PCN#20191212001.1
New Tray for Select Devices
Final Change Notification

Date: January 14, 2020
To: TOKYO ELECTRON DEVICE (DSTR) PCN

Dear Customer:

This is an announcement of a change to a device that is currently offered by Texas Instruments. The details of this change are on the following pages.

We request you acknowledge receipt of this notification within **30** days of the date of this notice. Lack of acknowledgement of this notice within 30 days constitutes acceptance of the change. If you require additional data to support your evaluation, please request within 30 days.

The changes discussed within this PCN will not take effect any earlier than **90** days from the date of this notification, unless customer agreement has been reached on an earlier implementation of the change. This notification period is per TI's standard process.

This notice does not change the end-of-life status of any product. Should product affected be on a previously issued product withdrawal/discontinuance notice, this notification does not extend the life of that product or change the life time buy offering/discontinuance plan.

For questions regarding this notice, contact your local Field Sales Representative or the PCN Team (PCN_ww_admin_team@list.ti.com).

Sincerely,

PCN Team
SC Business Services

Products Affected:

The devices listed on this page are a subset of the complete list of affected devices. According to our records, these are the devices that you have purchased within the past twenty-four (24) months. The corresponding customer part number is also listed, if available.

DEVICE	CUSTOMER PART NUMBER
DS90C387AVJD/NOPB	null
TMS320DM365ZCED30	null
DS90CR483AVJD/NOPB	null
TM4C1294NCPDTI3	null
TMS320DM355CZCE216	null
TMS320DM365ZCE30	null
TMS320F28069PZPS	null
TSB43AB22APDT	null
TSB43AB23PDT	null
AM1808EZCE4	null
DS90CR483VJD/NOPB	null
DS90CR484VJD/NOPB	null
TM4C129ENCPDTI3	null
TMS320DM368ZCE	null
TMS320DM368ZCED	null
TSB43AB21APDT	null
TMS320F28075PZPT	null
XIO2001IPNP	null
OMAPL138EZCEA3	null
TMS320F28066PZPS	null
TMS320F28062PZPS	null
TMS320C6748EZCEA3	null
TM4C1290NCPDTT3	null
TM4C1292NCPDTI3	null
DS90C387VJDX/NOPB	null
TMS320DM365ZCE21	null
DS90C387VJD/NOPB	null
AM1808EZCED4	null
TMS320DM365ZCE27	null
AM3351BZCE30	null

Technical details of this Product Change follow on the next page(s).

PCN Number:	20191212001.1		PCN Date:	Jan. 14, 2020
Title:	New Tray for Select Devices			
Customer Contact:	PCN Manager	**Dept:**	Quality Services	
Proposed 1st Ship Date:	April 14, 2020			
Change Type:				

|					
☐	Assembly Site	☐	Assembly Process	☐	Assembly Materials
☐	Design	☐	Electrical Specification	☐	Mechanical Specification
☐	Test Site	☒	Packing/Shipping/Labeling	☐	Test Process
☐	Wafer Bump Site	☐	Wafer Bump Material	☐	Wafer Bump Process
☐	Wafer Fab Site	☐	Wafer Fab Materials	☐	Wafer Fab Process
		☐	Part number change		

PCN Details

Description of Change:

Texas Instruments is pleased to announce the qualification of a new tray for the devices listed below. A comparison summary of the tray differences as follows:
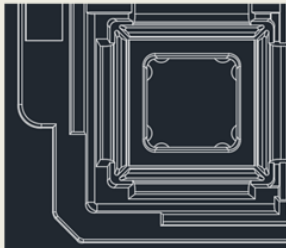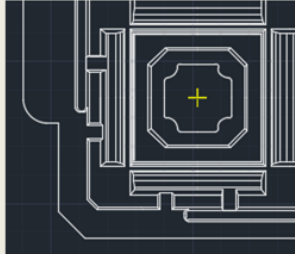
Group 1 Change Description - 14 x 14 TQFP Tray Change:

