



DATE: 4th December, 2020

PCN #: 2485 – Rev 2 - (Automotive)

PCN Title: Qualification of Internal "Diodes Technology (Cheng Du) Company Limited" (CAT) as Additional Assembly & Test Site Using PdCu or Au Bond Wire, And Qualification of Additional Wafer Source for Select Discrete Automotive Products

Dear Customer:

This is an announcement of change(s) to products that are currently being offered by Diodes Incorporated.

We request that you acknowledge receipt of this notification within 30 days of the date of this PCN. If you require samples for evaluation purposes, please make a request within 30 days as well. Otherwise, samples may not be built prior to this change. Please refer to the implementation date of this change as it is stated in the attached PCN form. Please contact your local Diodes sales representative to acknowledge receipt of this PCN and for any sample requests.

The changes announced in this PCN will not be implemented earlier than 90 days from the notification date stated in the attached PCN form.

Previously agreed upon customer specific change process requirements or device specific requirements will be addressed separately.

For questions or clarification regarding this PCN, please contact your local Diodes sales representative.

Sincerely,

Diodes Incorporated PCN Team



PRODUCT CHANGE NOTICE

PCN-2485 REV 2

Notification Date:	Implementation Date:	Product Family:	Change Type:	PCN #:
4 th December, 2020	4 th March, 2021	Discrete (Automotive)	Additional Assembly & Test Site / Assembly Bill of Materials / Additional Wafer Source / Part Top Marking	2485
TITLE				
Qualification of Internal "Diodes Technology (Cheng Du) Company Limited" (CAT) as Additional Assembly & Test Site Using PdCu or Au Bond Wire, And Qualification of Additional Wafer Source for Select Discrete Automotive Products				
DESCRIPTION OF CHANGE				
<p>This PCN is being issued to notify customers that in order to assure continuity of supply, Diodes has qualified internal "Diodes Technology (Cheng Du) Company Limited" (CAT) located in Chengdu, China as additional Assembly and Test site using PdCu or Au bond wire, and has also qualified Diodes internal BCD (Shanghai) Micro-Electronics Limited (SFAB2) in Shanghai China, as an additional wafer source for select automotive products listed in this PCN.</p> <p>Full electrical characterization and high reliability testing has been completed on representative part numbers to ensure no change to device functionality or electrical specifications in the datasheet. Refer to the attached Qualification Report (embedded in this file – to view, download this PCN file then open it with a PDF viewer to see the attached qual report).</p> <p>Rev 2: Added two additional pages of qualification data for SFAB2 to the attached (revised) qualification report.</p>				
IMPACT				
Continuity of Supply. There will be no change to the Form, Fit or Function of products affected, unless specifically indicated, i.e. some packages will have top marking changes or POD changes as outlined in the tables below. No change in datasheet parameters and product performance.				
PRODUCTS AFFECTED				
Please see the attached part list, top marking changes or POD changes in following Tables: Table 1 – Affected Part List to add CAT as A/T site using PdCu or Au bond wire. Table 2 – Affected Part List to add CAT as A/T site using PdCu or Au bond wire, and add Diodes internal SFAB2 as a wafer source Table 3 – Affected Part List to add Diodes internal SFAB2 as a wafer source Table 4 – Marking Code Format for affected packages Table 5 – POD Format for affected package				
WEB LINKS				
Manufacturer's Notice:	https://www.diodes.com/quality/product-change-notices/diodes-product-change-notices/			
For More Information Contact:	http://www.diodes.com/contacts			
Data Sheet:	http://www.diodes.com/products			
DISCLAIMER				
Unless a Diodes Incorporated Sales representative is contacted in writing within 30 days of the posting of this notice, all changes described in this announcement are considered approved.				

