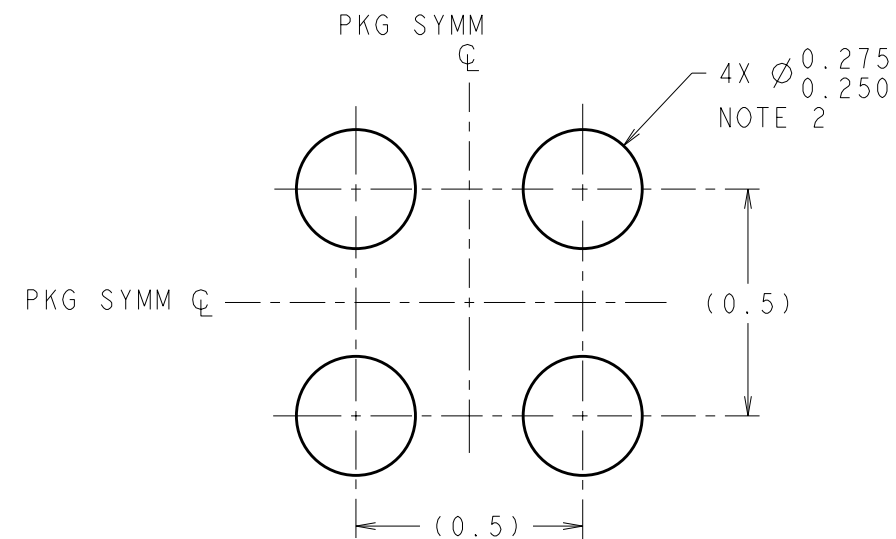
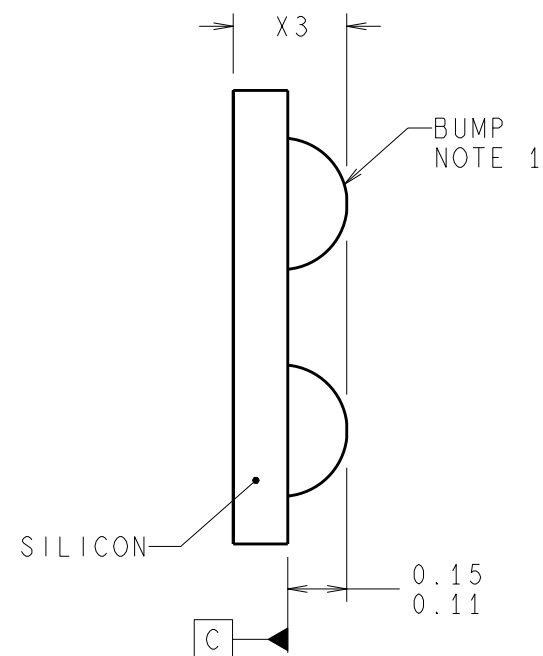
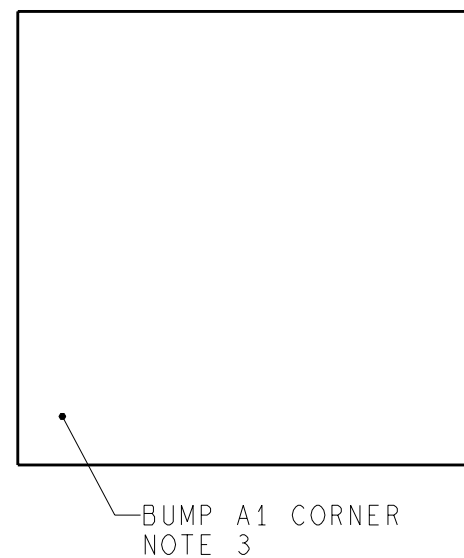


