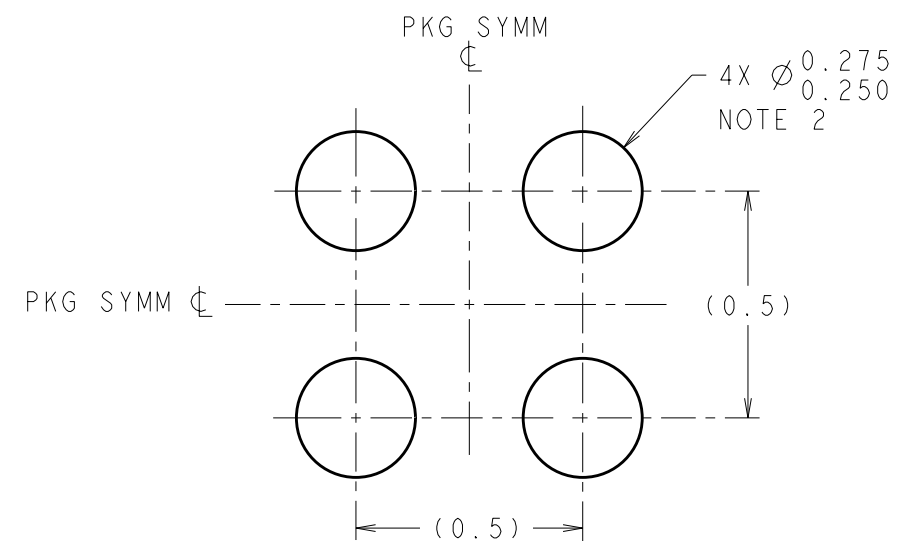
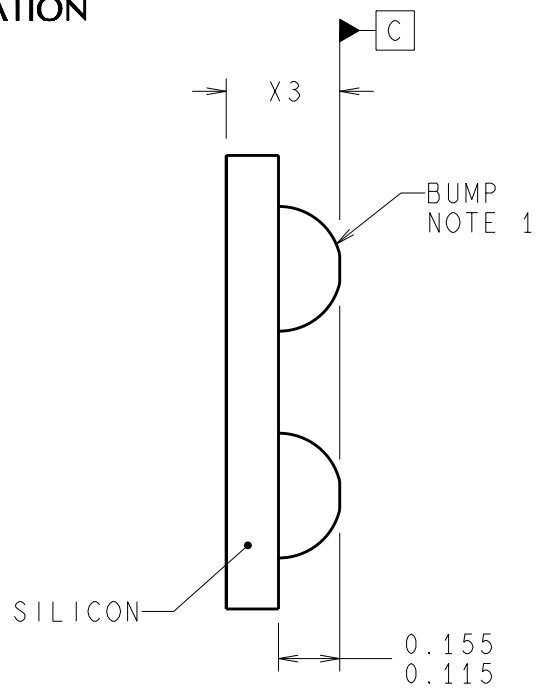
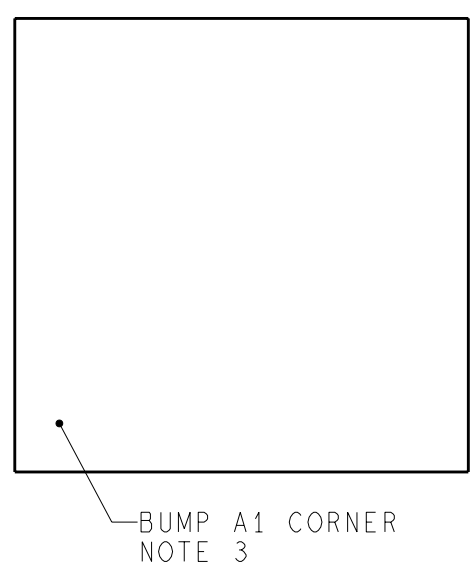


