



Cypress Semiconductor Corporation – An Infineon Technologies Company  
 198 Champion Court, San Jose, CA 95134. Tel: (408) 943-2600

## PRODUCT CHANGE NOTIFICATION

**PCN:** PCN211204

**Date:** March 29, 2021

**Subject:** Qualification of Daewon Tray at ChipMOS Test and Finish Site for 44-Lead TSOP II Package Memory Products

**To:** FUTURE ELECTRONICS  
 FUTURE ELE  
 pcn.system@futureelectronics.com

**Change Type:** Major

### Description of Change:

Cypress announces the qualification of Daewon tray to be used for 44-Lead TSOP II package tested and finish processed at ChipMOS Technologies Inc., Taiwan. This tray is qualified and currently in use by Cypress and its other Test and Finish subcons.

This tray is compatible to industry standard as this tray is aligned to JEDEC requirements.

Items	Existing	New
Manufacturer	KOSTAT	DAEWON
Supplier Part Number	KS-8503	TR142050
Cypress Drawing Number	51-52029	001-94661
Tray Color	Black	Black
Temperature Rating	150°C	150°C
Number of Pockets / Units per Tray	135	135
Tray Length	315.0 ± 0.25 mm	315.0 ± 0.25 mm
Tray Width	135.9 ± 0.25 mm	135.9 ± 0.25 mm
Tray Stacking Height	6.35 ± 0.13 mm	6.35 ± 0.13 mm
1 <sup>st</sup> Pocket X-Position	14.56 ± 0.13 mm	14.56 ± 0.13 mm
1 <sup>st</sup> Pocket Y-Position	13.27 ± 0.13 mm	13.27 ± 0.13 mm
Pocket X-Pitch	20.42 ± 0.13 mm	20.42 ± 0.13 mm
Pocket Y-Pitch	13.67 ± 0.13 mm	13.67 ± 0.13 mm
Top Pocket Length	18.88 ± 0.25 mm	18.88 ± 0.08 mm
Top Pocket Width	11.96 ± 0.25 mm	11.87 ± 0.08 mm
Pocket Depth	1.91 ± 0.25 mm	1.91 ± 0.10 mm

### Benefit of Change:

The qualification of the Daewon tray for 44-Lead TSOP II package at ChipMOS test and finish site will align ChipMOS to CML and the rest of the Cypress Subcon, which is also for tray standardization of this 44-Lead TSOP II package.

**Part Numbers Affected: 64**

See the attached 'Affected Parts List' file for a list of all part numbers affected by this change. Note that any new parts that are introduced after the publication of this PCN will include all changes outlined in this PCN.

**Qualification Status:**

This change has been qualified through a series of tests documented in the Qualification Test Plan QTP # 202106001. This qualification report can be found as an attachment to this PCN or by visiting [www.cypress.com](http://www.cypress.com) and typing the QTP number in the keyword search window.

**Sample Status:**

Qualification samples may not be built ahead of time for all part numbers affected by this change. Please review the attached 'Affected Parts List' file for a list of affected part numbers with their associated ChipMOS sample ordering part numbers. Samples are available now unless there is an indication that the sample ordering part numbers are subject to lead times. If you require qualification samples, please contact your local Cypress sales representative as soon as possible, preferably within 30 days of the date of this PCN, to place any sample orders.

**Approximate Implementation Date:**

Effective 90 days from the date of this notification or upon customer approval, whichever comes first, all shipments of Commercial, Industrial and Automotive non-PPAP part numbers in the attached file from ChipMOS will use Daewon trays.

For Automotive PPAP part numbers this change will be effective upon customer approval.

**Anticipated Impact:**

Products assembled with the Daewon tray are completely compatible with existing products from form, fit, functional, parametric and quality performance perspectives.

Cypress also recommends that customers take this opportunity to review these changes against current application notes, system design considerations and customer environment conditions to assess impact (if any) to their application.

**Method of Identification:**

Cypress maintains traceability of product to wafer level, including wafer fabrication location, through the lot number marked on the package.

**Response Required:**

No response is required.

