

**BI Technologies
RoHS compliance roadmap**

| Part family | Example P/N's (*x" varies by R-value, pins, or other options) | Pb-free & RoHS status | What changes make it RoHS compliant? | RoHS Annex exemptions for compliant part | Compliant P/N | Part marking indicating compliance | Packaging mark indicating compliance | Compliant sample availability | Start of compliant production | Will standard non-compliant part be continued? | Compliant part compatible with leaded solder process? | Compliant part compatible with LF solder process (260 °C peak reflow)? | Comments |
|--|--|--|---|--|---------------|------------------------------------|--------------------------------------|-------------------------------|-------------------------------|--|---|--|---|
| Trimming Potentiometers | | | | | | | | | | | | | |
| Single turn trimmers, except model 23 | 25x, 62x, 72x, 82x, 91x, 93x | Pb in lead plating | Lead plating becomes matte tin | Lead in electronic ceramic | TBD | "LF" is on part | RoHS compliance label | now | January 1, 2005 | yes | yes | yes | |
| Model 23 trimmer | 23x | compliant | none required | Lead in electronic ceramic | none required | none | RoHS compliance label | none required | now | n/a | yes | yes | |
| Multi-turn trimmers | 44x, 45x, 64x, 67x, 84x, 89x | Pb in lead plating | Lead plating becomes matte tin | Lead in electronic ceramic | TBD | "LF" is on part | RoHS compliance label | now | January 1, 2005 | yes | yes | yes | |
| Thin film networks | | | | | | | | | | | | | |
| Thin film NiCr-on-ceramic plastic packaged networks | NQSx, 66x, 688, 69x | Pb in leadframe plating | Lead plating becomes matte tin | none | TBD | "LF" is on part | RoHS compliance label | now | January 1, 2005 | yes | yes | yes | |
| Thin film NiCr-on-silicon plastic packaged networks | SX | Pb in leadframe plating | Lead plating becomes matte tin | none | TBD | "LF" is on part | RoHS compliance label | now | January 1, 2005 | yes | yes | yes | |
| Thick film resistors and networks | | | | | | | | | | | | | |
| BGA resistor networks | BBx | Pb in balls and attachment solder | TBD | TBD | TBD | TBD | RoHS compliance label | est. Q1 2005 | est. Q3 2005 | TBD | yes | yes | no compliant production path identified yet |
| Thick film chip arrays and chip RC networks | BCNx, RCx | BCN31 is compliant, Cd in thick film of others | thick film composition | Pb in glass of electronic components | no | none | RoHS compliance label | upon request | July 2005 | no | yes | yes | Cd to be removed by July 2005 |
| Thick film plastic packaged SOIC's | 618x, 627x, 628x | Cd in thick film | thick film composition | Pb in high melting temperature solders, Pb in glass of electronic components | no | none | RoHS compliance label | upon request | July 2005 | no | yes | yes | Cd to be removed by July 2005 |
| SIP networks | BHx, Cx, Lx, Mx, Tx, CRx | Pb in internal junction and leadframe plating | Internal junction becomes Sn/Ag/Cu solder. Lead plating becomes tin/copper. | Pb in glass of electronic components | TBD | none | RoHS compliance label | upon request except for Tx | now, except for Tx | no, phasing out | yes | yes | T-series will not become compliant |
| Thick film ceramic packaged DIP's | 887x, 888x, 898x, 899x | Cd in thick film | thick film composition | Pb in high melting temperature solders, Pb in glass of electronic components | no | none | RoHS compliance label | n/a | July 2005 | no | yes | yes | Cd to be removed by July 2005 |
| Leaded SIP high voltage power resistors | BHVxRWx (or RF, PF, PW) | Pb in leadframe plating, Cd in thick film | Lead plating becomes matte tin, thick film composition | Pb in glass of electronic components | no | none | RoHS compliance label | n/a | July 2005 | no | yes | yes | Cd to be removed by July 2005 |
| Leadless SIP high voltage power resistors | BHVxxRS | Cd in thick film | thick film composition | Pb in glass of electronic components | no | none | RoHS compliance label | n/a | July 2005 | no | yes | yes | Cd to be removed by July 2005 |
| Planar thick film power networks | BPCx, BPRx, | Cd in thick film | thick film composition | Pb in glass of electronic components | no | none | RoHS compliance label | n/a | July 2005 | no | yes | yes | Cd to be removed by July 2005 |
| Plastic packaged power resistors | MHPx, SMHPx | Cd in thick film | thick film composition | Pb in glass of electronic components | no | none | RoHS compliance label | n/a | July 2005 | no | yes | yes | Cd to be removed by July 2005 |
| Thick film chip surge resistors | BSRx | compliant | none required | Pb in glass of electronic components | none required | none | RoHS compliance label | none required | July 2005 | n/a | yes | yes | |
| Leadless chip inductor/capacitor | LC | compliant | none required | Lead in electronic ceramic | none required | none | RoHS compliance label | none required | March 1, 2003 | no | yes | yes | |
| Precision Potentiometers | | | | | | | | | | | | | |
| Single turn potentiometers, CP & wirewound, except 338x and 618x | 510x, 541x, 561x, 571x, 637x, | compliant | none required | none | none required | none | RoHS compliance label | none required | now | n/a | yes | yes | |
| 338x and 618x single turn CP potentiometers | 338x, 618x | Pb in lead plating | Lead plating becomes matte tin | none | TBD | "LF" is on part | RoHS compliance label | est. Q1 2005 | est. Q2 2005 | yes | yes | yes | |
| Multi-turn potentiometers, CP & wirewound | Ax, Bx, 728x, 738x, 748x, 814x, | compliant | none required | none | none required | none | RoHS compliance label | none required | now | n/a | yes | yes | |
| Linear motion potentiometers with terminals | 404x, 424x, 434x, 474x, 484x | compliant | none required | none | none required | none | RoHS compliance label | none required | now | n/a | yes | yes | |
| Turns counting dials | | | | | | | | | | | | | |
| Turns counting dials | RBx, 26x | compliant | none required | none | none required | none | RoHS compliance label | none required | now | n/a | yes | yes | |