Table 1 - Affected Part List to add CAT as A/T site using PdCu or Au bond wire

ADTA144EUAQ-13*	DMN2065UWQ-7*	DMNH4011SPSQ-13	DMP4011SPSQ-13	DMTH32M5LPSQ-13***	DMTH6005LPSQ-13
ADTA144ECAQ-13*	DMN3033LSDQ-13	DMNH6012SPSQ-13	DMP4013SPSQ-13	DMTH4004LPSQ-13	DMTH6006LPSWQ-13
ADTC144EUAQ-13*	DMN3033LSNQ-7	DMNH6021SPDQ-13	DMP4065SQ-7	DMTH4004SPSQ-13	DMTH6010LPDQ-13
BAT54TQ-7-F*	DMN4031SSDQ-13	DMNH6021SPDQ-13	DMP6350SQ-7	DMTH4005SPSQ-13	DMTH6010LPSQ-13
BC817-25Q-7-F*	DMN4035LQ-7	DMNH6021SPSQ-13***	DMPH1006UPSQ-13***	DMTH4007LPSQ-13	DMTH6010LPSWQ-13
BCR420UW6Q-7*	DMN53D0LQ-13*	DMNH6042SPDQ-13	DMPH4013SPSQ-13	DMTH4007SPDQ-13	DMTH6012LPSWQ-13
DMC3021LSDQ-13	DMN53D0LQ-7*	DMNH6042SPSQ-13***	DMPH6050SPDQ-13	DMTH4008LPSQ-13***	DMTH6016LPDQ-13
DMG1013UWQ-13*	DMN55D0UTQ-7**	DMP2160UWQ-7*	DMPH6050SSDQ-13	DMTH4011SPDQ-13	DMTH6016LPSQ-13***
DMG1013UWQ-7*	DMN5L06DMKQ-7*	DMP2240UWQ-7*	DMTH10H009LPSQ-13	DMTH4014LPDQ-13	DMTH8008SPSQ-13
DMG3420UQ-7	DMN5L06WKQ-7*	DMP3007SPSQ-13	DMTH10H010SPSQ-13	DMTH43M8LPSQ-13***	DMTH8012LPSQ-13
DMN10H220LQ-7	DMN61D9UWQ-13*	DMP3010LPSQ-13	DMTH10H025LPSQ-13***	DMTH6004LPSQ-13	DMTH84M1SPSQ-13
DMN2004DWKQ-7*	DMN61D9UWQ-7*	DMP3028LPSQ-13	DMTH3004LPSQ-13	DMTH6004SPSQ-13	ZXMN2F30FHQTA
DMN2004WKQ-7*	DMNH4005SPSQ-13				

Table 2 - Affected Part List to add CAT as A/T site using PdCu or Au bond wire, and add Diodes internal SFAB2 as a wafer source

2N7002DWAQ-7*	2N7002TQ-7-F**	BSS138DWQ-13*	BSS84DWQ-7**	DMN601WKQ-7*	DMP4015SPSQ-13
2N7002DWQ-13-F**	BS870Q-7-F*	BSS138DWQ-7*	BSS84Q-13-F**	DMN6140LQ-13*	DMP4015SSSQ-13**
2N7002DWQ-7-F**	BSN20Q-7*	BSS138Q-7-F**	BSS84Q-7-F**	DMN6140LQ-7*	DMPH4015SPSQ-13
2N7002KQ-13**	BSS123Q-13**	BSS8402DWQ-13**	BSS84WQ-7-F*	DMN65D8LQ-13*	DMPH4015SSSQ-13
2N7002KQ-7**	BSS123Q-7**	BSS8402DWQ-7**	DMN601DWKQ-7*	DMN65D8LQ-7*	MMBF170Q-7-F*
2N7002Q-7-F**	BSS123WQ-7-F*	BSS84DWQ-13**	DMN601WKQ-13*		