For additional information regarding this change, contact your local sales representative or contact the PCN Administrator at [pcn\\_adm@cypress.com](mailto:pcn_adm@cypress.com).

Sincerely,

Cypress PCN Administration

# Cypress Semiconductor Customer Specific Reliability Qualification Report

**QTP# 202106001**  
**Version \*\***

**Issue Date: 3/8/2021**

**CY62146G**

**Qualification of: 202106001: Qualification of DAEWON Tray for 44L TSOP II  
(400mils) Products at Chipmos Test & Finish Site**

Notice: The information in this report is prepared to assist in the qualification of our products. It is declassified for the internal use of our customers only, and may be modified to meet the needs of specific customers

The package details (material set, assembly location, etc.) are specific to the qual vehicles used for qualification. Alternate material sets and assembly locations may be qualified for the affected products. Production material may be assembled with any qualified material set and at any qualified assembly location.

**FOR ANY QUESTION ON THIS REPORT, Please Contact**  
[reliability@cypress.com](mailto:reliability@cypress.com)

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David Hoffman  
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## 1.0 Product and Package Information

### 1.0.1 Product Description

Product Part Number	CY62146G-45ZSXA	Cypress Division	MS
Device Description	N/A		

### 1.0.2 Package Information

Package Designation	ZW44A	Qual Record	QTP 202106001
Package Outline	44-leads TSOP II (400mils)		
Assembly	Greatek-Taiwan (IG)	Mold Compound	SUMITOMO G700SLA
Electrical Test	Chipmos-Taiwan (GO)	Die Attach	Hitachi EN-4900GC
Finish	Chipmos Taiwan (GO)	Flammability	V0 UL94
O2 Index	54%	Lead Finish	Pure Sn

## 2.0 Summary of stress test result

### 2.1 Reliability data collected from Qualification

Stress	Condition	Fab lot	Lot	Package	Assembly Site	TV	Read Point	SS	Reject	Comment
CADFIT ANALYSIS	As specified	9008038	612033470	ZW44A	IG	1	COMP	1	0	
DIMENSIONAL MEASUREMENT	As specified	9008038	612033470	ZW44A	IG	1	COMP	10	0	
DROP TEST	As specified	9008038	612033470	ZW44A	IG	1	COMP	135	0	
FORM AND FIT CHECK (VISUAL INSPECTION)	As specified	9008038	612033470	ZW44A	IG	1	COMP	25	0	
FUNCTIONAL TEST	As specified	9008038	612033470	ZW44A	IG	1	COMP	10	0	
SUBSTANCE CHECK	As specified	9008038	612033470	ZW44A	IG	1	COMP	1	0	
SURFACE RESISTIVITY MEASUREMENT	As specified	9008038	612033470	ZW44A	IG	1	COMP	10	0	
WARP TEST	As specified	9008038	612033470	ZW44A	IG	1	COMP	11	0	

### Reliability Tests Performed per Specification Requirement

Stress	Condition	Specification Reference
CADFIT ANALYSIS	As specified	Pass POD & End flash Criteria
DIMENSIONAL MEASUREMENT	As specified	POD Drawing-JESD22-B100B
DROP TEST	As specified	JESD22-B111
SUBSTANCE CHECK	As specified	European Union RoHS 2002/95/E REACH XVII
FUNCTIONAL TEST	As specified	Pass Manufacturability
SURFACE RESISTIVITY MEASUREMENT	As specified	Conductive Packing/shipping material: 105Ω/sq Static dissipative Packing/shipping material: 105 -1012 Ω/sq