Tray Comparison Tables:
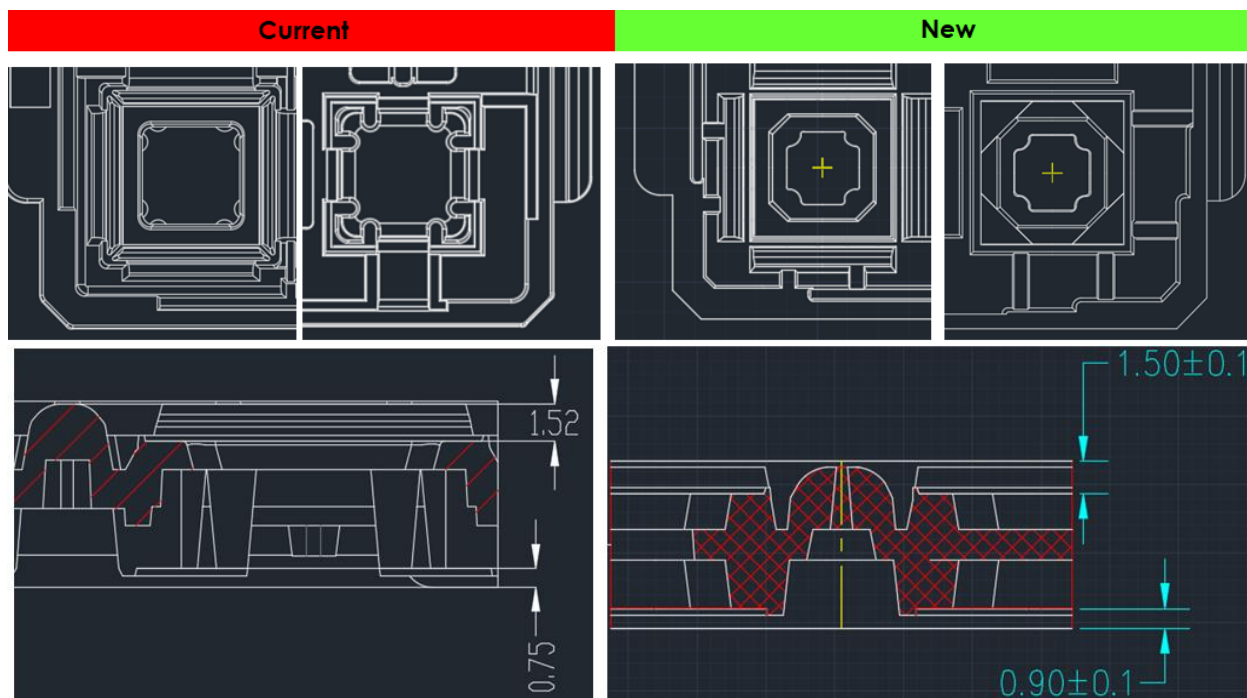
	4223432-0001	4224972-0001
Supplier	UBOT	Peak
Floor design	Circular square	Octagon
Cavity size	16.55 +/- 0.08	16.10 +/- 0.08
Seating height	1.52 mm (top) 0.75 mm (bottom)	1.5 mm(top) 0.9 mm (bottom)

Engineering Validation Results – Attribute Comparison

	EXISTING 4223432-0001	PROPOSED 4224972-0001	COMMENT CHANGE
* Supplier Part Number :	UQ1414 1.0 0615XB	ND 1414 1.0 0615 13 REV.G	CHANGE
* Gram Weight:	155	157	CHANGE
*Surface Resistivity :	10^4 - 10^10 ohm/sq	10^4 - 10^10 ohm/sq	UNCHANGE
* Package Size :	14x14x1.0	14x14x1.0	UNCHANGE
* Package Type :	TQFP	TQFP	UNCHANGE
Temperature Rating :	150C	150C	UNCHANGE
Matrix (Column X Rows) :	06x15	06x15	UNCHANGE
Fence design	Fillet	Fillet	UNCHANGE
Raw Material :	Carbon Fiber	Carbon Fiber	UNCHANGE
Color :	BLACK	BLACK	UNCHANGE
FLOOR DESIGN			CHANGE

Group 3 Change Description - 13 x 13 BGA Tray Change:

