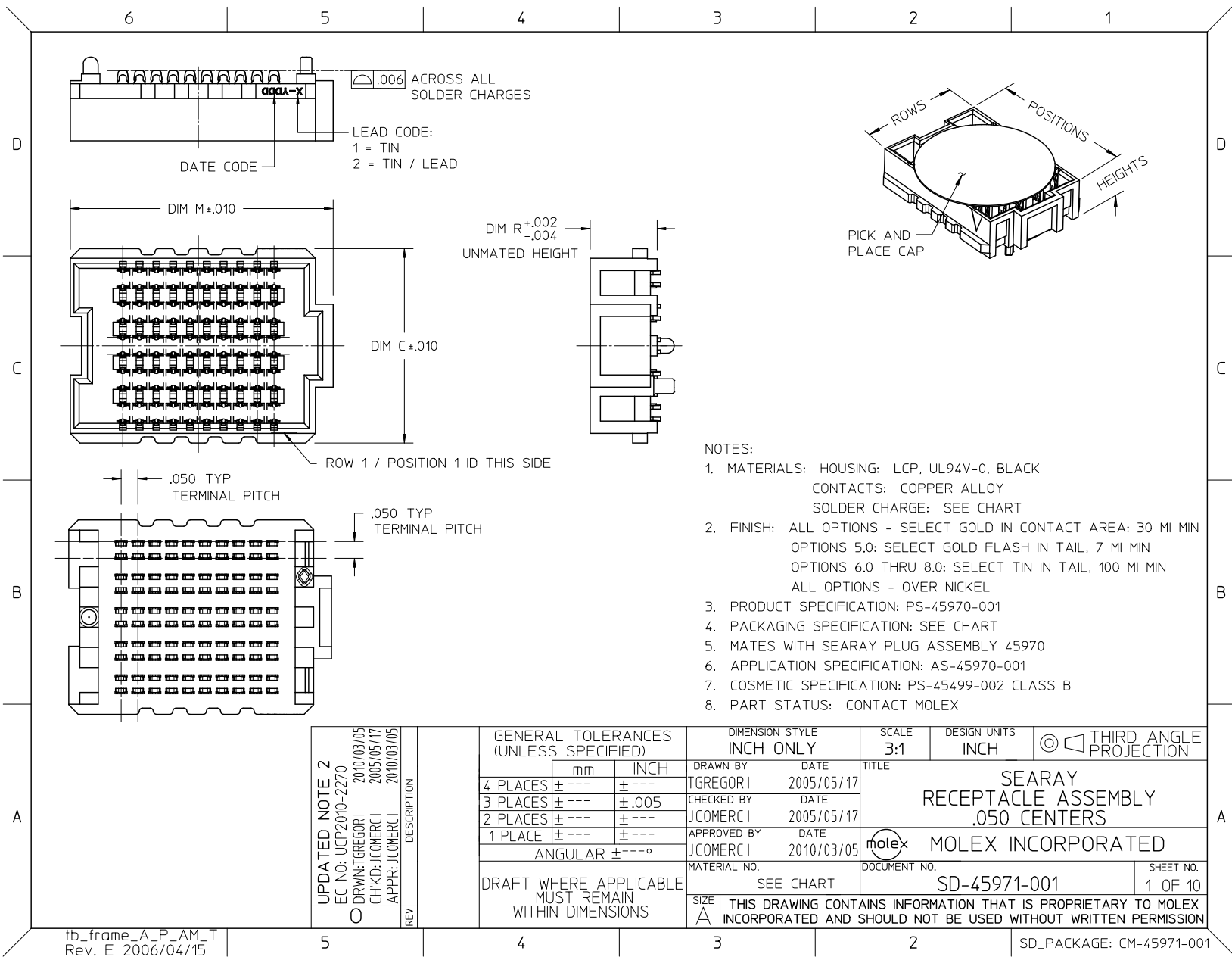
Reference - Drawing Numbers

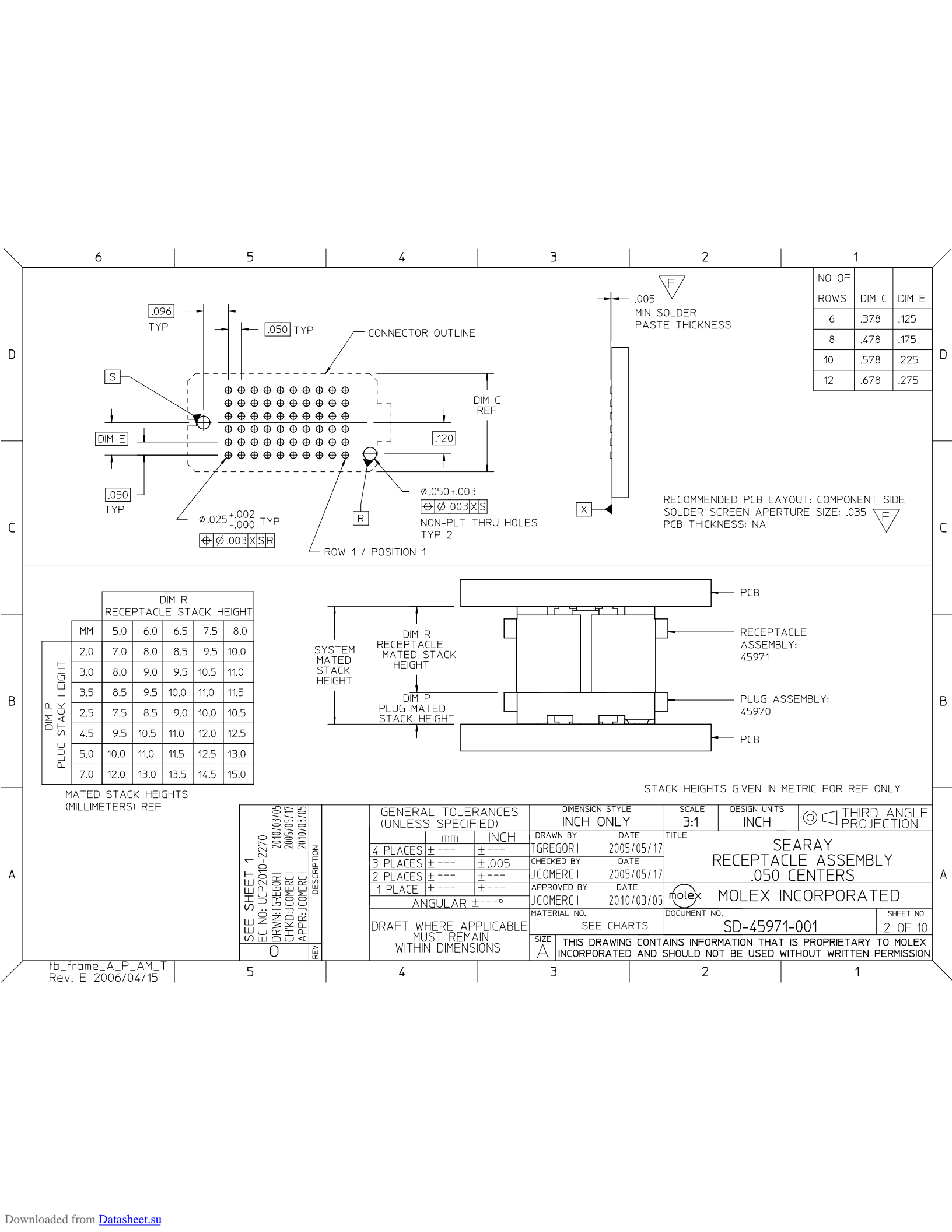
Application Specification	AS-45970-001, AS-45970-002, AS-45970-990
Packaging Specification	PK-45971-001, PK-45971-002
Product Specification	PS-45970-001, PS-45970-002
Sales Drawing	SD-45971-001
Test Summary	TS-45970-001

*SEARAY is a trademark of Samtec, Inc.

