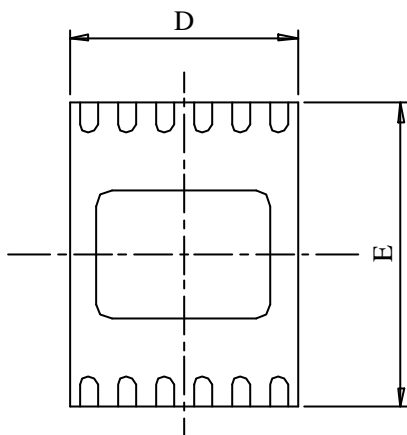
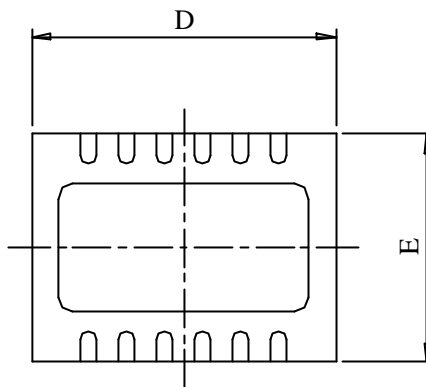


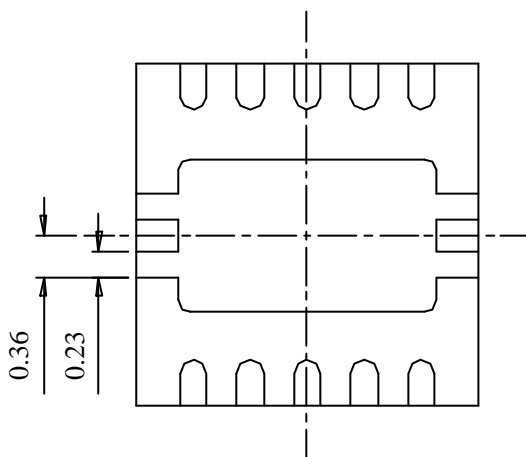
PACKAGE LAYOUT



TYPE 1
(Rectangular $D < E$)



TYPE 2
(Rectangular $D > E$)



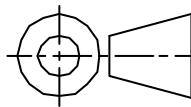
TYPE 3
Exposed Tie Bar Configuration

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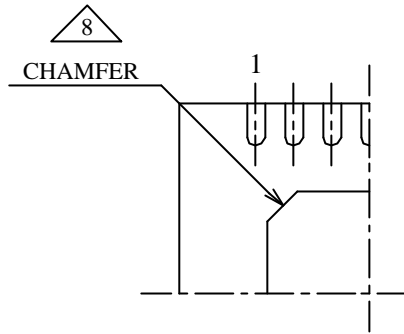
E

DWG NO: PKGMLPD	
APP'D	KH LEE
CHECKED	SN TAN
CHECKED	ARAVEN
DATE	2006-MAY-24

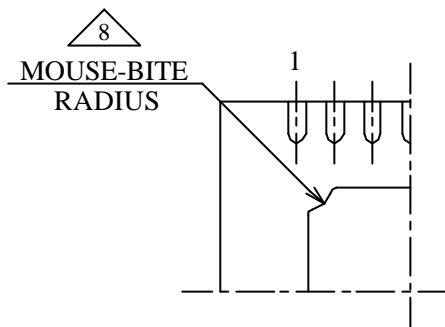


DWG TITLE:
MLP DUAL FAMILY
PACKAGE OUTLINE

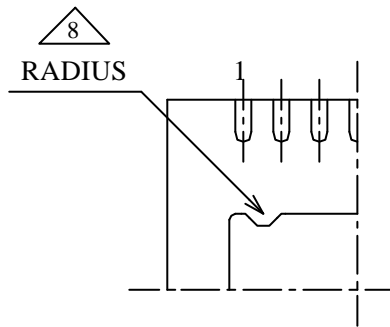
PIN#1 ID CONFIGURATION
(BOTTOM VIEW)



