



# BallLock™ BGA Socket

Covered by patents and/or patents applied for.

## FEATURES:

- Any grid size available on either 1.27mm [.050"] or 1.50mm [.059"] pitch.
- Lidless design - ball locks into two-fingered contact.
- Ultra-low profile socket adds only .050 [1.27] to overall package height (.100 [2.54] with SnapAdapt™ pins).
- Optional Corner guides aid in package insertion (not used with SnapAdapt™ pins).
- Consult Data Sheet Nos. 23003 and 23004 for Aries BallNest™ Socket.

## SPECIFICATIONS:

- Socket body is UL 94V-0 FR-4.
- Optional lead-in guides are black UL 94V-0 glass-filled Thermoplastic (PPS).
- Contacts are Beryllium Copper Alloy per QQ-C-533.
- Contact plating is either 100μ [2.54μm] min. 90/10 Tin/Lead per MIL-T-10727 or 10μ [.25μm] min. Gold per MIL-G-45204 over 30μ [.76μm] Nickel per QQ-N-290.
- Solder ball terminations are 90/10 Lead/Tin.
- Solder paste is 63/37 eutectic.
- Solder mask is "dryfilm."
- Inductance ≤ 1nH/contact. @ 100MHz approx. (under testing).
- Capacitance ≤ 1pF/contact @ 100MHz approx. (under testing).
- Contact resistance = 10mOhms initial, 20mOhms @ 10 cycles (under testing).
- Durability = 10 cycles max.; up to 50 cycles with SnapAdapt™ pin.
- Insertion Force = 50 grams/contact avg. (approximate); 40 grams/contact initial when used with SnapAdapt™ pin.
- Withdrawal Force = 20 grams/contact max. (approximate).
- Socket accepts BGA devices with .030 [.76] dia. balls.

## MOUNTING CONSIDERATIONS:

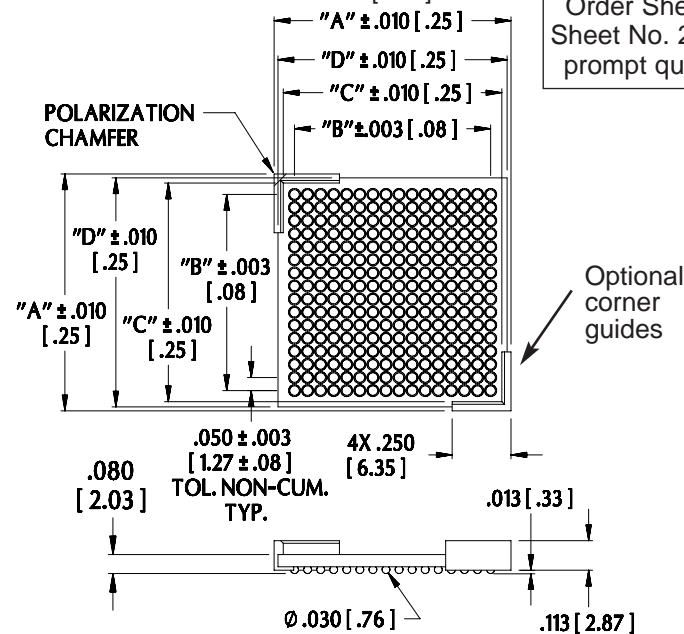
- Suggested PCB pad size = .025 ± .003 [.64 ± .08] dia.

## ALL DIMENSIONS: INCHES [MILLIMETERS]

"A" = BGA PACKAGE SIZE + .085 [2.29]  
 "B" = (NO. OF POSITIONS PER ROW - 1) X BGA PITCH

"C" = BGA PACKAGE SIZE + .015 [.25]

"D" = BGA PACKAGE SIZE + .060 [1.52]



Use Aries' BGA Order Sheet, Data Sheet No. 23000, for prompt quotations.

All tolerances ± .005 [.13] unless otherwise specified

## ORDERING INFORMATION

(for socket w/out corner guides only)

XXX-BGXXXXX-7XX

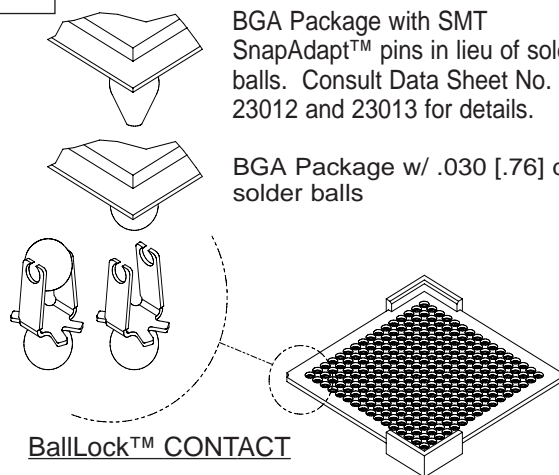
No. of positions (256 shown) | Ball Grid Array | Footprint designator (assigned by factory) | Pitch (1.50mm / 1.27mm) | Plating: 0=Tin, 1=Gold

Contact Type:  
 7=BallLock surface mount solder ball contact

Note: Part number assigned by factory when ordering socket with corner guides.

BGA Package with SMT SnapAdapt™ pins in lieu of solder balls. Consult Data Sheet No. 23012 and 23013 for details.

BGA Package w/ .030 [.76] dia. solder balls



Corner guides not used with SnapAdapt™ pins.

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