	Current	New
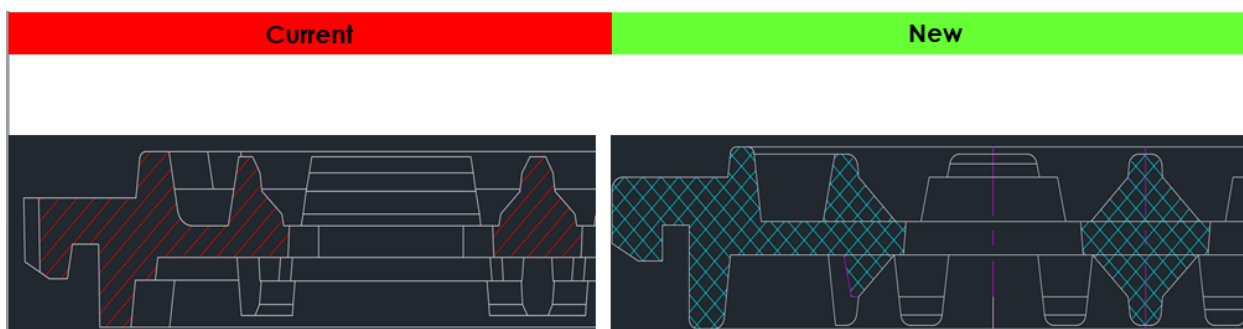
	4212436-0001	4224857-0001
Supplier	UBOT	Peak
Tray Fence	Chamfered	Fillet
Cavity size (LSL)	13.30 + 0.08 13.30 - 0.04	13.30 + 0.08 13.30 - 0.08
Seating ht	1.64 mm (top) 2.00 mm (bottom)	1.27 mm(top) 1.37 mm (bottom)

MATERIAL DESCRIPTION	EXISTING 4212436-0001	PROPOSED 4224857-0001	COMMENT CHANGE
* Supplier Name :	UBOT	Peak	CHANGE
* Supplier Part Number :	UB13131.40820XB	NX BG1313 1.74 0820 13	CHANGE
* Gram Weight:	110	132.5	CHANGE
* Surface Resistivity :	1 exp5 - 1 exp11	1 exp5 - 1 exp11	NO CHANGE
* Package Size :	13x13	13x13	NO CHANGE
* Package Type :	BGA	BGA	NO CHANGE
Temperature Rating :	150C	150C	NO CHANGE
Matrix (Column X Rows) :	8x20	8x20	NO CHANGE
Raw Material :	Carbon fiber	Carbon fiber	NO CHANGE
Thickness :	7.62 mm	7.62	NO CHANGE
Color :	BLACK	BLACK	NO CHANGE
Floor Design	Yes	Yes	NO CHANGE

ITEM DESCRIPTION	4212436-0001 UB13131.40820XB			4224857-0001 NX BG1313 1.74 0820 13			COMMENT
	DIM	Upper Limits	Lower Limits	DIM	Upper Limits	Lower Limits	
Overall Length	322.6	322.85	322.35	322.6	322.85	322.35	NO CHANGE
Layout Length	315.0	315.25	314.75	315.0	315.25	314.75	NO CHANGE
Layout Width	135.9	136.15	135.65	135.9	136.15	135.65	NO CHANGE
Layout Length on Top Stack frame	311.15	311.40	311.02	311.15	311.40	311.02	NO CHANGE
Layout Width on Top Stack frame	132.08	132.33	131.95	132.08	132.33	131.95	NO CHANGE
Layout Length on Bottom Stack frame	311.66	311.91	311.53	311.66	311.91	311.53	NO CHANGE
Layout Width on Bottom Stack frame	132.59	132.84	132.46	132.59	132.84	132.46	NO CHANGE
End Tab Length	92.1	92.35	91.85	92.1	92.35	91.85	NO CHANGE
Overall Height	7.62	7.75	7.49	7.62	7.75	7.49	NO CHANGE
Stack Height	1.27	1.40	1.14	1.27	1.40	1.14	NO CHANGE
Tray Matrix No.	08x20			08x20			NO CHANGE
Pitch M	15.45	15.58	15.32	15.45	15.58	15.32	NO CHANGE
Pitch M3	15.00	15.13	14.87	15.00	15.13	14.87	NO CHANGE
Pitch M1	15.00	15.13	14.87	15.00	15.13	14.87	NO CHANGE
Pitch M2	15.00	15.13	14.87	15.00	15.13	14.87	NO CHANGE
Distance of tray singulation from corner of tray	34.30	34.55	34.05	34.30	34.55	34.05	NO CHANGE
Tray singulation width	25.40	25.53	25.27	25.40	25.53	25.27	NO CHANGE
Tray Lifting surface height	2.54	2.67	2.41	2.54	2.67	2.41	NO CHANGE
Cavity Size (X)	13.30	13.38	13.26	13.30	13.38	13.22	CHANGE
Cavity Size (Y)	13.30	13.38	13.26	13.30	13.38	13.22	CHANGE
Pedestal Design	SLOPE			SLOPE			NO CHANGE
Package seating height (Top)	1.64	1.71	1.57	1.27	1.37	1.17	CHANGE
Package seating height (Bottom)	2.00	2.05	1.92	1.35	1.45	1.25	CHANGE