TYPE A ID



TYPE B ID



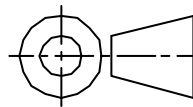
TYPE C ID

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

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APP'D	KH LEE
CHECKED	SN TAN
CHECKED	ARAVEN
DATE	2006-MAY-24

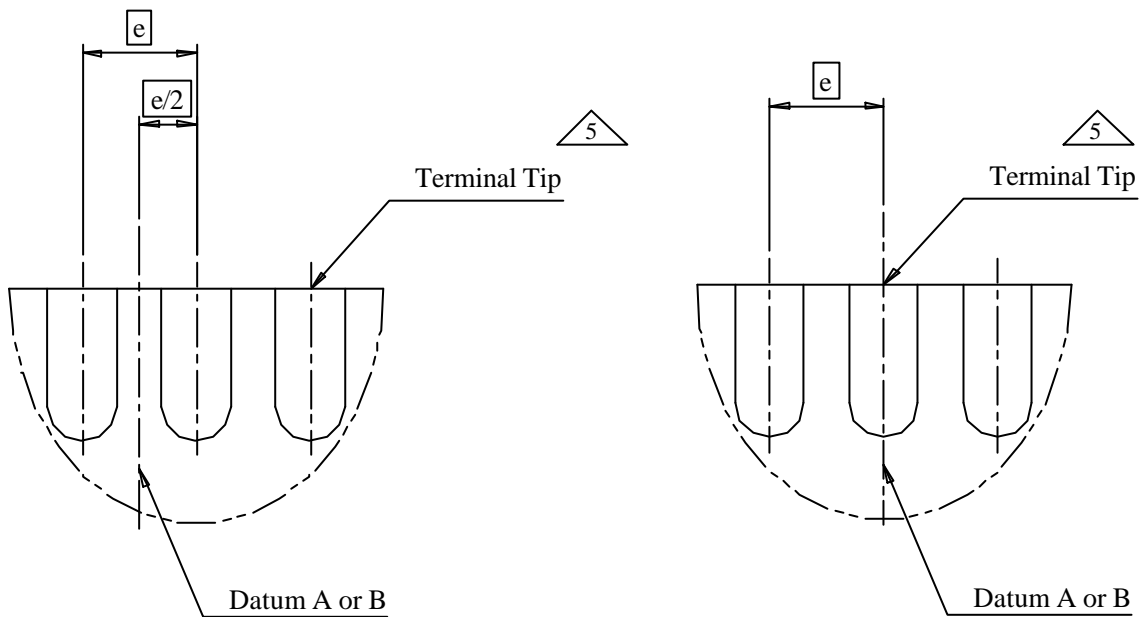


DWG TITLE:
MLP DUAL FAMILY
PACKAGE OUTLINE

TABLE 1

VARIATION DESIGNATORS  							
FIRST DIGIT CODE		SECOND DIGIT CODE		THIRD DIGIT CODE		FOURTH DIGIT CODE	
OVERALL HEIGHT		BODY LENGTH		BODY WIDTH		TERMINAL PITCH	
A	LETTER CODE	D	LETTER CODE	E	LETTER CODE	e	LETTER CODE
1.00 max	V	1.0	A	1.0	A	0.95	A
0.80 max	W	1.5	B	1.5	B	0.80	B
---	---	2.0	C	2.0	C	0.65	C
---	---	2.5	D	2.5	D	0.50	D
---	---	3.0	E	3.0	E	0.40	E
---	---	3.5	F	3.5	F	---	---
---	---	4.0	G	4.0	G	---	---
---	---	4.5	H	4.5	H	---	---
---	---	5.0	J	5.0	J	---	---
---	---	5.5	K	5.5	K	---	---
---	---	6.0	L	6.0	L	---	---

EXAMPLE: A 10 terminal HWF-PDSO-N which is 4mm long (D) by 5mm wide (E) and a pitch of 0.80mm will be variation WGJJB



EVEN TERMINAL SIDE

ODD TERMINAL SIDE

DETAIL B

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E

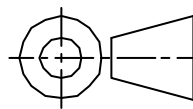
DWG NO: PKGMLPD

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CHECKED ARAVEN

DATE 2006-MAY-24



DWG TITLE:

MLP DUAL FAMILY
PACKAGE OUTLINE

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TABLE 2

COMMON DIMENSION						
	TOLERANCE OF FORM AND POSITION					
	e=0.95	e=0.80	e=0.65	e=0.50	e=0.40	
aaa	0.15	0.15	0.15	0.15	0.15	
bbb	0.10	00.10	0.10	0.10	0.07	
ccc	0.10	0.10	0.10	0.10	0.10	
ddd	0.05	0.05	0.05	0.05	0.05	
eee	0.08	0.08	0.08	0.08	0.08	
ggg	0.10	0.10	0.10	0.10	0.10	
NOTES	1,2					
ISSUE	C					

TABLE 3

COMMON DIMENSION						
SYMBOL	V : very thin			W : very very thin		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.70	0.75	0.80
A1	0.00	0.02	0.05	0.00	0.02	0.05
A3	---	0.20 ref	---	---	0.20 ref	---
θ	0	---	14°	0	---	14°
K	0.20	---	---	0.20	---	---
NOTES	1,2					
ISSUE	C					

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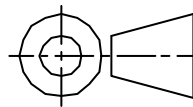
DWG NO: PKGMLPD

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DWG TITLE:

MLP DUAL FAMILY
PACKAGE OUTLINE

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TABLE 4

COMMON DIMENSIONS						
PITCH	LEAD WIDTH [b]					
	MIN	NOM	MAX			
0.95	0.30	0.40	0.45			
0.80	0.25	0.30	0.35			
0.65	0.25	0.30	0.35			
0.50	0.18	0.25	0.30			
0.40	0.15	0.20	0.25			
NOTES	1,2,5					
ISSUE	B					

TABLE 5

SPECIFIC DIMENSION VARIATIONS				
VARIATION		LEAD WIDTH [b]		
		MIN	NOM	MAX
VCCC-NJ1	WCCC-NJ1	0.20	0.25	0.30
VECD-NJ1	-	0.18	0.23	0.30
VEEA-NJ1	WEEA-NJ1	0.25	0.35	0.40
VEEA-NJ5	WEEA-NJ5	0.25	0.35	0.40
VEEA-2NJ1	WEEA-2NJ1	0.23	0.30	0.38
VEED-5NJ1	WEED-5NJ1	0.18	0.23	0.30
VEED-2NJ2	-	0.20	0.25	0.30
VGGC-0NJ1	WGGC-0NJ1	0.23	0.30	0.38
VGGB-NJ1	WGGB-NJ1	0.23	0.30	0.38
VGGB-0NJ1	WGGB-0NJ1	0.23	0.30	0.38
VJGD-2NJ1	WJGD-2NJ1	0.20	0.25	0.30

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E

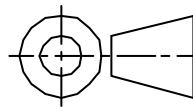
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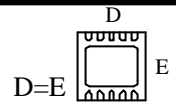


DWG TITLE:

MLP DUAL FAMILY
PACKAGE OUTLINE

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TABLE 6



SUMMARY TABLE Square packages



BODY SIZE	LEAD PITCH	LEAD COUNT	Very thin FQFP-N	Very very thin FQFP-N	TYPE A ID	TYPE B ID	TYPE C ID
1.5X1.5	0.50	4	VBBD	WBBD	---	---	---
2.0X2.0	0.65	6	VCCC	---	---	---	---
2.0X2.0	0.50	4	VCCD-1	WCCD-1	---	---	---
2.0X2.0	0.50	6	VCCD-2,4	WCCD-2,4	---	---	---
2.0X2.0	0.50	8	VCCD-3	---	---	---	R0.10
2.5X2.5	0.80	6	VDDB	WDDB	---	---	---
2.5X2.5	0.50	6	VDDD-1	WDDD-1	---	---	---
2.5X2.5	0.50	8	VDDD-2	WDDD-2	---	---	---
3.0X3.0	0.95	6	VEEA-1,2	WEEA-1,2	---	---	---
3.0X3.0	0.80	6	VEEB	WEEB	---	---	---
3.0X3.0	0.65	8	VEEC-1,2	WEEC-1,2	---	---	---
3.0X3.0	0.65	8	VEEC-2,2	WEEC-2,2	---	R0.30	---
3.0X3.0	0.65	8	VEEC-2,3	WEEC-2,3	---	R0.20	---
3.0X3.0	0.50	8	VEED-1,4,6	WEED-1,4,6	---	---	---
3.0X3.0	0.50	10	VEED-2,3,5	WEED-2,3,5	---	---	---
3.0X3.0	0.50	8	VEED-4,1	WEED-4,1	---	R0.20	---
3.0X3.0	0.50	10	VEED-5,1	WEED-5,1	C'0.225	---	---
3.0X3.0	0.50	10	VEED-5,2	WEED-5,2	C'0.225	---	---
3.0X3.0	0.50	10	VEED-5,3	WEED-5,3	---	---	R0.20
3.0X3.0	0.50	8	VEED-6,1	WEED-6,1	C'0.225	---	---
3.5X3.5	0.50	10	VFFD-1	WFFD-1	---	---	---
3.5X3.5	0.50	12	VFFD-2	WFFD-2	---	---	---
4.0X4.0	0.80	8	VGGB	WGGB	---	---	---
4.0X4.0	0.65	10	VGGC	WGGC	---	---	---
4.0X4.0	0.50	10	VGGD-1	WGGD-1	---	---	---
4.0X4.0	0.50	12	VGGD-2	WGGD-2	---	---	---
4.0X4.0	0.50	14	VGGD-3	WGGD-3	---	---	---
5.0X5.0	0.80	8	VJJB	WJJB	---	---	---
5.0X5.0	0.50	16	VJJD-1	WJJD-1	---	---	---
5.0X5.0	0.50	18	VJJD-2	WJJD-2	---	---	---

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E

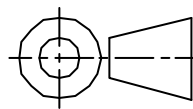
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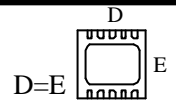
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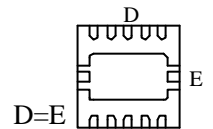
MLP DUAL FAMILY PACKAGE OUTLINE

TABLE 7



SUMMARY TABLE Square packages							
BODY SIZE	LEAD PITCH	LEAD COUNT	Very thin FQFP-N	Very very thin FQFP-N	TYPE A ID	TYPE B ID	TYPE C ID
2.0X2.0	0.65	6	VCCC-NJ1	WCCC-NJ1	---	---	R0.10
3.0X3.0	0.95	6	VEEA-NJ1	WEEA-NJ1	---	R0.20	---
3.0X3.0	0.95	6	VEEA-NJ2	WEEA-NJ2	---	R0.20	---
3.0X3.0	0.95	6	VEEA-NJ3	N/A	C'0.225	---	---
3.0X3.0	0.95	5	N/A	WEEA-NJ4	---	R0.20	---
3.0X3.0	0.95	6	VEEA-NJ5	WEEA-NJ5	---	R0.20	---
3.0X3.0	0.95	6	VEEA-NJ6	WEEA-NJ6	---	R0.20	---
3.0X3.0	0.95	6	VEEA-2NJ1	WEEA-2NJ1	C'0.225	---	---
3.0X3.0	0.65	8	N/A	WEEC-NJ1	---	R0.20	---
3.0X3.0	0.65	8	VEEC-2NJ1	WEEC-2NJ1	---	---	R0.20
3.0X3.0	0.50	8	N/A	WEED-NJ1	---	R0.20	---
3.0X3.0	0.50	10	VEED-NJ2	WEED-NJ2	---	R0.20	---
3.0X3.0	0.50	10	VEED-5NJ1	WEED-5NJ1	C'0.246	---	---
3.0X3.0	0.50	10	VEED-5NJ2	WEED-5NJ2	---	R0.20	---
4.0X4.0	0.80	8	VGGB-NJ1	WGGB-NJ1	---	R0.20	---
4.0X4.0	0.80	8	VGGB-0NJ1	WGGB-0NJ1	---	R0.20	---
4.0X4.0	0.65	12	VGGC-NJ1	WGGC-NJ1	---	---	R0.30
4.0X4.0	0.65	10	VGGC-0NJ1	WGGC-0NJ1	C'0225	---	---
5.0X5.0	0.50	16	VJJD-NJ1	WJJD-NJ1	---	R0.30	---

TABLE 8



SUMMARY TABLE Square Package, TYPE 3							
BODY SIZE	LEAD PITCH	LEAD COUNT	Very thin FQFP-N	Very very thin FQFP-N	TYPE A ID	TYPE B ID	TYPE C ID
3.0X3.0	0.50	10	VEED-2NJ1	N/A	C'0.246	---	---

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E

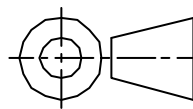
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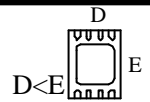
DATE 2006-MAY-24



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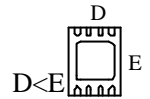
MLP DUAL FAMILY PACKAGE OUTLINE

TABLE 8



SUMMARY TABLE Rectangular Packages, TYPE 1							
BODY SIZE	LEAD PITCH	LEAD COUNT	Very thin FQFP-N	Very very thin FQFP-N	TYPE A ID	TYPE B ID	TYPE C ID
2.0X2.5	0.80	4	VCDB	WCDB	---	---	---
2.0X2.5	0.50	6	VCDD-1	WCDD-1	---	---	---
2.0X2.5	0.50	8	VCDD-2	WCDD-2	---	---	---
2.0X3.0	0.50	6	VCED-1	WCED-1	---	---	---
2.0X3.0	0.50	8	VCED-2	WCED-2	---	---	---
2.5X3.0	0.80	6	VDEB	WDEB	---	---	---
2.5X3.0	0.50	8	VDED	WDED	---	---	---
3.0X4.0	0.80	6	VEGB	WEGB	---	---	---
3.0X4.0	0.50	10	VEGD	WEGD	---	---	---
4.0X5.0	0.80	10	VGJB	WGJB	---	---	---
4.0X5.0	0.50	14	VGJD	WGJD	---	---	---