This document was generated on 05/25/2010

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		6		5		4		3		2		1					
D	TRAY PACK PK-45971-001	DIM R: (REF)		5.0 MM		6.0 MM		6.5 MM		7.5 MM		8.0 MM		STACK HEIGHTS GIVEN IN METRIC FOR REF ONLY			
		DIM R: HOUSING HEIGHT															
				.199		.238		.258		.297		.297					
		POSITION	DIM M	MATERIAL NO		MATERIAL NO		MATERIAL NO		MATERIAL NO		MATERIAL NO					
		19	1.232	45971-0163		45971-0263		45971-0363		45971-0463		45971-0563					
		10	0.782	45971-1163		45971-1263		45971-1363		45971-1463		45971-1563					
		20	1.282	45971-2163		45971-2263		45971-2363		45971-2463		45971-2563					
		30	1.782	45971-3163		45971-3263		45971-3363		45971-3463		45971-3563					
		40	2.282	45971-4163		45971-4263		45971-4363		45971-4463		45971-4563					
		50	2.782	45971-5163		45971-5263		45971-5363		45971-5463		45971-5563					
		15	1.032	45971-6163		45971-6263		45971-6363		45971-6463		45971-6563					
		25	1.532	45971-7163		45971-7263		45971-7363		45971-7463		45971-7563					
		35	2.032	45971-8163		45971-8263		45971-8363		45971-8463		45971-8563					
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		DIM R: HOUSING HEIGHT															
				.199		.238		.258		.297		.297					
		POSITION	DIM M	MATERIAL NO		MATERIAL NO		MATERIAL NO		MATERIAL NO		MATERIAL NO					
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		20	1.282	45971-2167		45971-2267		45971-2367		45971-2467		45971-2567					
		30	1.782	45971-3167		45971-3267		45971-3367		45971-3467		45971-3567					
		40	2.282	45971-4167		45971-4267		45971-4367		45971-4467		45971-4567					
		50	2.782	45971-5167		45971-5267		45971-5367		45971-5467		45971-5567					
		15	1.032	45971-6167		45971-6267		45971-6367		45971-6467		45971-6567					
		25	1.532	45971-7167		45971-7267		45971-7367		45971-7467		45971-7567					
		35	2.032	45971-8167		45971-8267		45971-8367		45971-8467		45971-8567					
45		2.532	45971-9167		45971-9267		45971-9367		45971-9467		45971-9567						
A		SEE SHEET 1 EC NO: UCP2010-2270 DRWN: JGREGOR I 2010/03/05 CHKD: JOMERC I 2005/05/17 APPR: JOMERC 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 RECEPTACLE ASSEMBLY .050 CENTERS MOLEX INCORPORATED SD-45971-001								
	4 PLACES				± ---	± ---		TGREGOR I						2005/05/17			
	3 PLACES				± ---	± .005		CHECKED BY						DATE			
	2 PLACES				± ---	± ---		JCOMERC I						2005/05/17			
	1 PLACE				± ---	± ---		APPROVED BY						DATE			
	ANGULAR ± ---°				JCOMERC I	2010/03/05	DOCUMENT NO. SHEET NO. 4 OF 10										
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS				MATERIAL NO.							SEE CHART					
					SIZE A	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION											
tb_frame_A_P_AM_T Rev. E 2006/04/15					5		4		3		2		1				

		6		5		4		3		2		1					
D	TRAY PACK PK-45971-001	DIM R: (REF)		5.0 MM		6.0 MM		6.5 MM		7.5 MM		8.0 MM		STACK HEIGHTS GIVEN IN METRIC FOR REF ONLY			
		DIM R: HOUSING HEIGHT															
				.199		.238		.258		.297		.297					
		POSITION	DIM M	MATERIAL NO		MATERIAL NO		MATERIAL NO		MATERIAL NO		MATERIAL NO					
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		10	0.782	45971-1181		45971-1281		45971-1381		45971-1481		45971-1581					
		20	1.282	45971-2181		45971-2281		45971-2381		45971-2481		45971-2581					
		30	1.782	45971-3181		45971-3281		45971-3381		45971-3481		45971-3581					
		40	2.282	45971-4181		45971-4281		45971-4381		45971-4481		45971-4581					
		50	2.782	45971-5181		45971-5281		45971-5381		45971-5481		45971-5581					
		15	1.032	45971-6181		45971-6281		45971-6381		45971-6481		45971-6581					
		25	1.532	45971-7181		45971-7281		45971-7381		45971-7481		45971-7581					
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B	TRAY PACK PK-45971-002	DIM R: (REF)		5.0 MM		6.0 MM		6.5 MM		7.5 MM		8.0 MM		STACK HEIGHTS GIVEN IN METRIC FOR REF ONLY			
		DIM R: HOUSING HEIGHT															
				.199		.238		.258		.297		.297					
		POSITION	DIM M	MATERIAL NO		MATERIAL NO		MATERIAL NO		MATERIAL NO		MATERIAL NO					