Reason for Change:

New tray offers improved centering of device in tray pocket

Anticipated impact on Fit, Form, Function, Quality or Reliability (positive / negative):

None

Changes to product identification resulting from this PCN:

New tray

Product Affected:

Group 1 Device list:

DS90C387AVJD/NOPB	MSP432E401YTPDT	TM4C129ENCPDTT3	TMS320F28378SPZPS
DS90C387RVJD/NOPB	RDX2528APDT	TMGHPE035PDT	TMS320F28379SPZPS
DS90C387VJD/NOPB	RDX2705APDT	TMS320F28062PZPS	TMS320F28379SPZPT

DS90C387VJDX/NOPB	SC4C1290KCPDTI2	TMS320F28065PZPS	TSB12LV01BPZT
DS90CF388AVJD/NOPB	SC4C1290KCPDTI3	TMS320F28065UPZPS	TSB12LV26PZT
DS90CF388VJD/NOPB	SC4C1294NCPDTI2	TMS320F28066PZPS	TSB41LV06APZP
DS90CR481VJD/NOPB	SCANSTA112VS/NOPB	TMS320F28067PZPS	TSB42AB4PDT
DS90CR482VS/NOPB	SCANSTA112VSX/NOPB	TMS320F28069PZPS	TSB43AB21AIPDTEP
DS90CR482VSX/NOPB	TM4C1290NCPDTT3	TMS320F28069UPZPS	TSB43AB21APDT
DS90CR483AVJD/NOPB	TM4C1292NCPDTI3	TMS320F28075PZPS	TSB43AB22APDT
DS90CR483VJD/NOPB	TM4C1292NCPDTT3	TMS320F28075PZPT	TSB43AB22PDT
DS90CR483VJDX/NOPB	TM4C1294KCPDTI3	TMS320F28076PZPS	TSB43AB23IPDTEP
DS90CR484AVJD/NOPB	TM4C1294KCPDTT3	TMS320F28374SPZPS	TSB43AB23PDT
DS90CR484VJD/NOPB	TM4C1294NCPDTI3	TMS320F28374SPZPT	TVP5158IPNP
DS90CR485VS/NOPB	TM4C1294NCPDTT3	TMS320F28375DPZPS	TVP5158PNP
DS90CR486VS/NOPB	TM4C129CNCPDTT3	TMS320F28375SPZPS	X2595A2PDT
F28PLC90DPZPS	TM4C129DNCPDTI3	TMS320F28375SPZPT	X2702EEPHIPDT
FDC5000PZPT	TM4C129DNCPDTT3	TMS320F28376SPZPS	XFF28377SPZPS
LM9740CCVS/NOPB	TM4C129EKCPDTI3	TMS320F28376SPZPT	XIO2001IPNP
LM9779CCVS/NOPB	TM4C129EKCPDTT3	TMS320F28377SPZPS	XIO2001PNP
LM9833CCVJD/NOPB	TM4C129ENCPDTI3	TMS320F28377SPZPT	
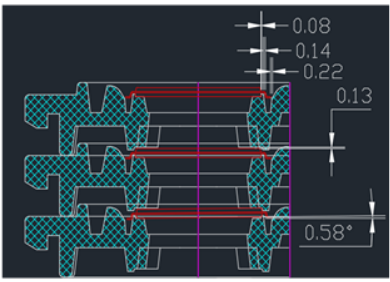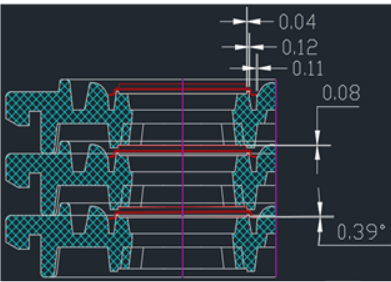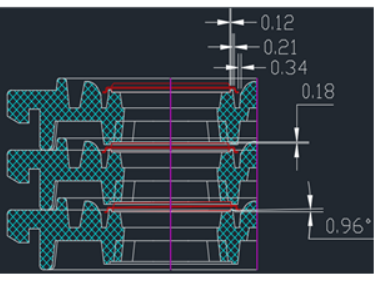
Group 3 Device list:

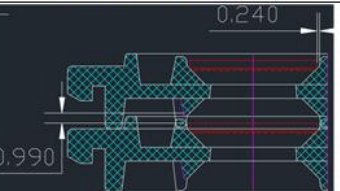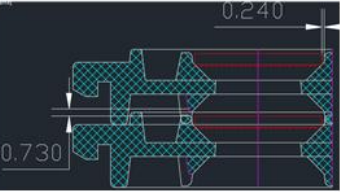|			
AM1806EZCE3	AM3354BZCED60	TMS320C6746EZCED4	TMS320DM365ZCE27
AM1806EZCE4	AM3356BZCEA60	TMS320C6748EZCE3	TMS320DM365ZCE30
AM1806EZCEA3	AM3358BZCE60	TMS320C6748EZCE4	TMS320DM365ZCED30
AM1806EZCED4	DMVA1ZCE	TMS320C6748EZCEA3	TMS320DM365ZCEF
AM1808EZCE3	DMVA25ZCE	TMS320C6748EZCED4	TMS320DM367ZCE
AM1808EZCE4	DMVA2ZCE	TMS320C6748EZCED4E	TMS320DM367ZCE30
AM1808EZCEA3	DMVA2ZCED	TMS320DM335DZCE216	TMS320DM367ZCED
AM1808EZCED4	OMAPL138EZCE3	TMS320DM335ZCE216	TMS320DM367ZCED30
AM3351BZCE30	OMAPL138EZCE4	TMS320DM335ZCE270	TMS320DM367ZCEF
AM3351BZCE60	OMAPL138EZCEA3	TMS320DM355CZCE216	TMS320DM368ZCE
AM3351BZCEA30	OMAPL138EZCEA3D	TMS320DM355CZCEA21	TMS320DM368ZCE48
AM3351BZCEA60	OMAPL138EZCED4	TMS320DM355DZCE135	TMS320DM368ZCED
AM3352BZCE30	OMAPL138EZCED4E	TMS320DM355DZCE216	TMS320DM368ZCED48F
AM3352BZCE60	OMAPL138EZCEML	TMS320DM355DZCE270	TMS320DM368ZCEDF
AM3352BZCEA30	SM32DM355GCEM216EP	TMS320DM355DZCEA21	TMS320DM368ZCEDUP
AM3352BZCEA60	SN12065850BZCE	TMS320DM355ZCE135	TMS320DM368ZCEF
AM3352BZCED30	SN12095260BZCE	TMS320DM355ZCE216	TMS320DM369ZCE
AM3352BZCED60	TLK3131ZWQ	TMS320DM355ZCE270	TMS320DM369ZCED
AM3354BZCE60	TMS320C6746EZCE3	TMS320DM355ZCEA216	TMS320DM369ZCEDF
AM3354BZCEA60	TMS320C6746EZCEA3	TMS320DM365ZCE21	TMS320DM369ZCEF

Group 1 Device Fit Analysis:
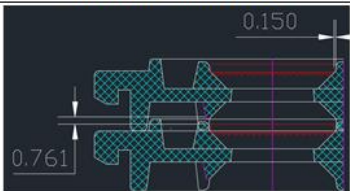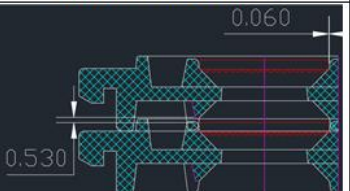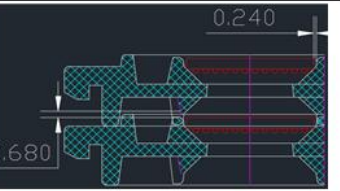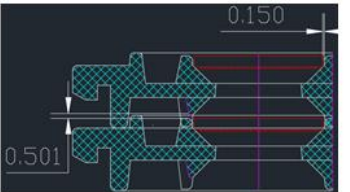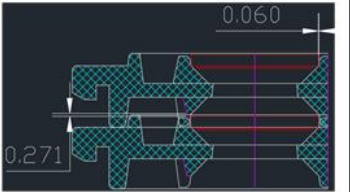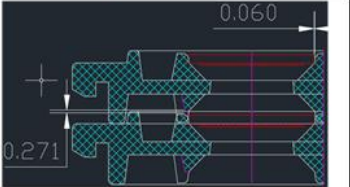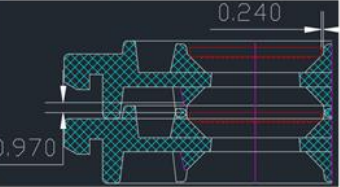
FIT ANALYSIS