TABLE 9



SUMMARY TABLE Rectangular Packages, TYPE 1							
BODY SIZE	LEAD PITCH	LEAD COUNT	Very thin FQFP-N	Very very thin FQFP-N	TYPE A ID	TYPE B ID	TYPE C ID
2.0X3.0	0.50	8	VCED-NJ1	WCED-NJ1	---	R0.20	---
2.0X3.0	0.50	6	VCED-NJ2	WCED-NJ2	---	R0.20	---
2.0X3.0	0.50	8	VCED-NJ3	N/A	C'0.225	---	---
2.0X5.0	0.50	6	VCJD-NJ1	WCJD-NJ1	---	R0.20	---
2.5X3.0	0.50	8	VDED-NJ1	WDED-NJ1	---	R0.20	---
2.5X3.0	0.50	8	VDED-NJ2	WDED-NJ2	---	R0.20	---
3.0X4.9	0.65	8	VNJR-1	WNJR-1	---	R0.20	---

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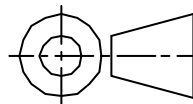
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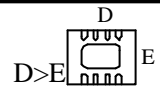


DWG TITLE:

MLP DUAL FAMILY
PACKAGE OUTLINE

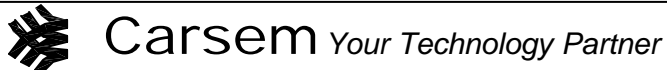
Page 9 of 21

TABLE 10



SUMMARY TABLE Rectangular Packages, TYPE 2								9	11a
BODY SIZE	LEAD PITCH	LEAD COUNT	Very thin FQFP-N	Very very thin FQFP-N	TYPE A ID	TYPE B ID	TYPE C ID		
1.5X1.0	0.50	4	VBAD	WBAD	---	---	---		
2.0X1.0	0.50	4	VCAD-1	WCAD-1	---	---	---		
2.0X1.0	0.50	6	VCAD-2	WCAD-2	---	---	---		
2.0X1.5	0.50	4	VCBD-1	WCBD-1	---	---	---		
2.0X1.5	0.50	6	VCBD-2	WCBD-2	---	---	---		
2.5X1.5	0.50	6	VDBD-1	WDBD-1	---	---	---		
2.5X1.5	0.50	8	VDBD-2	WDBD-2	---	---	---		
2.5X2.0	0.50	4	VDCD-1	WDCD-1	---	---	---		
2.5X2.0	0.50	6	VDCD-2	WDCD-2	---	---	---		
2.5X2.0	0.50	8	VDCD-3	WDCD-3	---	---	---		
3.0X1.5	0.50	8	VEBD-1	WEBD-1	---	---	---		
3.0X1.5	0.50	10	VEBD-2	WEBD-2	---	---	---		
3.0X2.0	0.95	6	VECA	---	---	---	---		
3.0X2.0	0.65	8	VECC	---	---	---	---		
3.0X2.0	0.50	8	VECD-1,4	WECD-1,4	---	---	---		
3.0X2.0	0.50	10	VECD-2,3	WECD-2	---	---	---		
3.0X2.5	0.50	8	VEDD-1	WEDD-1	---	---	---		
3.0X2.5	0.50	10	VEDD-2	WEDD-2	---	---	---		
3.5X2.5	0.50	10	VFDD-1	WFDD-1	---	---	---		
3.5X2.5	0.50	12	VFDD-2	WFDD-2	---	---	---		
3.5X3.0	0.50	10	VFED-1	WFED-1	---	---	---		
3.5X3.0	0.50	12	VFED-2	WFED-2	---	---	---		
4.0X3.0	0.50	10	VGED-1	WGED-1	---	---	---		
4.0X3.0	0.50	12	VGED-2,4	WGED-2,4	---	---	---		
4.0X3.0	0.50	14	VGED-3	WGED-3	---	---	---		
5.0X3.0	0.50	16	VJED-1	WJED-1	---	---	---		
5.0X3.0	0.50	18	VJED-2	WJED-2	---	---	---		
5.0X4.0	0.50	14	VJGD-1	WJGD-1	---	---	---		
5.0X4.0	0.50	18	VJGD-3	WJGD-3	---	---	---		
6.0X5.0	0.50	16	VLJD-1	WLJD-1	---	---	---		
6.0X5.0	0.50	18	VLJD-2	WLJD-2	---	---	---		

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E

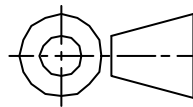
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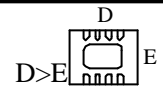
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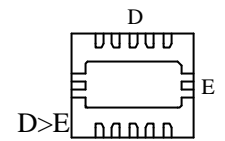
MLP DUAL FAMILY PACKAGE OUTLINE

TABLE 11



SUMMARY TABLE Rectangular Packages, TYPE 2							
BODY SIZE	LEAD PITCH	LEAD COUNT	Very thin FQFP-N	Very very thin FQFP-N	TYPE A ID	TYPE B ID	TYPE C ID
3.0X2.0	0.50	8	VECD-NJ1	N/A	C'0.225	---	---
3.0X2.0	0.50	8	VECD-NJ2	WECD-NJ2	C'0.225	---	---
3.0X2.0	0.50	8	N/A	WECD-NJ3	C'0.225	---	---
3.0X2.0	0.50	10	VECD-NJ4	---	---	R0.20	---
3.0X2.0	0.50	8	VECD-NJ5	N/A	C'0.225	---	---
4.5X3.5	0.80	8	VHFB-NJ1	WHFB-NJ1	---	R0.20	---
5.0X3.0	0.50	16	VJED-NJ1	WJED-NJ1	---	R0.30	---
5.0X4.0	0.50	16	VJGD-2NJ1	WJGD-2NJ1	---	R0.30	---

TABLE 12



SUMMARY TABLE Rectangular Packages, TYPE 3							
BODY SIZE	LEAD PITCH	LEAD COUNT	Very thin FQFP-N	Very very thin FQFP-N	TYPE A ID	TYPE B ID	TYPE C ID
6.0X5.0	0.50	20	VLJD-NJ1	N/A	C'0.225	---	---
6.0X5.0	0.50	22	VLJD-NJ2	N/A	---	R0.30	---
6.0X5.0	0.50	18	VLJD-NJ3	N/A	C'0.225	---	---

