

IBM Server & Storage System's Requirements for Purchased Electronic Components Used in a Leaded(Pb) Solder System, including Restriction on Hazardous Substances (RoHS)

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1. Scope:

This specification defines IBM Server & Storage System’s requirements for procured RoHS compliant electronic components and electronic components [used in a leaded\(Pb\) solder system, by IBM or IBM authorized subcontractors. This includes components in Ball Grid Array \(BGA\) packages, where the non-ball portion of the package is RoHS compliant and the balls contain lead\(Pb\).](#)

2. Applicability:

To be applicable, this specification shall be referenced on the IBM Part Number Drawing, or applicable procurement document and shall apply to all purchases made under that Part Number by IBM, IBM’s Affiliates, or any third parties purchasing the product to IBM’s part number.

3. Precedence:

In case of conflict between IBM requirements, the order of precedence provisions set forth in the Applicable agreement shall apply. In the event of an inconsistency in the technical requirements, the following order of precedence shall apply:

- IBM Written Waivers (mutually agreed in writing)
- IBM Part Number Drawing (or equivalent component description documentation)
- This Specification
- IBM Specification 873444
- [SQRD](#)
- [Other IBM Specifications](#)
- [Referenced Industry Standards](#)
- Supplier Technical Specifications - (including such items as: electrical performance specs, quality and reliability commitments etc.)

4. Documents Replaced By This Specification:

The following IBM specifications have been replaced by this specification:

IBM Specification	Specification Title
None	None

5. Referenced Documents:

The following documents in their current revision or successor form a part of this specification and Suppliers are required to meet all the specifications listed below. In case of conflict see Section 3 “Precedence”.

Document Number	Document Title
03N6596	IBM Supplier Quality Requirements Document (SQRD)
873444	Requirements for Purchased Electronic Components
46G3772	IBM Environmental Requirements for Materials, Parts and Products

Additional IBM Environmental information can be found at:

<http://www-03.ibm.com/procurement/proweb.nsf/ContentDocsByTitle/United+States~Information+for+suppliers>

6. Exceptions:

Any exception to the requirements of this specification shall constitute a change that must be approved in writing by IBM and documented in a Supplier Quality Document (SQD).

7. Additional Requirements:

See IBM Specifications 46G3772 and 873444 for additional requirements. For solder process compatibility, see specification 873444 section 6.5.1.

8. Clarifications Regarding Memory DIMMS and Other Subassemblies:

Modules and subassemblies include but are not limited to the following: memory DIMMs, crystal oscillator modules, real-time clock modules, fiber optic transceivers, BGA packages (with decoupling capacitors, resistors etc.) and passive components with internal subassemblies.

Either Sn/Pb (tin/lead) or **lead(Pb)-free** solder may be used for component attachment within a subassembly. In either case, the laminate material must be compatible with the assembly process and temperatures. The surface finish must **meet the requirements of IBM specification 873444 section 6.14.4.1.**

8.1 Subassembly Using Tin - Lead (Sn/Pb) Solder:

BGA components on a subassembly, that are soldered to the subassembly using a Sn/Pb solder, must use Sn/Pb solder balls.

All components soldered to a subassembly must meet the requirements of IBM specification 873444 section **6.5.1.**

8.2 Subassembly Using **Lead(Pb)-free Solder:**

All the components on a subassembly, that are soldered to the subassembly using a **lead(Pb)-free** solder, must meet IBM specification 26P0381 **and 873444.**