PKG	NOMINAL TRAY vs NOMINAL PACKAGE	MINIMUM TRAY MAXIMUM PACKAGE	MAXIMUM TRAY vs MINIMUM PACKAGE
PZP, PDT, PNP, NEZ, PZT	0.08 / 0.14 / 0.22 / 0.13 / 0.58°	0.04 / 0.12 / 0.11 / 0.08 / 0.39°	0.12 / 0.21 / 0.34 / 0.18 / 0.96°

- X and Y clearance is not greater than 0.5 mm
- Rotation angle is less than 10 degrees
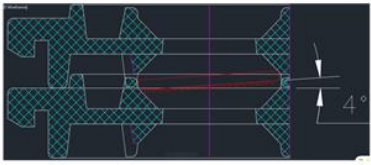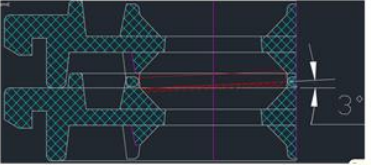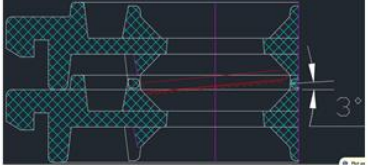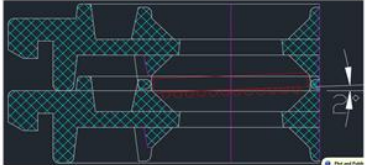
Group 3 Device Fit Analysis:
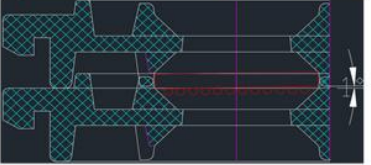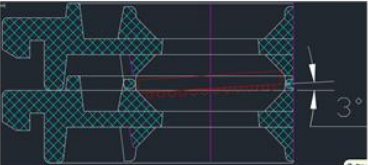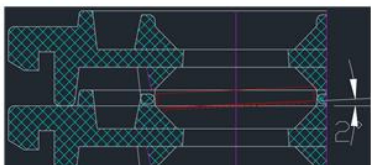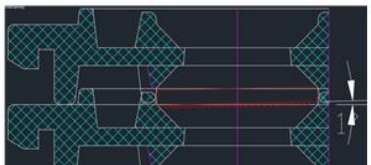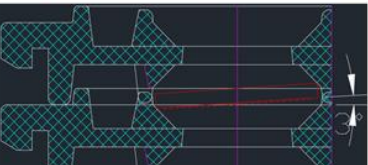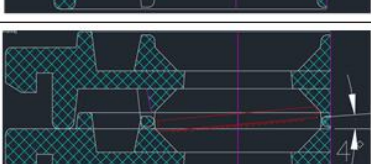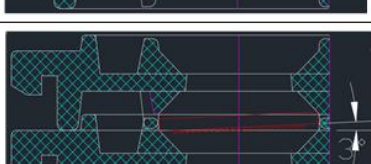
FIT ANALYSIS

PACKAGE	NOMINAL TRAY vs NOMINAL PACKAGE	TRAY MINIMUM vs PACKAGE MAXIMUM	TRAY MAXIMUM vs PACKAGE MINIMUM
ZCE/GCE	0.150 / 0.761	0.060 / 0.530	0.240 / 0.990
ZWQ	0.150 / 0.441	0.060 / 0.201	0.240 / 0.680
ZXK	0.150 / 0.501	0.060 / 0.271	0.240 / 0.730
ZAA	0.150 / 0.741	0.060 / 0.271	0.240 / 0.970

- X and Y clearance is not greater than 5 mm

7

FIT ANALYSIS

PACKAGE	NOMINAL TRAY vs NOMINAL PACKAGE	TRAY MINIMUM vs PACKAGE MAXIMUM	TRAY MAXIMUM vs PACKAGE MINIMUM
ZCE/GCE	4°	3°	3°
ZWQ	2°	1°	3°
ZXK	2°	1°	3°
ZAA	4°	3°	4°

- Angle is less than 10degrees

8

For questions regarding this notice, e-mails can be sent to the contacts shown below or your local Field Sales Representative.

Location	E-Mail
USA	PCNAmericasContact@list.ti.com
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
WW PCN Team	PCN_ww_admin_team@list.ti.com

IMPORTANT NOTICE AND DISCLAIMER

and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to TI's Terms of Sale (www.ti.com/legal/termsofsale.html) or other applicable terms available either on ti.com or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products.