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E

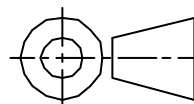
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e=0.50mm										
Variation Symbol	VBAD	VBBB	VCAD-1	VCAD-2	VCBD-1	VCBD-2	VCCD-1	VCCD-2		Note
	WBAD	WBBB	WCAD-1	WCAD-2	WCBD-1	WCBD-2	WCCD-1	WCCD-2		
D BSC	1.50	1.50	2.00	2.00	2.00	2.00	2.00	2.00		
E BSC	1.00	1.50	1.00	1.00	1.50	1.50	2.00	2.00		
D1 BSC	---	---	---	---	---	---	---	---		
E1 BSC	---	---	---	---	---	---	---	---		
D2	MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	NOM	0.00	0.70	0.00	0.00	1.20	1.20	1.20	1.20	
	MAX	0.00	0.75	0.00	0.00	1.25	1.25	1.25	1.25	
E2	MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	NOM	0.00	0.10	0.00	0.00	0.10	0.10	0.60	0.60	
	MAX	0.00	0.15	0.00	0.00	0.15	0.15	0.65	0.65	
L	MIN	0.20	0.45	0.20	0.20	0.45	0.45	0.45	0.45	
	NOM	0.30	0.55	0.30	0.30	0.55	0.55	0.55	0.55	
	MAX	0.40	0.65	0.40	0.40	0.65	0.65	0.65	0.65	
N	4	4	4	6	4	6	4	6		
ND	2	2	2	3	2	3	2	3		
NE	---	---	---	---	---	---	---	---		
NOTES	1,2,11b	1,2	1,2,11b	1,2,11b	1,2,11b	1,2,11b	1,2	1,2		
PAD	TYPE B	TYPE A	TYPE B	TYPE B	TYPE B	TYPE B	TYPE A	TYPE A		
ISSUE	A	A	A	A	A	A	A	A		

e=0.50mm										
Variation Symbol	VCCD-3	VCCD-4	VCDD-1	VCDD-2	VCED-1	VCED-2	VDBD-1	VDBD-2		Note
	N/A	WCCD-4	WCDD-1	WCCD-2	WCED-1	WCED-2	WDBD-1	WDBD-2		
D BSC	2.00	2.00	2.00	2.00	2.00	2.00	2.50	2.50		
E BSC	2.00	2.00	2.50	2.50	3.00	3.00	1.50	1.50		
D1 BSC	---	---	---	---	---	---	---	---		
E1 BSC	---	---	---	---	---	---	---	---		
D2	MIN	0.00	1.30	0.00	0.00	0.60	1.50	0.00	0.00	
	NOM	1.20	---	1.00	---	---	---	1.70	1.70	
	MAX	1.25	1.75	1.10	1.10	1.00	1.75	1.75	1.75	
E2	MIN	0.00	0.50	0.00	0.00	0.90	1.60	0.00	0.00	
	NOM	0.60	---	0.70	---	---	---	0.10	0.10	
	MAX	0.65	0.80	0.80	0.80	1.20	1.90	0.15	0.15	
L	MIN	0.20	0.30	0.45	0.45	0.30	0.30	0.45	0.45	
	NOM	0.30	0.40	0.55	0.55	0.40	0.40	0.55	0.55	
	MAX	0.45	0.50	0.65	0.65	0.50	0.50	0.65	0.65	
N	8	6	6	8	6	8	6	8		
ND	4	3	3	4	3	4	3	4		
NE	---	---	---	---	---	---	---	---		
NOTES	1,2	1,2	1,2,11a	1,2,11a	1,2,11a	1,2,11a	1,2,11b	1,2,11b		
PAD	TYPE A	TYPE A	TYPE B	TYPE B	TYPE B	TYPE B	TYPE B	TYPE B		
ISSUE	A		A	C	C	C	A	B		

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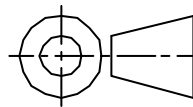
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TABLE 10

		e=0.50mm								
Variation Symbol	VDCD-1	VDCD-2	VDCD-3	VDDD-1	VDDD-2	VDED	VEBD-1	VEBD-2		Note
	WDCD-1	WDCD-2	WDCD-3	WDDD-1	WDDD-2	WDED	WEBD-1	WEBD-2		
D BSC	2.50	2.50	2.50	2.50	2.50	2.50	3.00	3.00		
E BSC	2.00	2.00	2.00	2.50	2.50	3.00	1.50	1.50		
D1 BSC	---	---	---	---	---	---	---	---		
E1 BSC	---	---	---	---	---	---	---	---		
D2	MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	NOM	1.70	1.70	1.70	1.70	1.70	1.50	2.20	2.20	
	MAX	1.75	1.75	1.75	1.75	1.75	1.60	2.25	2.25	
E2	MIN	0.00	0.00	0.00	0.00	0.00	1.10	0.00	0.00	
	NOM	0.60	0.60	0.60	1.10	1.10	1.20	0.10	0.10	
	MAX	0.65	0.65	0.65	1.15	1.15	1.30	0.15	0.15	
L	MIN	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	
	NOM	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	
	MAX	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	
N	4	6	8	6	8	8	8	10		
ND	2	3	4	3	4	4	4	5		
NE	---	---	---	---	---	---	---	---		
NOTES	1,2,11b	1,2,11b	1,2,11b	1,2	1,2	1,2,11a	1,2,11b	1,2,11b		
PAD	TYPE B	TYPE B	TYPE B	TYPE A	TYPE A	TYPE B	TYPE B	TYPE B		
ISSUE	A	A	A	A	A	A	A	A		

TABLE 11

		e=0.50mm								
Variation Symbol	VECD-1	VECD-2	VECD-3	VECD-4	VEDD-1	VEDD-2	VEED-1	N/A	VEED-2	Note
	WECD-1	WECD-2	N/A	WECD-4	WEDD-1	WEDD-2	N/A	WEED-1	N/A	
D BSC	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
E BSC	2.00	2.00	2.00	2.00	2.50	2.50	3.00	3.00	3.00	
D1 BSC	---	---	---	---	---	---	---	---	---	
E1 BSC	---	---	---	---	---	---	---	---	---	
D2	MIN	0.00	0.00	0.00	1.70	0.00	0.00	0.00	0.00	0.00
	NOM	2.20	2.20	2.20	---	2.20	2.20	2.20	2.00	2.20
	MAX	2.25	2.25	2.25	2.20	2.25	2.25	2.25	2.10	2.25
E2	MIN	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.00
	NOM	0.60	0.60	0.60	---	1.10	1.10	1.60	1.20	1.60
	MAX	0.65	0.65	0.65	0.60	1.15	1.15	1.65	1.30	1.65
L	MIN	0.45	0.45	0.20	0.30	0.45	0.30	0.45	0.45	0.45
	NOM	0.55	0.55	0.30	0.40	0.55	0.50	0.55	0.55	0.55
	MAX	0.65	0.65	0.45	0.50	0.65	0.65	0.65	0.65	0.65
N	8	10	10	8	8	10	8	8	10	
ND	4	5	5	4	4	5	4	4	5	
NE	---	---	---	---	---	---	---	---	---	
NOTES	1,2,11b	1,2,11b	1,2,11b	1,2,11b	1,2,11b	1,2,11b	1,2	1,2	1,2	
PAD	TYPE B	TYPE B	TYPE B	TYPE B	TYPE B	TYPE B	TYPE B	TYPE B	TYPE A	TYPE A
ISSUE	A	A	A	C	A	A	A	A	A	

