SECTION I
LIST OF MANUFACTURERS' QUALIFIED CAPABILITIES FOR EACH TECHNOLOGY

MANUFACTURER INFORMATION:	PLANT LOCATION:	CAGE Code: 59554
FTG Circuits Minnetonka, LLC	Same Address as Manufacturer	Phone: 952-988-8059
11126 Bren Road West, Minnetonka, MN, 55343 US		Fax:
		EMail: MarwanR@ftgcorp.com

CAPABILITIES BY TECHNOLOGY/ASSOCIATED SPECIFICATION

Specification: MIL-PRF-31032/1, MIL-PRF-31032/2
Qualification Letters: VQ(VQE-15-028707), VQ(VQE-18-032982), VQ(VQE-19-033858)
Composition: S - Homogenous thermosetting base material printed boards
Rigid Base Material: GF: Woven E-Glass, Epoxy Resin, Flame Resistant
Max. Panel Size: 18" x 24"
Max. Number of Layers: 24
Max. Board Thickness: .136"
Min. Hole Size: .007" Laser Ablated Plated Hole Size Before Plating, .012" Drilled Plated-Through Hole Before Plating
Aspect Ratio: 0.56:1 Microvia, 6.75:1 Through-Hole
Min. Conductor Width/Space: .0035"/.0045"
Hole Preparation: Permanganate Desmear, Plasma Desmear
Hole Wall Conductive Coating: Electroless Copper
Copper Plating: Direct Current Plate, Pulse Plate
Hole Fill/Via Plug: Non-Conductive
Solder Resist: Dry Film, Liquid Photoimageable
Finish System: ENIG, Electrolytic Ni / Hard Au, HASL, Hot Oil Reflow of Plated Sn/Pb
Additional Fab Capabilities: Blind Vias, Buried 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-15-028707), VQ(VQE-18-032982), VQ(VQE-19-033858)
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: 20
Max. Board Thickness: .122"
Min. Hole Size: .014" Drilled Plated-Through Hole Before Plating
Aspect Ratio: 6.66:1 Through-Hole
Min. Conductor Width/Space: .004"/.0037"
Hole Preparation: Permanganate Desmear, Plasma Etchback
Hole Wall Conductive Coating: Electroless Copper
Copper Plating: Direct Current Plate, Pulse Plate
Hole Fill/Via Plug: Non-Conductive
Solder Resist: Dry Film, Liquid Photoimageable
Finish System: ENIG, Electrolytic Ni / Hard Au, HASL, Hot Oil Reflow of Plated Sn/Pb
Additional Fab Capabilities: Blind Vias, Buried Vias, Foil Lamination, Sequential Lamination
Controlled Impedance: Differential, Single-Ended