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|-------------------------------------|---|---|---|---|-------------------------------|------------------------------------|--------------------------------------|-------------------------------|-------------------------------|--|---|--|----------|
| Switches | | | | | | | | | | | | | |
| Sealed switch | 82xSW | Pb in lead plating | Lead plating becomes matte tin | Lead in electronic ceramic | TBD | "LF" is on part | RoHS compliance label | now | January 1, 2005 | yes | yes | yes | |
| Microcircuits and Modules | | | | | | | | | | | | | |
| Standard power modules | 77xx | Pb in high-temperature solders (>85% Pb), Pb in lead finish | TBD on lead finish | Pb in glass of electronic component, Pb in high-melting temperature solders | TBD | TBD | RoHS compliance label | TBD | TBD | TBD | TBD | TBD | |
| DC-DC converter | 830x-004Vxx | Pb in high-temperature solder (>85% Pb), Pb in lead finish, low temperature solder, and SMD component leads | TBD on lead finish and low temperature solder | Pb in glass of electronic component, Pb in high-melting temperature solders | TBD | TBD | RoHS compliance label | TBD | TBD | TBD | TBD | TBD | |
| Standard Magnetics | | | | | | | | | | | | | |
| Through-hole chokes | HM series 18x, 19x, 28x | Pb in lead finish | Lead plating becomes matte tin | none | "LF" appended to existing P/N | per customer requirement | per customer requirement | upon request | now | yes | yes | yes | |
| ISDN isolation | HM80 | Pb in lead finish | Lead plating becomes matte tin | none | "LF" appended to existing P/N | per customer requirement | per customer requirement | upon request | now | yes | yes | yes | |
| Ferrite beads | BMBx | Pb in lead finish | Lead plating becomes matte tin | none | "LF" appended to existing P/N | per customer requirement | per customer requirement | upon request | now | yes | yes | yes | |
| Chip inductors | BMCx, BMLx | Pb in lead finish | Lead plating becomes matte tin | none | "LF" appended to existing P/N | per customer requirement | per customer requirement | upon request | now | yes | yes | yes | |
| Plastic packaged inductor | BCLx | Pb in lead finish | Lead plating becomes matte tin | none | "LF" appended to existing P/N | per customer requirement | per customer requirement | upon request | now | yes | yes | yes | |
| Power Magnetics | | | | | | | | | | | | | |
| Through-hole Power magnetics | HM series 11-13, 15, 31, 32, 41, 50, 53, 55 | Pb in lead finish | Lead plating becomes matte tin | none | "LF" appended to existing P/N | per customer requirement | per customer requirement | upon request | now | yes | yes | yes | |
| Surface mount Power magnetics | HM series 00, 33, 61, 63-68, 71, 73-79 | Pb in lead finish | Lead plating becomes matte tin | none | "LF" appended to existing P/N | per customer requirement | per customer requirement | upon request | now | yes | yes | yes | |
| Telecom/LAN Magnetics | | | | | | | | | | | | | |
| Through hole Telecom/LAN magnetics | HSx, HTx in through hole configuration | Pb in lead finish | Lead plating becomes matte tin | none | "LF" appended to existing P/N | per customer requirement | per customer requirement | upon request | now | yes | yes | yes | |
| Surface mount Telecom/LAN magnetics | HSx, HTx in SMT configuration | Pb in lead finish | Lead plating becomes matte tin | none | "LF" appended to existing P/N | per customer requirement | per customer requirement | upon request | now | yes | yes | yes | |

Notes:
Compliance herein is the same as lead-free and indicates meeting E.U. RoHS legislation (Directive 2002/95/EC and all revisions to the date of this chart). Lead in copper (brass), steel, and aluminum are assumed exemptions (not listed). "RoHS" is E.U. reduction of hazardous substances legislation (Directive EC/2002/95/EC). TBD is "to be determined." "n/a" is not applicable. "est." is estimate. "Q" is calendar quarter. "CP" is conductive plastic. "BGA" is ball grid array.