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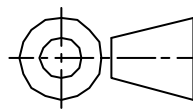
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TABLE 12

		e=0.50mm									Note
Variation Symbol	N/A	VEED-3	VEED-4	VEED-4.1	VEED-5	VEED-5.1	VEED-5.2	VEED-5.3	VEED-6		
		WEED-2	N/A	WEED-4	WEED-4.1	WEED-5	WEED-5.1	WEED-5.2	WEED-5.3	WEED-6	
D BSC	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
E BSC	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
D1 BSC	---	---	---	---	---	---	---	---	---	---	
E1 BSC	---	---	---	---	---	---	---	---	---	---	
D2	MIN	0.00	0.00	2.20	2.23	2.20	2.23	2.23	2.23	2.00	
	NOM	2.00	2.20	---	2.38	---	2.38	2.38	2.38	---	
	MAX	2.10	2.25	2.70	2.48	2.70	2.48	2.48	2.48	2.50	
E2	MIN	0.00	0.00	1.40	1.49	1.40	1.49	1.49	1.49	1.20	
	NOM	1.20	1.60	---	1.64	---	1.64	1.64	1.64	---	
	MAX	1.30	1.65	1.75	1.74	1.75	1.74	1.74	1.74	1.50	
L	MIN	0.45	0.20	0.30	0.30	0.30	0.30	0.30	0.30	0.45	
	NOM	0.55	0.30	0.40	0.40	0.40	0.40	0.40	0.40	0.55	
	MAX	0.65	0.45	0.50	0.50	0.50	0.50	0.50	0.50	0.65	
N	10	10	8	8	10	10	10	10	10	8	
ND	5	5	4	4	5	5	5	5	5	4	
NE	---	---	---	---	---	---	---	---	---	---	
NOTES	1,2	1,2	1,2	---	1,2	---	---	---	---	1,2	
PAD	TYPE A	TYPE A	TYPE A	TYPE A	TYPE A	TYPE C	TYPE A	TYPE A	TYPE A	TYPE A	
ISSUE	A	A	C	A	C	---	---	A	C		

TABLE 13

		e=0.50mm									Note
Variation Symbol	VEED-6.1	VEGD	VFDD-1	VFDD-2	VFED-1	VFED-2	VFFD-1	VFFD-2	VGED-1		
		WEED-6.1	WEGD	WFDD-1	WFDD-2	WFED-1	WFED-2	WFFD-1	WFFD-2	WGED-1	
D BSC	3.00	3.00	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.00	
E BSC	3.00	4.00	2.50	2.50	3.00	3.00	3.50	3.50	3.00	3.00	
D1 BSC	---	---	---	---	---	---	---	---	---	---	
E1 BSC	---	---	---	---	---	---	---	---	---	---	
D2	MIN	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	NOM	2.35	2.00	2.70	2.70	2.70	2.70	2.70	2.70	3.20	
	MAX	2.45	2.10	2.75	2.75	2.75	2.75	2.75	2.75	3.25	
E2	MIN	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	NOM	1.35	2.20	1.10	1.10	1.60	1.60	2.10	2.10	1.60	
	MAX	1.45	2.30	1.15	1.15	1.65	1.65	2.15	2.15	1.65	
L	MIN	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	
	NOM	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	
	MAX	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	
N	8	10	10	12	10	12	10	12	10		
ND	4	5	5	6	5	6	5	6	5		
NE	---	---	---	---	---	---	---	---	---		
NOTES	---	1,2,11a	1,2,11b	1,2,11b	1,2,11b	1,2,11b	1,2	1,2	1,2,11b		
PAD	TYPE A	TYPE B	TYPE B	TYPE B	TYPE B	TYPE B	TYPE A	TYPE A	TYPE B		
ISSUE	A	A	A	A	A	A	A	A	A		

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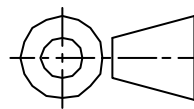
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TABLE 14

e=0.50mm										
Variation Symbol	VGED-2	VGED-3	VGED-4	VGGD-1	N/A	VGGD-2	N/A	VGGD-3	N/A	Note
	WGED-2	WGED-3	WGED-4	N/A	WGGD-1	N/A	WGGD-2	N/A	WGGD-3	
D BSC	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
E BSC	3.00	3.00	3.00	4.00	4.00	4.00	4.00	4.00	4.00	
D1 BSC	---	---	---	---	---	---	---	---	---	
E1 BSC	---	---	---	---	---	---	---	---	---	
D2	MIN	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	
	NOM	3.20	3.20	---	3.20	3.00	3.20	3.00	3.20	3.00
	MAX	3.25	3.25	3.70	3.25	3.10	3.25	3.10	3.25	3.10
E2	MIN	0.00	0.00	1.40	0.00	0.00	0.00	0.00	0.00	
	NOM	1.60	1.60	---	2.60	2.20	2.60	2.20	2.60	2.20
	MAX	1.65	1.65	1.80	2.65	2.30	2.65	2.30	2.65	2.30
L	MIN	0.45	0.45	0.30	0.45	0.45	0.45	0.45	0.45	
	NOM	0.55	0.55	0.40	0.55	0.55	0.55	0.55	0.55	
	MAX	0.65	0.65	0.50	0.65	0.65	0.65	0.65	0.65	
N	12	14	12	10	10	12	12	14	14	
ND	6	7	6	5	5	6	6	7	7	
NE	---	---	---	---	---	---	---	---	---	
NOTES	1,2,11b	1,2,11b	1,2,11b	1,2	1,2	1,2	1,2	1,2	1,2	
PAD	TYPE B	TYPE B	TYPE B	TYPE A	TYPE A	TYPE A	TYPE A	TYPE A	TYPE A	
ISSUE	A	A	C	A	A	A	A	A	A	