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		10	0.782	45971-1185		45971-1285		45971-1385		45971-1485		45971-1585					
		20	1.282	45971-2185		45971-2285		45971-2385		45971-2485		45971-2585					
		30	1.782	45971-3185		45971-3285		45971-3385		45971-3485		45971-3585					
		40	2.282	45971-4185		45971-4285		45971-4385		45971-4485		45971-4585					
		50	2.782	45971-5185		45971-5285		45971-5385		45971-5485		45971-5585					
		15	1.032	45971-6185		45971-6285		45971-6385		45971-6485		45971-6585					
		25	1.532	45971-7185		45971-7285		45971-7385		45971-7485		45971-7585					
		35	2.032	45971-8185		45971-8285		45971-8385		45971-8485		45971-8585					
45	2.532	45971-9185		45971-9285		45971-9385		45971-9485		45971-9585							
A	SEE SHEET 1 EC NO: UCP2010-2270 DRWN: JGREGOR I 2010/03/05 CHKD: JOMERC I 2005/05/17 APPR: JOMERC I 2010/03/05	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE INCH ONLY		SCALE 1:1		DESIGN UNITS INCH		THIRD ANGLE PROJECTION		TITLE SEARAY RECEPTACLE ASSEMBLY .050 CENTERS		A			
		4 PLACES ± ---		mm		INCH		DRAWN BY JGREGOR I		DATE 2005/05/17							
		3 PLACES ± ---				± .005		CHECKED BY JCOMERC I		DATE 2005/05/17							
		2 PLACES ± ---				± ---		APPROVED BY JCOMERC I		DATE 2010/03/05		MOLEX INCORPORATED					
		1 PLACE ± ---				± ---		MATERIAL NO.		DOCUMENT NO.							
		ANGULAR ± ---°						SEE CHART		SD-45971-001		SHEET NO. 5 OF 10					
		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									

NOTES:
1. THIS SHEET CONTAINS THE FOLLOWING OPTIONS
NO OF ROWS: 8
SOLDER CHARGE: TIN
PACKAGING: TRAYS AND TAPE AND REEL

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		6		5		4		3		2		1		
D	TRAY PACK PK-45971-001	DIM R: (REF)		5.0 MM		6.0 MM		6.5 MM		7.5 MM		8.0 MM		STACK HEIGHTS GIVEN IN METRIC FOR REF ONLY
		DIM R: HOUSING HEIGHT												
				.199		.238		.258		.297		.297		
		POSITION	DIM M	MATERIAL NO		MATERIAL NO		MATERIAL NO		MATERIAL NO		MATERIAL NO		
		19	1.232	45971-0111		45971-0211		45971-0311		45971-0411		45971-0511		
		10	0.782	45971-1111		45971-1211		45971-1311		45971-1411		45971-1511		
		20	1.282	45971-2111		45971-2211		45971-2311		45971-2411		45971-2511		
		30	1.782	45971-3111		45971-3211		45971-3311		45971-3411		45971-3511		
		40	2.282	45971-4111		45971-4211		45971-4311		45971-4411		45971-4511		
		50	2.782	45971-5111		45971-5211		45971-5311		45971-5411		45971-5511		
		15	1.032	45971-6111		45971-6211		45971-6311		45971-6411		45971-6511		
		25	1.532	45971-7111		45971-7211		45971-7311		45971-7411		45971-7511		
		35	2.032	45971-8111		45971-8211		45971-8311		45971-8411		45971-8511		
		45	2.532	45971-9111		45971-9211		45971-9311		45971-9411		45971-9511		
C	TRAY PACK PK-45971-002	DIM R: (REF)		5.0 MM		6.0 MM		6.5 MM		7.5 MM		8.0 MM		STACK HEIGHTS GIVEN IN METRIC FOR REF ONLY
		DIM R: HOUSING HEIGHT												
				.199		.238		.258		.297		.297		
		POSITION	DIM M	MATERIAL NO		MATERIAL NO		MATERIAL NO		MATERIAL NO		MATERIAL NO		
		19	1.232	45971-0115		45971-0215		45971-0315		45971-0415		45971-0515		
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		20	1.282	45971-2115		45971-2215		45971-2315		45971-2415		45971-2515		
		30	1.782	45971-3115		45971-3215		45971-3315		45971-3415		45971-3515		
		40	2.282	45971-4115		45971-4215		45971-4315		45971-4415		45971-4515		
		50	2.782	45971-5115		45971-5215		45971-5315		45971-5415		45971-5515		
		15	1.032	45971-6115		45971-6215		45971-6315		45971-6415		45971-6515		
		25	1.532	45971-7115		45971-7215		45971-7315		45971-7415		45971-7515		
		35	2.032	45971-8115		45971-8215		45971-8315		45971-8415		45971-8515		
		45	2.532	45971-9115		45971-9215		45971-9315		45971-9415		45971-9515		
A	SEE SHEET 1 EC NO: UCP2010-2270 DRWN: JGREGOR I 2010/03/05 CHKD: JOMERC I 2005/05/17 APPR: JOMERC I 2010/03/05	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE INCH ONLY		SCALE 1:1		DESIGN UNITS INCH		THIRD ANGLE PROJECTION		TITLE SEARAY RECEPTACLE ASSEMBLY .050 CENTERS		