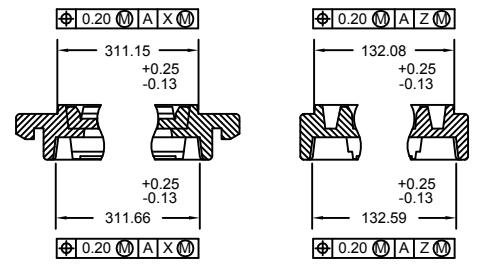
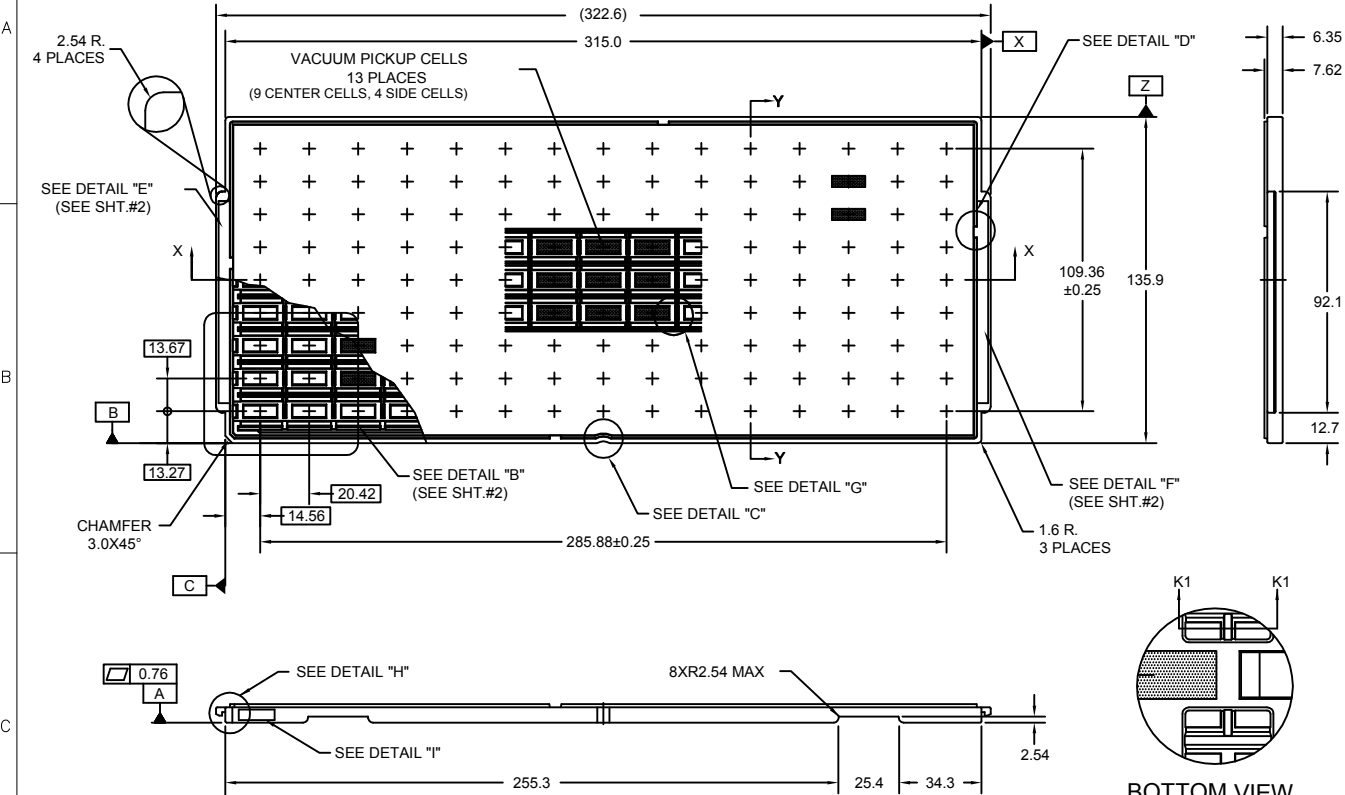
## Revision History

Document Title: NEW QUALIFICATION REPORT FOR - DEVICE (CY62146G-45ZSXA), FINISH SITE (CHIPMOS-TAIWAN), FAB SITE (9), QTP #(202106001)

Document Number: 002-32751

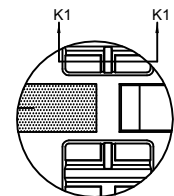
Rev.	Issue Date	ECN No.	Originator	Description
**	03/08/2021	7100187	HONESTO.SINTOS	New Qualification Report for - Device (CY62146G-45ZSXA), Finish Site (Chipmos-Taiwan), Fab Site (9), QTP #(202106001)