TABLE 15

e=0.50mm										
Variation Symbol	VGJD	VJED-1	VJED-2	VJGD-1	VJGD-3	VJJD-1	N/A	VJJD-2	N/A	Note
	WJGD	WJED-1	WJED-2	WJGD-1	WJGD-3	N/A	WJJD-1	N/A	WJJD-2	
D BSC	4.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	
E BSC	5.00	3.00	3.00	4.00	4.00	5.00	5.00	5.00	5.00	
D1 BSC	---	---	---	---	---	---	---	---	---	
E1 BSC	---	---	---	---	---	---	---	---	---	
D2	MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	NOM	3.00	4.20	4.20	4.20	4.20	4.20	4.00	4.20	4.00
	MAX	3.10	4.25	4.25	4.25	4.25	4.25	4.10	4.25	4.10
E2	MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	NOM	3.20	1.60	1.60	2.60	2.60	3.60	3.20	3.60	3.20
	MAX	3.30	1.65	1.65	2.65	2.65	3.65	3.30	3.65	3.30
L	MIN	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	
	NOM	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	
	MAX	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	
N	14	16	18	14	18	16	16	18	18	
ND	7	8	9	7	9	8	8	9	9	
NE	---	---	---	---	---	---	---	---	---	
NOTES	1,2,11b	1,2,11b	1,2,11b	1,2,11b	1,2,11b	1,2	1,2	1,2	1,2	
PAD	TYPE B	TYPE B	TYPE B	TYPE B	TYPE B	TYPE A	TYPE A	TYPE A	TYPE A	
ISSUE	A	A	A	A	A	A	A	A	A	

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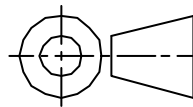
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TABLE 16

		e=0.50mm									Note
Variation Symbol	VLJD-1	VLJD-2	VCED-NJ1	VCED-NJ2	VCED-NJ3	VCJD-NJ1	VDED-NJ1	VDED-NJ2	VECD-NJ1		
		WLJD-1	WLJD-2	WCED-NJ1	WCED-NJ2	---	WCJD-NJ1	WDED-NJ1	WDED-NJ2	N/A	
D BSC	6.00	6.00	2.00	2.00	2.00	2.00	2.50	2.50	3.00		
E BSC	5.00	5.00	3.00	3.00	3.00	5.00	3.00	3.00	2.00		
D1 BSC	---	---	---	---	---	---	---	---	---		
E1 BSC	---	---	---	---	---	---	---	---	---		
D2	MIN	3.80	3.80	1.35	1.225	1.50	1.33	1.05	1.35	2.25	
	NOM	---	---	1.50	1.375	1.65	1.48	1.20	1.50	2.40	
	MAX	4.70	4.70	1.60	1.475	1.75	1.58	1.30	1.60	2.50	
E2	MIN	2.80	2.80	1.15	1.00	1.65	2.39	1.35	1.05*	0.65	
	NOM	---	---	1.30	1.15	1.80	2.54	1.50	1.20	0.80	
	MAX	3.40	3.40	1.40	1.25	1.90	2.64	1.60*	1.30	0.90	
L	MIN	0.45	0.45	0.30	0.45	0.30	0.35	0.30*	0.40*	0.30	
	NOM	0.55	0.55	0.40	0.55	0.40	0.45	0.40*	0.50	0.40	
	MAX	0.65	0.65	0.50	0.65	0.50	0.55	0.50	0.60	0.50	
N	16	18	8	6	8	6	8	8	8		
ND	8	9	4	3	4	3	4	4	4		
NE	---	---	---	---	---	---	---	---	---		
NOTES	1,2,11b	1,2,11b	1,2	1,2	1,2	1,2	1,2	1,2	1,2		
PAD	TYPE B	TYPE B	TYPE B	TYPE B	TYPE A	TYPE B	TYPE B	TYPE B	TYPE B		
ISSUE	C	C	---	---	---	---	---	---	---		

TABLE 17

		e=0.50mm									Note
Variation Symbol	VECD-NJ2	---	VECD-NJ4	VECD-NJ5	N/A	VEED-NJ2	VEED-2NJ1	VEED-5NJ1	VEED-5NJ2		
		WECD-NJ2	WECD-NJ3	---	N/A	WEED-NJ1	WEED-NJ2	---	WEED-5NJ1	WEED-5NJ2	
D BSC	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00		
E BSC	2.00	2.00	2.00	2.00	3.00	3.00	3.00	3.00	3.00		
D1 BSC	---	---	---	---	---	---	---	---	---		
E1 BSC	---	---	---	---	---	---	---	---	---		
D2	MIN	1.988	1.988	2.25	1.59	2.20	1.87	2.11	2.11*	2.15*	
	NOM	2.138	2.138	2.40	1.74	2.30	2.02	2.26	2.26	2.30	
	MAX	2.238	2.238	2.50	1.84	2.40	2.12	2.36*	2.36	2.40	
E2	MIN	0.413	0.413	0.60	0.30	1.40	1.06	1.19	1.19*	1.35*	
	NOM	0.563	0.563	0.75	0.45	1.50	1.21	1.34	1.34	1.50	
	MAX	0.663	0.663	0.85	0.55	1.60	1.31	1.44	1.44	1.60	
L	MIN	0.30	0.30	0.30	0.30*	0.20	0.30*	0.45	0.45	0.20*	
	NOM	0.40	0.40	0.40	0.40	0.30	0.40	0.55	0.55	0.30	
	MAX	0.50	0.50	0.50	0.50	0.40	0.50	0.65	0.65*	0.40	
N	8	8	10	8	10	10	10	10	10		
ND	4	4	5	4	5	5	5	5	5		
NE	---	---	---	---	---	---	---	---	---		
NOTES	1,2	1,2	1,2	1,2	1,2	---	1,2	1,2	1,2,11b		
PAD	TYPE B	TYPE A	TYPE B	TYPE B	TYPE A	TYPE A	TYPE A	TYPE A	TYPE A	TYPE B	
ISSUE	---	---	---	---	---	A	---	---	---		

