



DIMENSIONAL REFERENCES			
REF.	MIN.	NOM.	MAX.
A	1.000	1.100	1.200
A1	0.270	0.320	0.370
A2		0.260 REF	
A3		0.530 REF	
b	0.380	0.400	0.480
D		12.000 BSC	
D1		11.050 BSC	
E		12.000 BSC	
E1		11.050 BSC	
e		0.650 BSC	
aaa		0.150	
bbb		0.200	
ddd		0.120	
eee		0.150	
fff		0.080	
N		192	

NOTES:

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
- ALL DIMENSIONS AND TOLERANCES CONFORM TO ANSI Y14.5M-1994.
- MATERIAL MUST BE COMPLIANT WITH MAXIM SPECIFICATION 10-0131 FOR SUBSTANCE CONTENT, MUST BE Eu ROHS COMPLIANT WITHOUT EXEMPTION AND PB-FREE.
- DIMENSION IS MEASURED AT THE MAXIMUM SOLDER BALL DIAMETER, PARALLEL TO PRIMARY DATUM .
- PRIMARY DATUM AND SEATING PLANE ARE DEFINED BY THE SPHERICAL CROWNS OF THE SOLDER BALLS.
- PARALLELISM MEASUREMENT SHALL EXCLUDE ANY EFFECT OF MARK ON TOP SURFACE OF PACKAGE.
- DIMENSION 'ddd' IS MEASURED PARALLEL TO PRIMARY DATUM .
- 'N' IS THE NUMBER OF ATTACHED SOLDER BALLS.
- MARKING SHOWN IS FOR PKG. ORIENTATION ONLY.
- ALL DIMENSIONS APPLY TO PbFREE (+) PKG. CODE ONLY.
- PACKAGE CODES: X19222+1, X19222+1C



TITLE:
PACKAGE OUTLINE, 192 BALLS CTBGA,
12x12x1.10 mm

APPROVAL	DOCUMENT CONTROL NO. 21-0712	REV. B	1/1
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-DRAWING NOT TO SCALE-