Table 3 - Affected Part List to add Diodes internal SFAB2 as a wafer source

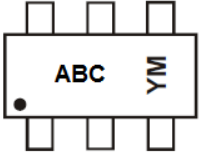
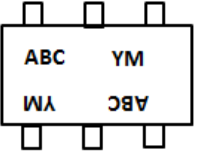
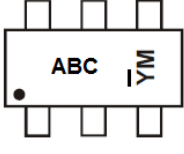
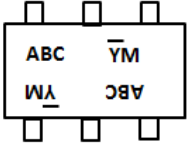
2N7002AQ-13	2N7002AQ-7	DMN65D8LDWQ-7	DMP4010SK3Q-13	DMP4015SK3Q-13	DMPH4015SK3Q-13
-------------	------------	---------------	----------------	----------------	-----------------

Note: “**” Change bond wire from Cu to PdCu
 Note: “***” Change bond wire from Au to PdCu
 Note: “****” Change bond wire from Cu to Au

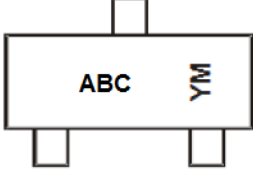
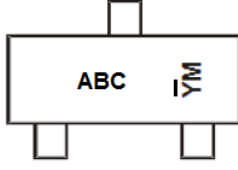
Table 4 - Marking Code Formats

SOT-23	Current Site	New Site
	SAT (Diodes Internal AT site Shanghai, China)	CAT (Diodes Internal AT Site Chengdu, China) Bar “-” above Y indicates CAT
	Marking format example	Marking format example

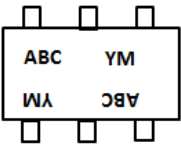
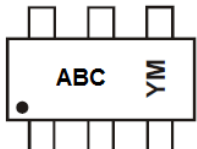
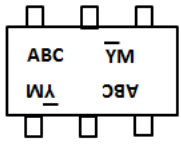
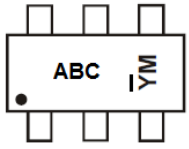
SOT-26

SAT (Diodes Internal AT site Shanghai, China)		CAT (Diodes Internal AT Site Chengdu, China) Bar "-" above Y indicates CAT	
Marking format example		Marking format example	
			

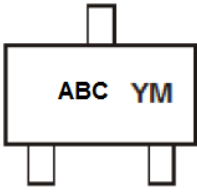
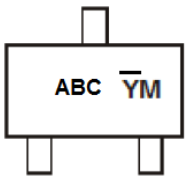
SOT-323

SAT (Diodes Internal AT site Shanghai, China)		CAT (Diodes Internal AT Site Chengdu, China) Bar "-" above Y indicates CAT	
Marking format example		Marking format example	
			

SOT-363

SAT (Diodes Internal AT site Shanghai, China)		CAT (Diodes Internal AT Site Chengdu, China) Bar "-" above Y indicates CAT	
Marking format example		Marking format example	
			

SOT-523

SAT (Diodes Internal AT site Shanghai, China)		CAT (Diodes Internal AT Site Chengdu, China) Bar "-" above Y indicates CAT	
Marking format example		Marking format example	
			

SSOT-23

SAT (Diodes Internal AT site Shanghai, China)	CAT (Diodes Internal AT Site Chengdu, China) Bar "-" above Y indicates CAT
Marking format example	Marking format example

SOP-8L

SAT (Diodes Internal AT site Shanghai, China)	CAT (Diodes Internal AT Site Chengdu, China) Bar "-" above Y indicates CAT
Marking format example	Marking format example