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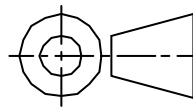
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TABLE 20

e=0.65mm										
Variation Symbol	VEEC-2NJ1	VGGC-0NJ1	VGGC-NJ1	VNJR-1						Note
	WEEC-2NJ1	WGGC-0NJ1	WGGC-NJ1	WNJR-1						
D BSC	3.00	4.00	4.00	3.00						
E BSC	3.00	4.00	4.00	4.90						
D1 BSC	---	---	---	---						
E1 BSC	---	---	---	---						
D2	MIN	2.23	2.95	3.20	2.10					
	NOM	2.38	3.10	3.35	2.25					
	MAX	2.48	3.20	3.45	2.35					
E2	MIN	1.49	2.55	1.85	2.90					
	NOM	1.64	2.70	2.00	3.05					
	MAX	1.74	2.80	2.10	3.15					
L	MIN	0.30	0.30	0.45	0.45					
	NOM	0.40	0.40	0.55	0.55					
	MAX	0.50	0.50	0.65	0.65					
N	8	10	12	8						
ND	4	5	6	4						
NE	---	---	---	---						
NOTES	1,2	1,2	1,2	1,2						
PAD	TYPE A	TYPE A	TYPE A	TYPE B						
ISSUE	---	---	---	---						

TABLE 21

e=0.80mm										
Variation Symbol	VCDB	Vddb	VDEB	VEEB	N/A	VEGB	VGGB	VGJB	VJJB	Note
	WCDB	WDDB	WDEB	N/A	WEEB	WEGB	WGGB	WGJB	WJJB	
D BSC	2.00	2.50	2.50	3.00	3.00	3.00	4.00	4.00	5.00	
E BSC	2.50	2.50	3.00	3.00	3.00	4.00	4.00	5.00	5.00	
D1 BSC	---	---	---	---	---	---	---	---	---	
E1 BSC	---	---	---	---	---	---	---	---	---	
D2	MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	NOM	1.00	1.50	1.50	2.20	2.00	2.00	3.00	3.00	4.00
	MAX	1.10	1.60	1.60	2.25	2.10	2.10	3.10	3.10	4.10
E2	MIN	0.00	0.00	1.10	0.00	0.00	0.00	0.00	0.00	
	NOM	0.70	0.70	1.20	1.20	1.20	2.20	2.20	3.20	3.20
	MAX	0.80	0.80	1.30	1.30	1.30	2.30	2.30	3.30	3.30
L	MIN	0.40	0.10	0.40	0.40	0.40	0.40	0.40	0.40	
	NOM	0.55	0.55	0.55	0.50	0.55	0.55	0.55	0.55	
	MAX	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	
N	4	6	6	6	6	6	8	10	8	
ND	2	3	3	3	3	3	4	5	4	
NE	---	---	---	---	---	---	---	---	---	
NOTES	1,2,11a	1,2	1,2,11a	1,2	1,2	1,2,11a	1,2	1,2,11a	1,2	
PAD	TYPE B	TYPE A	TYPE B	TYPE A	TYPE A	TYPE B	TYPE A	TYPE B	TYPE A	
ISSUE	B	A	A	A	B	A	A	A	A	

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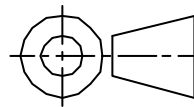
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TABLE 24

		e=0.95mm								
Variation Symbol	VEEA-2NJ1									Note
	WEEA-2NJ1									
D BSC	3.00									
E BSC	3.00									
D1 BSC	---									
E1 BSC	---									
D2	MIN	2.23								
	NOM	2.38								
	MAX	2.48								
E2	MIN	1.50								
	NOM	1.65								
	MAX	1.75								
L	MIN	0.30								
	NOM	0.40								
	MAX	0.50								
N	6									
ND	3									
NE	---									
NOTES	1,2									
PAD	TYPE A									
ISSUE	---									

TABLE 25

Variation Symbol										Note
D BSC										
E BSC										
D1 BSC										
E1 BSC										
D2	MIN									
	NOM									
	MAX									
E2	MIN									
	NOM									
	MAX									
L	MIN									
	NOM									
	MAX									
N										
ND										
NE										
NOTES										
PAD										
ISSUE										

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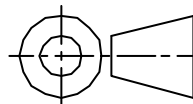
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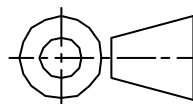
1. Dimensioning and tolerancing conform to ASME Y14.5M-1994.
2. All dimensions are in millimeters, angle is in degrees (°).
3. N is the total number of terminals.
4. The terminal #1 identifier and terminal numbering convention shall conform to JESD 95-1 SPP-012. Details of terminal #1 identifier are optional, but must be located within the zone indicated.
The terminal #1 identifier may be either a mold, embeded metal or mark feature.
5. Dimension b applies to metallized terminal and is measured between 0.15MM and 0.30MM from terminal tip.
6. ND refers to the maximum number of terminals on D side.
7. Variation in FIGURE 1 (WGGD-3) is shown for illustration only.
8. For each variation identifier dimension detail, please refer to the Summary Table on page.
9. For a complete set of dimensions for each variation, see the individual variation and the common dimensions and tolerances on page 4.
10. Unilateral coplanarity zone applies to the exposed heat sink slug as well as the terminals.
11. In the case of the rectangular package, the terminal side of the package is determined as followed:
 - a) Type 1: The terminals are on the short side of the package.
 - b) Type 2: The terminals are on the long side of the package.
12. Variation codes reference specific JEDEC MO-229 package variations. However, codes starting with NJR are not currently JEDEC registered and not defined in the 'Variation Designation' table.
Variation with a star (*) symbol are also not JEDEC registered.
13. When more than one variation (option) exists for the same profile height, body size (DxE), and pitch then those variations will be denoted by an additional dash number (i.e. -1,-2, etc) designator to identify them. The new variations would be created from all or any of the following reasons :
Terminal count, Terminal length and/or exposed pad sizes.
14. Variation with Exposed Tie Bars do not comply with JEDEC OUTLINE MO-229

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