REVISIONS				DATE	APPROVED
PAGE	ZONE	REV	ECN	DESCRIPTION	
1	-	**	4569854	NEW RELEASE	11/14/14

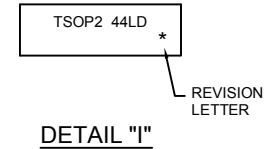


SECTION "X-X" SECTION "Y-Y"

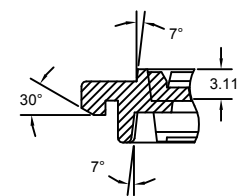
TRAY STACKING DETAIL SCALE : 3/1



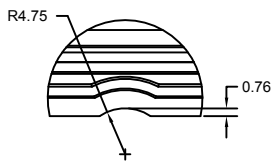
BOTTOM VIEW DETAIL "G" SCALE : 4/1



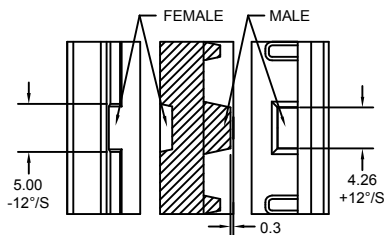
DETAIL "I" SCALE : 4/1



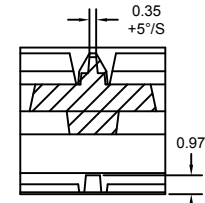
DETAIL "H" SCALE : 4/1



DETAIL "C" SCALE : 4/1



SLIP-LOCK DETAILS DETAIL "D" SCALE : 4/1



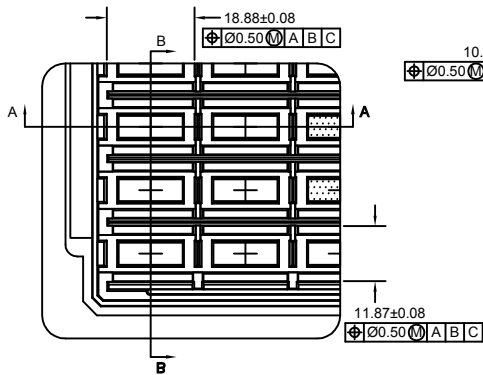
SECTION "K1-K1" SCALE : 8/1

<NOTE> 1. CONFORM TO EIA-541  
2. CELL COUNT IS 9 X 15 = 135.

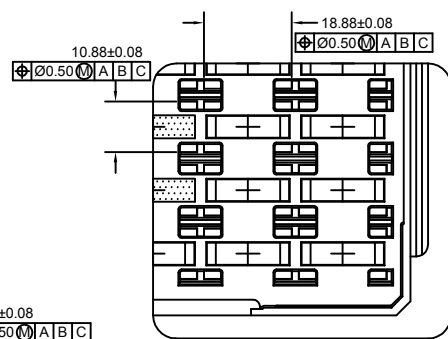
BLACK	TZ44-II-B
RED	TZ44-II-R

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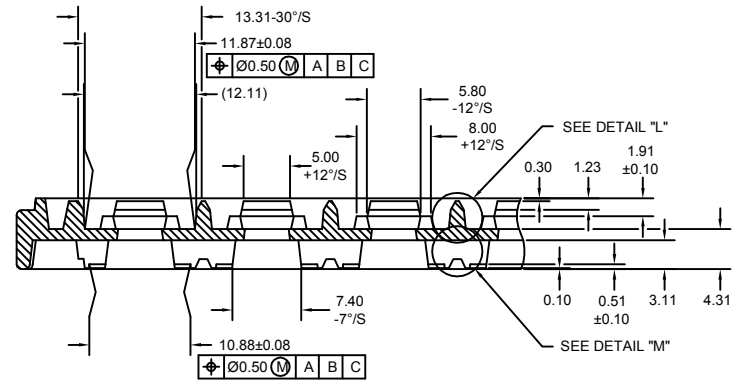
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN MILLIMETERS STANDARD TOLERANCES ON:		DESIGNED BY	DATE	CYPRESS Company Confidential	
DECIMALS	ANGLES	DRAWN BY	DATE	TITLE	
.X ± 0.25	± 0.5°	OMZ	11/14/14	TRAY, 44 TSOPII (DAEWON)	
.XX ± 0.13		CHECKED BY	DATE	SIZE	PART NO.
.XXX ± 0.13		OMZ	11/14/14	A	TZ44-II-*
		APPROVED BY	DATE	DWG NO	REV
		QAD	11/14/14	001-94661	**
MATERIAL	SEE NOTES	APPROVED BY	DATE	SCALED TO FIT	ENG'G REV
FINISH		LYO	11/14/14	00	00
		APPROVED BY	DATE	SHEET 1 of 2	