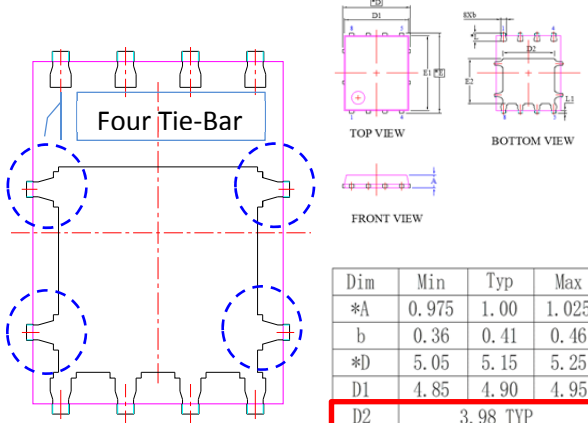
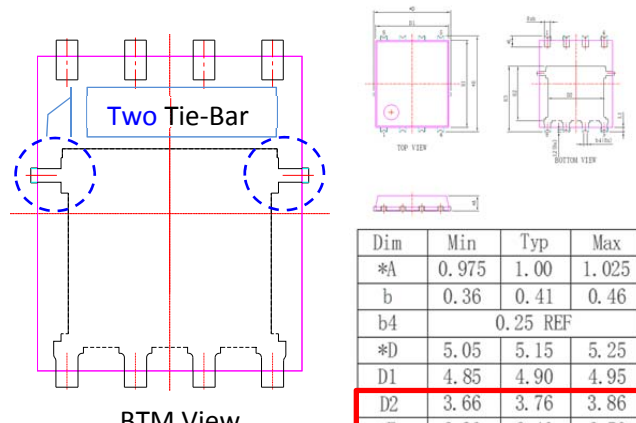
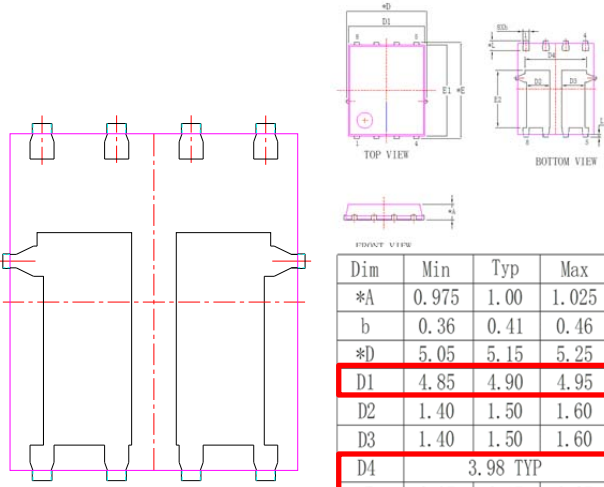
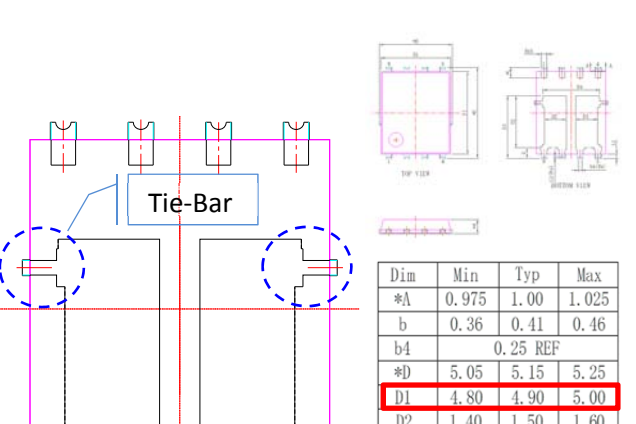
SC-59

SAT (Diodes Internal AT site Shanghai, China)	CAT (Diodes Internal AT Site Chengdu, China) Bar "-" above Y indicates CAT
Marking format example	Marking format example

PowerDI5060-8L

SAT (Current Diodes Internal AT site Shanghai, China)	CAT (Diodes Internal AT Site Chengdu, China) Bar "-" above Y indicates CAT
Marking format example	Marking format example
<p>DII = Manufacturer's Marking ABCDEFG = Product Type Marking Code YYWW = Date Code Marking YY = Year (ex: 13 = 2013) WW = Week (01 - 53)</p>	<p>DII = Manufacturer's Marking ABCDEFG = Product Type Marking Code YYWW = Date Code Marking YY = Year (ex: 13 = 2013) WW = Week (01 - 53)</p> <p>Other marking layout also will follow change for site Identifier</p>