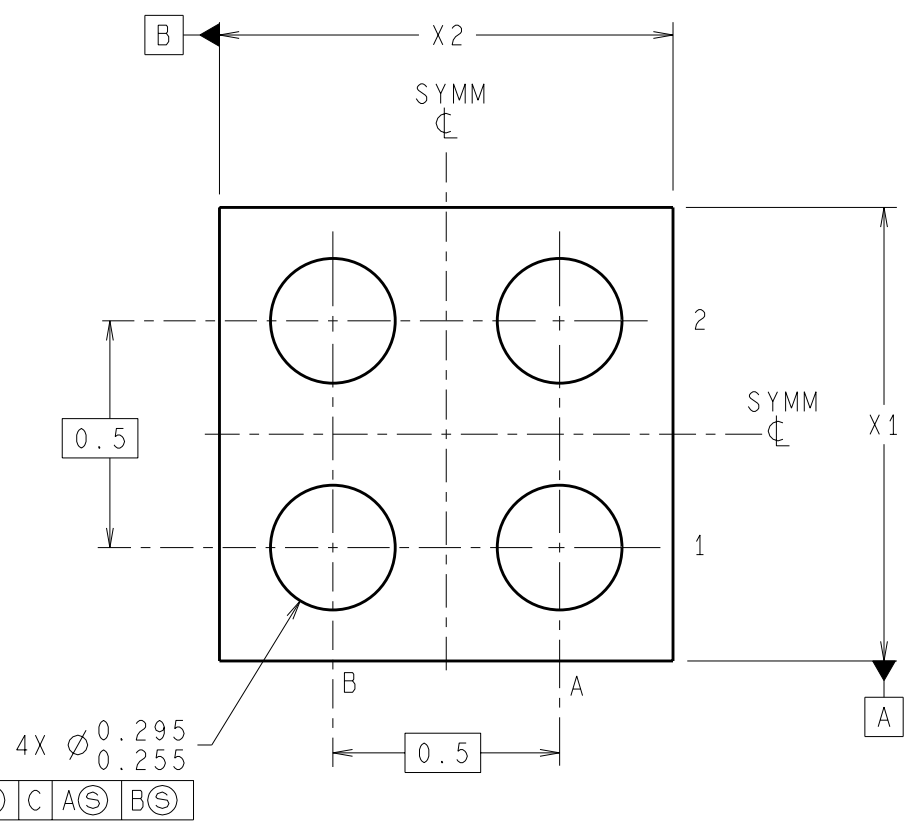
REVISIONS				
REV	DESCRIPTION	E.C.N.	DATE	BY/APP'D
A	RELEASE TO DOCUMENT CONTROL	1653	11/10/2004	MS/VP
B	DIM 0.155/0.115 WAS 0.15/0.11; DIM 0.295/0.255 WAS 0.30/0.28; DATUM C WAS AT BOTTOM OF SILICON; GEOM TOL 0.005 WAS 0.001; REVISE TITLE AND UPDATE JEDEC NOTE 5; PKG DIM TABLE: ADD "(MICROMETERS)"	1759	10/20/2005	MS/VP
C	CHANGE X3 PACKAGE HEIGHT TOLERANCE IN PACKAGE DIMENSION TABLE ON SHEET 2	3126	08/12/2010	AF/SL/CSL



LAND PATTERN RECOMMENDATION



DIMENSIONS ARE IN MILLIMETERS
DIMENSIONS IN () FOR REFERENCE ONLY




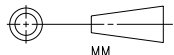
NOTES: UNLESS OTHERWISE SPECIFIED

- 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 AUGUST 2010.

APPROVALS		DATE		 National Semiconductor 2900 Semiconductor Dr., Santa Clara, CA 95052-8090	EXTREME THIN MICRO SMD, 4 BUMP, LARGE DOME BUMPS 0.5mm PITCH
DRAWN	MARTA SUCHY	11/10/2004			
DFTG. CHK.	SUEANN LIM	08/12/2010			
ENGR. CHK.	CS LEE	08/12/2010			
PROJECTION	SCALE	SIZE	DRAWING NUMBER	REV	
 MM	NTS	B	(SC)MKT-XRA04XXX	C	
FORMERLY: N/A				SHEET 1 of 2	

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

PACKAGE DIMENSIONS (MICROMETERS)					
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 $\pm 45\mu\text{m}$
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	 EXTREME THIN MICRO SMD, 4 BUMP, LARGE DOME BUMPS 0.5mm PITCH		
DRAWN	MARTA SUCHY	11/10/2004			
DFTG. CHK.	SUEANN LIM	08/12/2010			
ENGR. CHK.	CS LEE	08/12/2010			
PROJECTION		SCALE	SIZE	DRAWING NUMBER	REV
 MM		NTS	B	(SC)MKT-XRA04XXX	C
FORMERLY: N/A			SHEET 2 of 2		