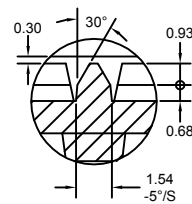
**TOP VIEW**  
**DETAIL "B"**  
SCALE : 2/1  
(FROM SHT.#1)



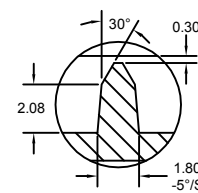
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**DETAIL "B"**  
SCALE : 2/1  
(FROM SHT.#1)



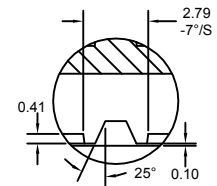
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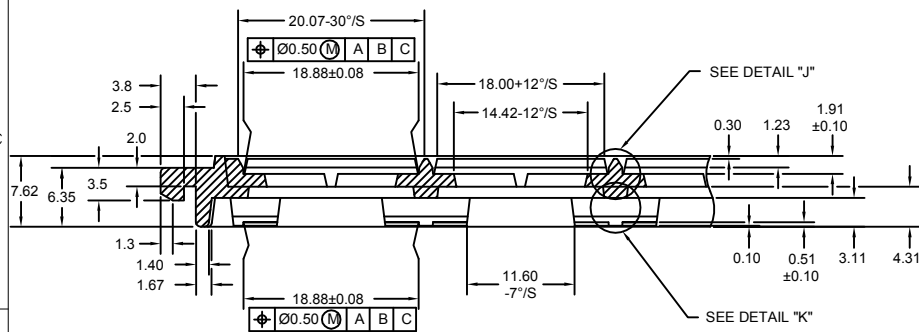
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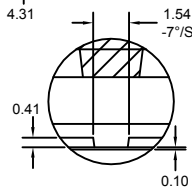
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SCALE : 10/1