Table 5 - POD Format for PowerDI5060-8L

SAT	CAT																																																																																																																
PowerDI5060-8L Type (Without wettable flank)	SWP-PoweDI5060-8L Q Type (With wettable flank)																																																																																																																
Base line: SAT exist POD design	Change from four tie-bars to two tie-bars																																																																																																																
 <p align="center">Four Tie-Bar</p> <table border="1"> <thead> <tr> <th>Dim</th> <th>Min</th> <th>Typ</th> <th>Max</th> </tr> </thead> <tbody> <tr> <td>*A</td> <td>0.975</td> <td>1.00</td> <td>1.025</td> </tr> <tr> <td>b</td> <td>0.36</td> <td>0.41</td> <td>0.46</td> </tr> <tr> <td>*D</td> <td>5.05</td> <td>5.15</td> <td>5.25</td> </tr> <tr> <td>D1</td> <td>4.85</td> <td>4.90</td> <td>4.95</td> </tr> <tr> <td>D2</td> <td></td> <td>3.98 TYP</td> <td></td> </tr> <tr> <td>*F</td> <td>6.05</td> <td>6.15</td> <td>6.25</td> </tr> <tr> <td>E1</td> <td>5.75</td> <td>5.80</td> <td>5.85</td> </tr> <tr> <td>E2</td> <td>3.56</td> <td>3.66</td> <td>3.725</td> </tr> <tr> <td>*L</td> <td>0.51</td> <td>0.61</td> <td>0.71</td> </tr> <tr> <td>L1</td> <td>0.10</td> <td>0.175</td> <td>0.20</td> </tr> </tbody> </table> <p align="center">BTM View</p>	Dim	Min	Typ	Max	*A	0.975	1.00	1.025	b	0.36	0.41	0.46	*D	5.05	5.15	5.25	D1	4.85	4.90	4.95	D2		3.98 TYP		*F	6.05	6.15	6.25	E1	5.75	5.80	5.85	E2	3.56	3.66	3.725	*L	0.51	0.61	0.71	L1	0.10	0.175	0.20	 <p align="center">Two Tie-Bar</p> <table border="1"> <thead> <tr> <th>Dim</th> <th>Min</th> <th>Typ</th> <th>Max</th> </tr> </thead> <tbody> <tr> <td>*A</td> <td>0.975</td> <td>1.00</td> <td>1.025</td> </tr> <tr> <td>b</td> <td>0.36</td> <td>0.41</td> <td>0.46</td> </tr> <tr> <td>b4</td> <td></td> <td>0.25 REF</td> <td></td> </tr> <tr> <td>*D</td> <td>5.05</td> <td>5.15</td> <td>5.25</td> </tr> <tr> <td>D1</td> <td>4.85</td> <td>4.90</td> <td>4.95</td> </tr> <tr> <td>D2</td> <td>3.66</td> <td>3.76</td> <td>3.86</td> </tr> <tr> <td>*E</td> <td>6.30</td> <td>6.40</td> <td>6.50</td> </tr> <tr> <td>E1</td> <td>5.75</td> <td>5.80</td> <td>5.85</td> </tr> <tr> <td>E2</td> <td>3.56</td> <td>3.66</td> <td>3.76</td> </tr> <tr> <td>*L</td> <td>0.635</td> <td>0.735</td> <td>0.835</td> </tr> <tr> <td>L1</td> <td>0.275</td> <td>0.300</td> <td>0.325</td> </tr> <tr> <td>L2</td> <td></td> <td>0.05 REF</td> <td></td> </tr> </tbody> </table> <p align="center">BTM View</p>	Dim	Min	Typ	Max	*A	0.975	1.00	1.025	b	0.36	0.41	0.46	b4		0.25 REF		*D	5.05	5.15	5.25	D1	4.85	4.90	4.95	D2	3.66	3.76	3.86	*E	6.30	6.40	6.50	E1	5.75	5.80	5.85	E2	3.56	3.66	3.76	*L	0.635	0.735	0.835	L1	0.275	0.300	0.325	L2		0.05 REF																	
Dim	Min	Typ	Max																																																																																																														
*A	0.975	1.00	1.025																																																																																																														
b	0.36	0.41	0.46																																																																																																														
*D	5.05	5.15	5.25																																																																																																														
D1	4.85	4.90	4.95																																																																																																														
D2		3.98 TYP																																																																																																															
*F	6.05	6.15	6.25																																																																																																														
E1	5.75	5.80	5.85																																																																																																														
E2	3.56	3.66	3.725																																																																																																														
*L	0.51	0.61	0.71																																																																																																														