		4 PLACES ± --- ± ---		DRAWN BY T GREGOR I DATE 2005/05/17										
		3 PLACES ± --- ± .005		CHECKED BY JCOMERC I DATE 2005/05/17										
		2 PLACES ± --- ± ---		APPROVED BY JCOMERC I DATE 2010/03/05										
		1 PLACE ± --- ± ---		MATERIAL NO.										
		ANGULAR ± --- °		SEE CHART										
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS												

		6		5		4		3		2		1					
D	TRAY PACK PK-45971-001	DIM R: (REF)		5.0 MM		6.0 MM		6.5 MM		7.5 MM		8.0 MM		STACK HEIGHTS GIVEN IN METRIC FOR REF ONLY			
		DIM R: HOUSING HEIGHT															
				.199		.238		.258		.297		.297					
		POSITION	DIM M	MATERIAL NO		MATERIAL NO		MATERIAL NO		MATERIAL NO		MATERIAL NO					
		19	1.232	45971-0121		45971-0221		45971-0321		45971-0421		45971-0521					
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		20	1.282	45971-2121		45971-2221		45971-2321		45971-2421		45971-2521					
		30	1.782	45971-3121		45971-3221		45971-3321		45971-3421		45971-3521					
		40	2.282	45971-4121		45971-4221		45971-4321		45971-4421		45971-4521					
		50	2.782	45971-5121		45971-5221		45971-5321		45971-5421		45971-5521					
		15	1.032	45971-6121		45971-6221		45971-6321		45971-6421		45971-6521					
		25	1.532	45971-7121		45971-7221		45971-7321		45971-7421		45971-7521					
		35	2.032	45971-8121		45971-8221		45971-8321		45971-8421		45971-8521					
45	2.532	45971-9121		45971-9221		45971-9321		45971-9421		45971-9521							
C	TRAY PACK PK-45971-002	DIM R: (REF)		5.0 MM		6.0 MM		6.5 MM		7.5 MM		8.0 MM		STACK HEIGHTS GIVEN IN METRIC FOR REF ONLY			
		DIM R: HOUSING HEIGHT															
				.199		.238		.258		.297		.297					
		POSITION	DIM M	MATERIAL NO		MATERIAL NO		MATERIAL NO		MATERIAL NO		MATERIAL NO					
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		30	1.782	45971-3125		45971-3225		45971-3325		45971-3425		45971-3525					
		40	2.282	45971-4125		45971-4225		45971-4325		45971-4425		45971-4525					
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		15	1.032	45971-6125		45971-6225		45971-6325		45971-6425		45971-6525					
		25	1.532	45971-7125		45971-7225		45971-7325		45971-7425		45971-7525					
		35	2.032	45971-8125		45971-8225		45971-8325		45971-8425		45971-8525					
45	2.532	45971-9125		45971-9225		45971-9325		45971-9425		45971-9525							
A	SEE SHEET 1 EC NO: UCP2010-2270 DRWN: JGREGOR I 2010/03/05 CHKD: JCOMERC I 2005/05/17 APPR: JCOMERC I 2010/03/05	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE INCH ONLY		SCALE 3:1		DESIGN UNITS INCH		THIRD ANGLE PROJECTION		TITLE SEARAY RECEPTACLE ASSEMBLY .050 CENTERS		A			