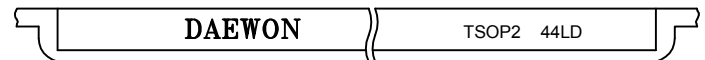
**DETAIL "M"**  
SCALE : 10/1



**SECTION "A-A"**  
SCALE : 4/1



**DETAIL "K"**  
SCALE : 10/1



**DETAIL "E"**  
(FROM SHT.#1)



**DETAIL "F"**  
(FROM SHT.#1)



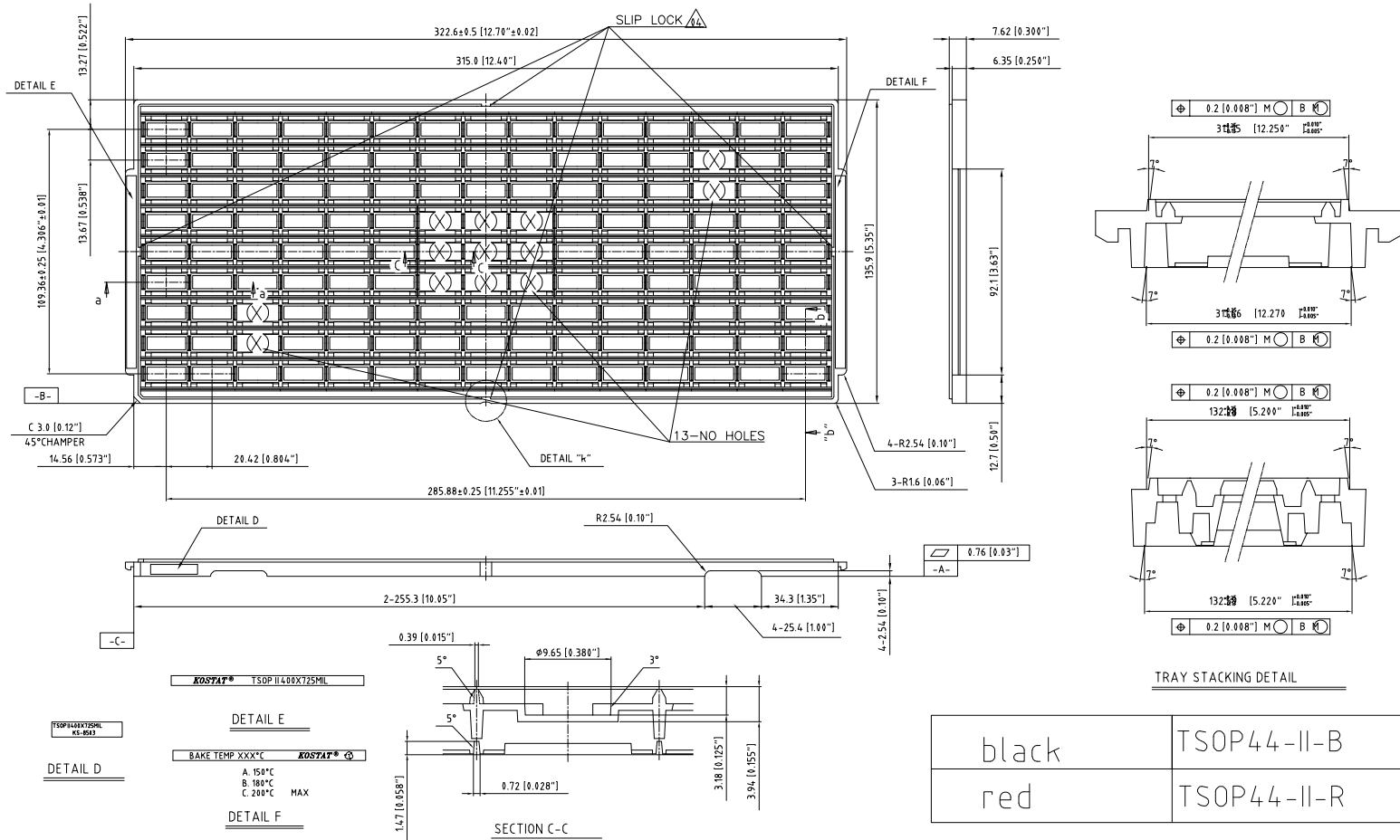
TITLE TRAY, 44 TSOPII (DAEWON)			
SIZE A	PART NO. TZ44-II-*	DWG NO 001-94661	REV **
SCALED TO FIT	ENG'G REV 00	SHEET 2 OF 2	