L1	0.10	0.175	0.20																																																																																																														
Dim	Min	Typ	Max																																																																																																														
*A	0.975	1.00	1.025																																																																																																														
b	0.36	0.41	0.46																																																																																																														
b4		0.25 REF																																																																																																															
*D	5.05	5.15	5.25																																																																																																														
D1	4.85	4.90	4.95																																																																																																														
D2	3.66	3.76	3.86																																																																																																														
*E	6.30	6.40	6.50																																																																																																														
E1	5.75	5.80	5.85																																																																																																														
E2	3.56	3.66	3.76																																																																																																														
*L	0.635	0.735	0.835																																																																																																														
L1	0.275	0.300	0.325																																																																																																														
L2		0.05 REF																																																																																																															
PowerDI5060-8L E Type (Without wettable flank)	SWP-PoweDI5060-8L R Type (With wettable flank)																																																																																																																
Base line: SAT exist POD design	Different tie-bar shape																																																																																																																
 <p align="center">BTM View</p> <table border="1"> <thead> <tr> <th>Dim</th> <th>Min</th> <th>Typ</th> <th>Max</th> </tr> </thead> <tbody> <tr> <td>*A</td> <td>0.975</td> <td>1.00</td> <td>1.025</td> </tr> <tr> <td>b</td> <td>0.36</td> <td>0.41</td> <td>0.46</td> </tr> <tr> <td>*D</td> <td>5.05</td> <td>5.15</td> <td>5.25</td> </tr> <tr> <td>D1</td> <td>4.85</td> <td>4.90</td> <td>4.95</td> </tr> <tr> <td>D2</td> <td>1.40</td> <td>1.50</td> <td>1.60</td> </tr> <tr> <td>D3</td> <td>1.40</td> <td>1.50</td> <td>1.60</td> </tr> <tr> <td>D4</td> <td></td> <td>3.98 TYP</td> <td></td> </tr> <tr> <td>*E</td> <td>6.05</td> <td>6.15</td> <td>6.25</td> </tr> <tr> <td>E1</td> <td>5.75</td> <td>5.80</td> <td>5.85</td> </tr> <tr> <td>E2</td> <td>3.56</td> <td>3.66</td> <td>3.76</td> </tr> <tr> <td>*L</td> <td>0.51</td> <td>0.61</td> <td>0.71</td> </tr> <tr> <td>L1</td> <td>0.10</td> <td>0.175</td> <td>0.20</td> </tr> </tbody> </table>	Dim	Min	Typ	Max	*A	0.975	1.00	1.025	b	0.36	0.41	0.46	*D	5.05	5.15	5.25	D1	4.85	4.90	4.95	D2	1.40	1.50	1.60	D3	1.40	1.50	1.60	D4		3.98 TYP		*E	6.05	6.15	6.25	E1	5.75	5.80	5.85	E2	3.56	3.66	3.76	*L	0.51	0.61	0.71	L1	0.10	0.175	0.20	 <p align="center">Tie-Bar</p> <p align="center">BTM View</p> <table border="1"> <thead> <tr> <th>Dim</th> <th>Min</th> <th>Typ</th> <th>Max</th> </tr> </thead> <tbody> <tr> <td>*A</td> <td>0.975</td> <td>1.00</td> <td>1.025</td> </tr> <tr> <td>b</td> <td>0.36</td> <td>0.41</td> <td>0.46</td> </tr> <tr> <td>b4</td> <td></td> <td>0.25 REF</td> <td></td> </tr> <tr> <td>*D</td> <td>5.05</td> <td>5.15</td> <td>5.25</td> </tr> <tr> <td>D1</td> <td>4.80</td> <td>4.90</td> <td>5.00</td> </tr> <tr> <td>D2</td> <td>1.40</td> <td>1.50</td> <td>1.60</td> </tr> <tr> <td>D3</td> <td>1.40</td> <td>1.50</td> <td>1.60</td> </tr> <tr> <td>D4</td> <td>3.88</td> <td>3.98</td> <td>4.08</td> </tr> <tr> <td>*E</td> <td>6.30</td> <td>6.40</td> <td>6.50</td> </tr> <tr> <td>E1</td> <td>5.75</td> <td>5.80</td> <td>5.85</td> </tr> <tr> <td>E2</td> <td>3.56</td> <td>3.66</td> <td>3.76</td> </tr> <tr> <td>*L</td> <td>0.635</td> <td>0.735</td> <td>0.835</td> </tr> <tr> <td>L1</td> <td>0.275</td> <td>0.300</td> <td>0.325</td> </tr> <tr> <td>L2</td> <td></td> <td>0.05 REF</td> <td></td> </tr> </tbody> </table>	Dim	Min	Typ	Max	*A	0.975	1.00	1.025	b	0.36	0.41	0.46	b4		0.25 REF		*D	5.05	5.15	5.25	D1	4.80	4.90	5.00	D2	1.40	1.50	1.60	D3	1.40	1.50	1.60	D4	3.88	3.98	4.08	*E	6.30	6.40	6.50	E1	5.75	5.80	5.85	E2	3.56	3.66	3.76	*L	0.635	0.735	0.835	L1	0.275	0.300	0.325	L2		0.05 REF	