		4 PLACES ± --- ± ---		DRAWN BY T GREGOR I DATE 2005/05/17													
		3 PLACES ± --- ± .005		CHECKED BY JCOMERC I DATE 2005/05/17													
		2 PLACES ± --- ± ---		APPROVED BY JCOMERC I DATE 2010/03/05													
		1 PLACE ± --- ± ---		MATERIAL NO.													
		ANGULAR ± --- °		SEE CHART													
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS															

		6		5		4		3		2		1		
D	TRAY PACK PK-45971-001	DIM R: (REF)		5.0 MM		6.0 MM		6.5 MM		7.5 MM		8.0 MM		STACK HEIGHTS GIVEN IN METRIC FOR REF ONLY
		DIM R: HOUSING HEIGHT												
				.199		.238		.258		.297		.297		
		POSITION	DIM M	MATERIAL NO		MATERIAL NO		MATERIAL NO		MATERIAL NO		MATERIAL NO		
		19	1.232	45971-0123		45971-0223		45971-0323		45971-0423		45971-0523		
		10	0.782	45971-1123		45971-1223		45971-1323		45971-1423		45971-1523		
		20	1.282	45971-2123		45971-2223		45971-2323		45971-2423		45971-2523		
		30	1.782	45971-3123		45971-3223		45971-3323		45971-3423		45971-3523		
		40	2.282	45971-4123		45971-4223		45971-4323		45971-4423		45971-4523		
		50	2.782	45971-5123		45971-5223		45971-5323		45971-5423		45971-5523		
		15	1.032	45971-6123		45971-6223		45971-6323		45971-6423		45971-6523		
		25	1.532	45971-7123		45971-7223		45971-7323		45971-7423		45971-7523		
		35	2.032	45971-8123		45971-8223		45971-8323		45971-8423		45971-8523		
		45	2.532	45971-9123		45971-9223		45971-9323		45971-9423		45971-9523		
C	TRAY PACK PK-45971-002	DIM R: (REF)		5.0 MM		6.0 MM		6.5 MM		7.5 MM		8.0 MM		STACK HEIGHTS GIVEN IN METRIC FOR REF ONLY
		DIM R: HOUSING HEIGHT												
				.199		.238		.258		.297		.297		
		POSITION	DIM M	MATERIAL NO		MATERIAL NO		MATERIAL NO		MATERIAL NO		MATERIAL NO		
		19	1.232	45971-0127		45971-0227		45971-0327		45971-0427		45971-0527		
		10	0.782	45971-1127		45971-1227		45971-1327		45971-1427		45971-1527		
		20	1.282	45971-2127		45971-2227		45971-2327		45971-2427		45971-2527		
		30	1.782	45971-3127		45971-3227		45971-3327		45971-3427		45971-3527		
		40	2.282	45971-4127		45971-4227		45971-4327		45971-4427		45971-4527		
		50	2.782	45971-5127		45971-5227		45971-5327		45971-5427		45971-5527		
		15	1.032	45971-6127		45971-6227		45971-6327		45971-6427		45971-6527		
		25	1.532	45971-7127		45971-7227		45971-7327		45971-7427		45971-7527		
		35	2.032	45971-8127		45971-8227		45971-8327		45971-8427		45971-8527		
		45	2.532	45971-9127		45971-9227		45971-9327		45971-9427		45971-9527		
A	SEE SHEET 1 EC NO: UCP2010-2270 DRWN: JGREGORI 2010/03/05 CHKD: JCOMERC I 2005/05/17 APPR: JCOMERC I 2010/03/05	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE INCH ONLY		SCALE 1:1		DESIGN UNITS INCH		THIRD ANGLE PROJECTION		SEARAY RECEPTACLE ASSEMBLY .050 CENTERS		A
		4 PLACES ± --- ± ---		DRAWN BY JGREGORI DATE 2005/05/17		TITLE		MOLEX MOLEX INCORPORATED		DOCUMENT NO. SD-45971-001				
		3 PLACES ± --- ± .005		CHECKED BY JCOMERC I DATE 2005/05/17										
		2 PLACES ± --- ± ---		APPROVED BY JCOMERC I DATE 2010/03/05										
		1 PLACE ± --- ± ---		MATERIAL NO.		SEE CHART								
		ANGULAR ± ---°		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						

NOTES:
1. THIS SHEET CONTAINS THE FOLLOWING OPTIONS
NO OF ROWS: 12
SOLDER CHARGE: TIN / LEAD
PACKAGING: TRAYS AND TAPE AND REEL