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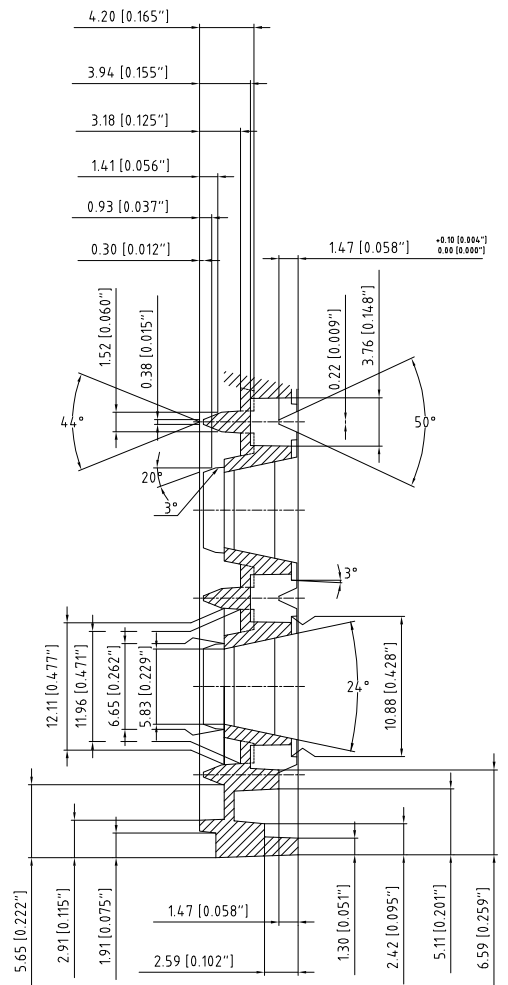
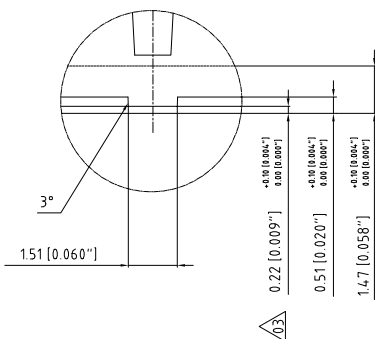
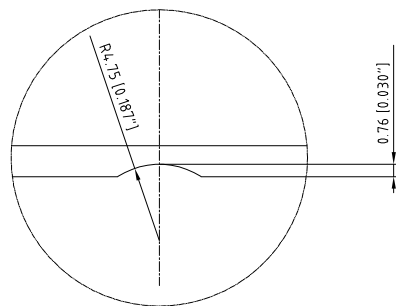
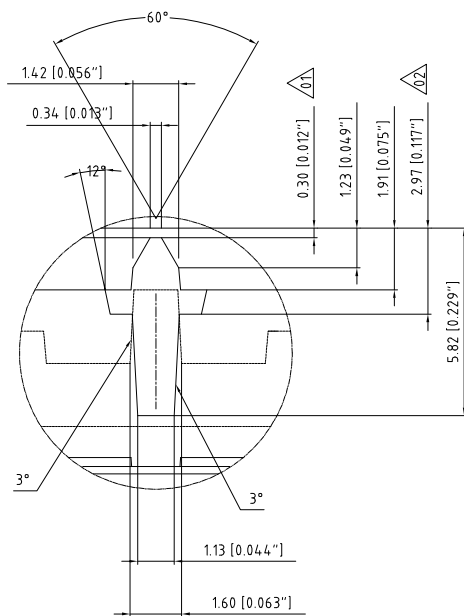
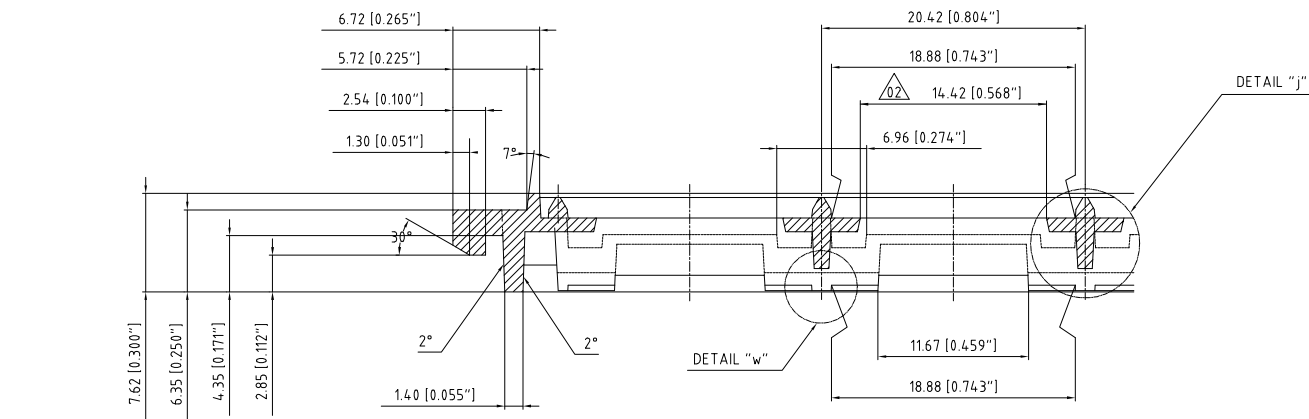
REVISIONS