Dim	Min	Typ	Max																																																																																																														
*A	0.975	1.00	1.025																																																																																																														
b	0.36	0.41	0.46																																																																																																														
*D	5.05	5.15	5.25																																																																																																														
D1	4.85	4.90	4.95																																																																																																														
D2	1.40	1.50	1.60																																																																																																														
D3	1.40	1.50	1.60																																																																																																														
D4		3.98 TYP																																																																																																															
*E	6.05	6.15	6.25																																																																																																														
E1	5.75	5.80	5.85																																																																																																														
E2	3.56	3.66	3.76																																																																																																														
*L	0.51	0.61	0.71																																																																																																														
L1	0.10	0.175	0.20																																																																																																														
Dim	Min	Typ	Max																																																																																																														
*A	0.975	1.00	1.025																																																																																																														
b	0.36	0.41	0.46																																																																																																														
b4		0.25 REF																																																																																																															
*D	5.05	5.15	5.25																																																																																																														
D1	4.80	4.90	5.00																																																																																																														
D2	1.40	1.50	1.60																																																																																																														
D3	1.40	1.50	1.60																																																																																																														
D4	3.88	3.98	4.08																																																																																																														
*E	6.30	6.40	6.50																																																																																																														
E1	5.75	5.80	5.85																																																																																																														
E2	3.56	3.66	3.76																																																																																																														
*L	0.635	0.735	0.835																																																																																																														
L1	0.275	0.300	0.325																																																																																																														
L2		0.05 REF																																																																																																															