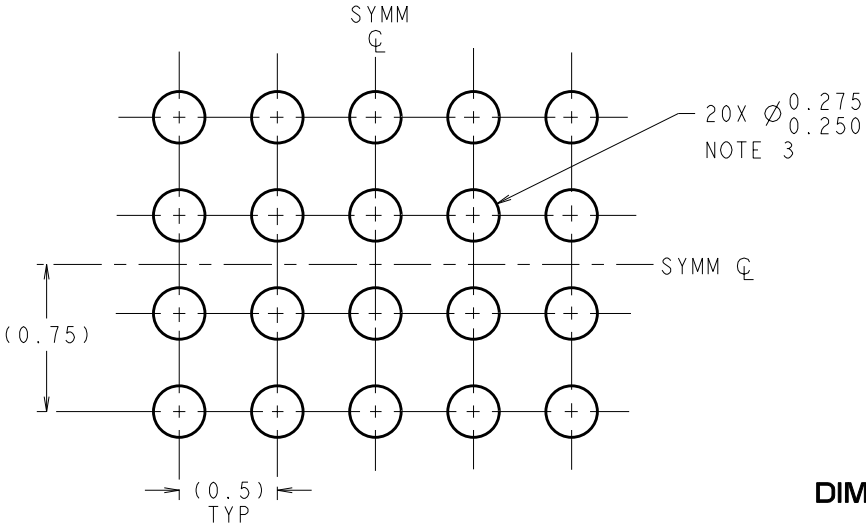
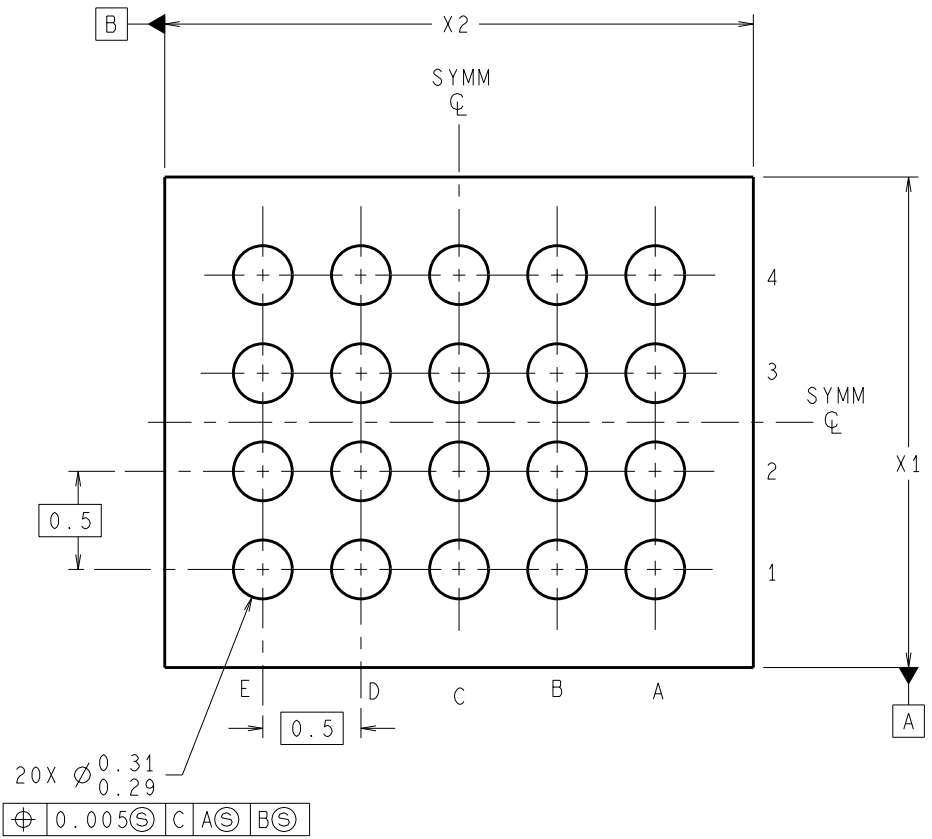
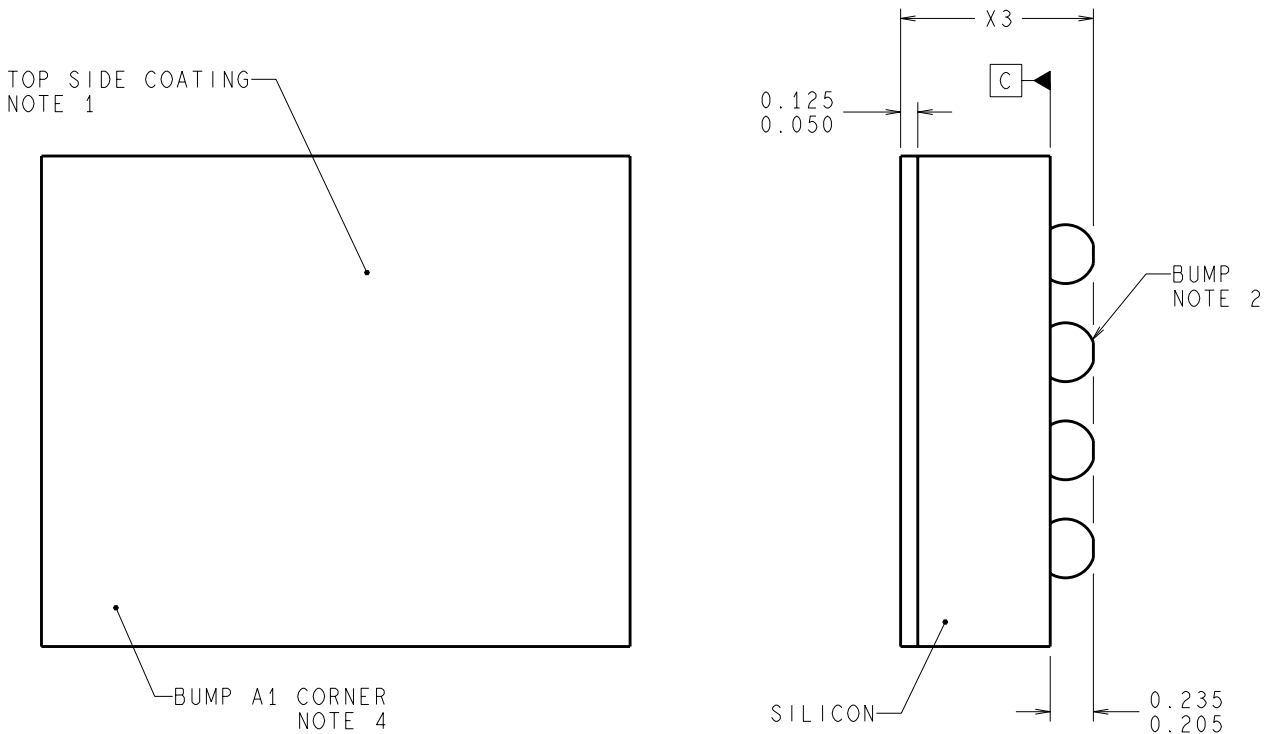


