

SECTION I
LIST OF MANUFACTURERS' QUALIFIED CAPABILITIES FOR EACH TECHNOLOGY

<p>MANUFACTURER INFORMATION: Multicircuits Inc. 2301 Universal St, Oshkosh, WI, 54904</p>		<p>CAGE Code: 1BQS8 Phone: 920-385-7537 Fax: EMail: twalker@multicircuits.com</p>
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CAPABILITIES BY TECHNOLOGY/ASSOCIATED SPECIFICATION

Specification: MIL-PRF-31032/1, MIL-PRF-31032/2
 Qualification Letters: VQ(VQE-24-038887)
 Composition: M - Mixed based material printed boards
 Rigid Base Material: GF: Woven E-Glass, Epoxy Resin, Flame Resistant; Woven Glass Reinforced, Hydrocarbon Resin with Ceramic Fill
 Max. Panel Size: 21" x 24"
 Max. Number of Layers: 18
 Max. Board Thickness: .177"
 Min. Hole Size: .0079" Drilled Plated-Through Hole Before Plating
 Aspect Ratio: 9:1 Through-Hole
 Min. Conductor Width/Space: .0035"/.003"
 Hole Preparation: Permanganate Desmear, Permanganate Etchback, Plasma Desmear, Plasma Etchback
 Hole Wall Conductive Coating: Electroless Copper
 Copper Plating: Direct Current Plate
 Hole Fill/Via Plug: Conductive, Non-Conductive
 Solder Resist: Liquid Photoimageable
 Finish System: ENIG, Electrolytic Ni / Hard Au, HASL
 Additional Fab Capabilities: Blind Vias, Foil Lamination, Sequential Lamination
 Controlled Impedance: Differential, Single-Ended

CAPABILITIES BY TECHNOLOGY/ASSOCIATED SPECIFICATION

Specification: MIL-PRF-31032/1, MIL-PRF-31032/2
 Qualification Letters: VQ(VQE-19-033227)
 Composition: S - Homogenous thermosetting base material printed boards
 Rigid Base Material: GF: Woven E-Glass, Epoxy Resin, Flame Resistant
 Max. Panel Size: 21" x 24"
 Max. Number of Layers: 18
 Max. Board Thickness: .177"
 Min. Hole Size: .0079" Drilled Plated-Through Hole Before Plating
 Aspect Ratio: 9:1 Through-Hole
 Min. Conductor Width/Space: .0035"/.003"
 Hole Preparation: Permanganate Desmear, Permanganate Etchback, Plasma Desmear, Plasma Etchback
 Hole Wall Conductive Coating: Electroless Copper
 Copper Plating: Direct Current Plate
 Hole Fill/Via Plug: Conductive, Non-Conductive
 Solder Resist: Liquid Photoimageable
 Finish System: ENIG, Electrolytic Ni / Hard Au, HASL
 Additional Fab Capabilities: Blind Vias, Sequential Lamination,
 Controlled Impedance: Differential, Single-Ended

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CAPABILITIES BY TECHNOLOGY/ASSOCIATED SPECIFICATION

Specification: MIL-PRF-31032/1, MIL-PRF-31032/2
 Qualification Letters: VQ(VQE-19-033870)
 Composition: S - Homogenous thermosetting base material printed boards
 Rigid Base Material: GI: Glass Base, Woven, Polyimide Resin, Heat Resistant
 Max. Panel Size: 18" x 24"
 Max. Number of Layers: 16
 Max. Board Thickness: .093"
 Min. Hole Size: .01" Drilled Plated-Through Hole Before Plating
 Aspect Ratio: 9.3:1 Through-Hole
 Min. Conductor Width/Space: .003"/.003"
 Hole Preparation: Permanganate Desmear, Permanganate Etchback, Plasma Desmear, Plasma Etchback
 Hole Wall Conductive Coating: Electroless Copper
 Copper Plating: Direct Current Plate
 Hole Fill/Via Plug: Conductive, Non-Conductive
 Solder Resist: Liquid Photoimageable
 Finish System: ENIG, Electrolytic Ni / Hard Au, HASL
 Additional Fab Capabilities: Foil Lamination
 Controlled Impedance: Differential, Single-Ended