REVISIONS				
REV	DESCRIPTION	E.C.N.	DATE	BY/APP'D
A	RELEASE TO DOCUMENT CONTROL	1653	11/10/2004	MS/VP

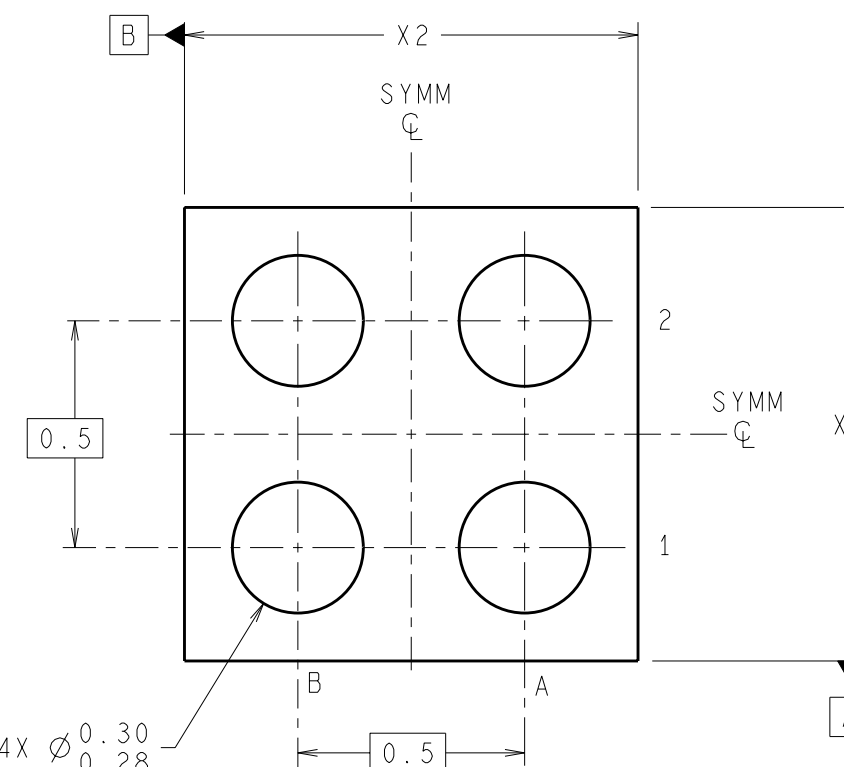


LAND PATTERN RECOMMENDATION

DIMENSIONS ARE IN MILLIMETERS
DIMENSIONS IN () FOR REFERENCE ONLY



Φ	0.001	(S)	C	A	(S)	B	(S)
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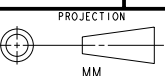
NOTES: UNLESS OTHERWISE SPECIFIED

- FOR SOLDER BUMP COMPOSITION, SEE "SOLDER INFORMATION" IN THE PACKAGING SECTION OF THE NATIONAL SEMICONDUCTOR WEB PAGE (www.national.com).
- RECOMMEND NON-SOLDER MASK DEFINED LANDING PAD.
- PIN A1 IS ESTABLISHED BY LOWER LEFT CORNER WITH RESPECT TO TEXT ORIENTATION.
- XXX IN DRAWING NUMBER REPRESENTS PACKAGE SIZE VARIATION WHERE X1 IS PACKAGE WIDTH, X2 IS PACKAGE LENGTH AND X3 IS PACKAGE HEIGHT (SEE TABLE, SHEET 2).
- NO JEDEC REGISTRATION AS OF NOVEMBER 2004.

APPROVALS		DATE	 National Semiconductor 2900 Semiconductor Dr., Santa Clara, CA 95052-8090	EXTREME THIN MICRO SMD, 4 BUMP, PRINTED BUMPS 0.5mm PITCH	
DRAWN	MARTA SUCHY	11/10/2004			
DFTG. CHK.	THANH LEQUANG	11/10/2004			
ENGR. CHK.	VIRAJ PATWARDHAN	11/10/2004			
PROJECTION	MM	SCALE	SIZE	DRAWING NUMBER	REV
		NTS	B	(SC)MKT-XRA04XXX	A
FORMERLY: N/A			SHEET 1 of 2		

REVISIONS				
REV	DESCRIPTION	E.C.N.	DATE	BY/APP'D
SEE SHEET 1				

PACKAGE DIMENSIONS					
X1 DESIGNATOR	X1 PACKAGE WIDTH $\pm 30\mu\text{m}$	X2 DESIGNATOR	X2 PACKAGE LENGTH $\pm 30\mu\text{m}$	X3 DESIGNATOR	X3 PACKAGE HEIGHT $\pm 75\mu\text{m}$
A	975	A	975	A	250
B	1000	B	1000		
C	1026	C	1026		
D	1051	D	1051		
E	1077	E	1077		
F	1102	F	1102		
G	1128	G	1128		
H	1153	H	1153		
J	1179	J	1179		
K	1204	K	1204		
L	1230	L	1230		
M	1255	M	1255		
N	1281	N	1281		
P	1306	P	1306		
Q	1332	Q	1332		
R	1357	R	1357		
S	1383	S	1383		
T	1408	T	1408		
U	1434	U	1434		
V	1459	V	1459		
W	1485	W	1485		

APPROVALS		DATE	 2900 Semiconductor Dr., Santa Clara, CA 95052-8090			
DRAWN	MARTA SUCHY	11/10/2004				
DFTG. CHK.	THANH LEQUANG	11/10/2004				
ENGR. CHK.	VIRAJ PATWARDHAN	11/10/2004				
 PROJECTION MM			SCALE	SIZE	DRAWING NUMBER	REV
			NTS	B	(SC)MKT-XRA04XXX	A
			FORMERLY: N/A		SHEET 2 of 2	

**EXTREME THIN MICRO SMD,
4 BUMP, PRINTED BUMPS
0.5mm PITCH**