REVISIONS				
LTR	DESCRIPTION	E.C.N.	DATE	BY/APP'D
A	RELEASE TO DOCUMENT CONTROL	290	04/18/2001	MS/VP
B	CHANGE BUMPS NUMBERING ORDER PER JEDEC; JEDEC REGISTRATION WAS 207 & VARIATION WAS CA-y; UPDATE NOTE 4.	509	02/06/2002	MS/VP

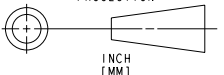


LAND PATTERN RECOMMENDATION

DIMENSIONS ARE IN MILLIMETERS

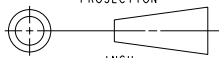


- NOTES: UNLESS OTHERWISE SPECIFIED
- EPOXY COATING.
 - 63 Sn / 37 Pb EUTECTIC BUMP.
 - RECOMMEND NON-SOLDER MASK DEFINED LANDING PAD.
 - PIN A1 IS ESTABLISHED BY LOWER LEFT CORNER WITH RESPECT TO TEXT ORIENTATION.
 - XXX IN DRAWING NUMBER REPRESENTS PACKAGE SIZE VARIATION WHERE X1 IS PACKAGE WIDTH, X2 IS PACKAGE LENGTH AND X3 IS PACKAGE HEIGHT (SEE TABLE, SHEET 2).
EXAMPLE: BPA20EFB HAS WIDTH=2098, LENGTH=2619, HEIGHT=945
 - REFERENCE JEDEC REGISTRATION MO-211, VARIATION BF.

APPROVALS		DATE		 <i>National Semiconductor</i> 2900 Semiconductor Dr., Santa Clara, CA 95052-8090	
DRAWN	MARTA SUCHY		04/18/2001		
DFTG. CHK.	THANH LEQUANG		02/06/2002		
ENGR. CHK.	VIRAJ PATWARDHAN		02/06/2002		
				MICRO SMD, 20 BUMP(LARGE), 0.5mm PITCH	
		SCALE	SIZE	DRAWING NUMBER	REV
		N/A	C	(SC)MKT-BLA20XXX	B
DO NOT SCALE DRAWING				SHEET 1 of 2	

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

PACKAGE DIMENSIONS					
X1 DESIGNATOR	X1 PACKAGE WIDTH ±30μm	X2 DESIGNATOR	X2 PACKAGE LENGTH ±30μm	X3 DESIGNATOR	X3 PACKAGE HEIGHT ±100μm
A	1996	A	2492	A	795
B	2022	B	2517	B	945
C	2047	C	2543	C	995
D	2073	D	2568		
E	2098	E	2593		
F	2123	F	2619		
G	2149	G	2644		
H	2174	H	2670		
J	2200	J	2695		
K	2225	K	2720		
L	2250	L	2746		
M	2276	M	2771		
N	2301	N	2797		
P	2327	P	2822		
Q	2352	Q	2847		
R	2377	R	2873		
S	2403	S	2898		
T	2428	T	2924		
U	2454	U	2949		

APPROVALS		DATE		 <i>National Semiconductor</i> 2900 Semiconductor Dr., Santa Clara, CA 95052-8090			
DRAWN	MARTA SUCHY	04/18/2001					
DFTG. CHK.	THANH LEQUANG	02/06/2002					
ENGR. CHK.	VIRAJ PATWARDHAN	02/06/2002					
				MICRO SMD, 20 BUMP(LARGE), 0.5mm PITCH			
PROJECTION  INCH [MM]				SCALE	SIZE	DRAWING NUMBER	REV
				N/A	C	(SC)MKT-BLA20XXX	B
				DO NOT SCALE DRAWING			SHEET 2 of 2