PAGE	ZONE	REV	ECN	DESCRIPTION	DATE	APPROVED
1	-	**	51842	NEW RELEASE	09/03/97	
1	-	*A	250129	Change title from 44 TSOP TYPE II TRAY ( 9X15 ) to Tray, TSOPII 400X725 TSOPII 44, Change p/n from TSOPII-44 to TSOPII44-*, added table for blk and red p/n	08/10/04	
1	-	*B	3822678	Full revision of specs.	06/13/06	
1	-	*C	3850803	TRANSFER DRAWING TO CML UPDATED TEMPLATE	12/23/12	QAD/UYO
1	-	*D	6466627	Update Package Name on End Tab	01/30/19	LKSU
1,2	-	*E	6677732	Update Package Name on Side of Tray and Change Company Logo	09/19/19	LKSU




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UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN MILLIMETERS STANDARD TOLERANCES ON: DECIMALS ± 0.25 XX ± 0.13 XXX ± 0.13 XXXX ANGLES ± 1°	DESIGNED BY	DATE	CYPRESS Company Confidential
	DRAWN	DATE	
	CHK BY	DATE	
	APPROVED BY	DATE	
	APPROVED BY	DATE	
MATERIAL	SEE NOTE	TITLE	TRAY, TSOPII 400X725 TSOPII44
FINISH	SEE NOTE	SIZE	A
		PART NO.	TZ44-II-*
		DWG NO.	51-52029
		REV	*E
DO NOT SCALE			SHEET 1 OF 2



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UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN MILLIMETERS STANDARD TOLERANCES ON: DECIMALS ± 0.25 XX ± 0.25 XXX ± 0.13 XXXX ± 0.13 MATERIAL SEE NOTE FINISH SEE NOTE		DESIGNED BY DRAWN CHK BY APPROVED BY APPROVED BY	DATE DATE DATE DATE DATE	 <b>CYPRESS</b> Company Confidential TITLE TRAY, TS0P11 400X725 TS0P1144 SIZE A PART NO. TZ44-II-* DWG NO. 51-52029 REV *E
ANGLES ± 1° SEE NOTE SEE NOTE	KWTE RPZ LKSU CGON	09/19/19 09/19/19 09/19/19 09/19/19	DO NOT SCALE SHEET 2 OF 2	

Item	Marketing Part Number	Family
1	8909000785	ASync
2	8909000787	ASync
3	A2C02770600X	ASync
4	A2C03558300X	ASync
5	CY62126EV30LL-45ZSXI	ASync
6	CY62136ESL-45ZSXI	ASync
7	CY62136EV30LL-45ZSXI	ASync
8	CY62136FV30LL-45ZSXI	ASync
9	CY62137EV30LL-45ZSXI	ASync
10	CY62146ELL-45ZSXI	ASync
11	CY62146ESL-45ZSXI	ASync
12	CY62146EV30LL-45ZSXI	ASync
13	CY62146G30-45ZSXA	ASync
14	CY62146G-45ZSXA	ASync
15	CY621472G30-45ZSXA	ASync
16	CY62147EV30LL-45ZSXI	ASync
17	CY62147G30-45ZSXA	ASync
18	CY62147G30-55ZSXE	ASync
19	CY62157ELL-45ZSXI	ASync
20	CY62157ESL-45ZSXI	ASync
21	CY62157EV30LL-45ZSXI	ASync
22	CY62157H30-55ZSXE	ASync
23	CY62158ELL-45ZSXI	ASync
24	CY62158EV30LL-45ZSXI	ASync
25	CY7C1010DV33-10ZSXI	ASync
26	CY7C1011DV33-10ZSXI	ASync
27	CY7C1011G30-10ZSXA	ASync
28	CY7C1011G30-12ZSXE	ASync
29	CY7C1020CV26-15ZSXE	ASync
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43	CG10105AF	ASync
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52	CG8254AA	ASync
53	CG8264AA	ASync
54	CG8556AA	ASync
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