

QUALIFICATIONS VALIDATED
ANNUALLY

QML-31032-4
12 February 1998
SUPERSEDING
QML-31032-3
21 November 1997

QUALIFIED MANUFACTURERS LIST
OF
DEPARTMENT OF DEFENSE PERFORMANCE SPECIFICATION
MIL-PRF-31032
PRINTED CIRCUIT BOARDS / PRINTED WIRING BOARDS
GENERAL SPECIFICATION FOR



This list has been prepared for use by or for the Government in the acquisition of printed circuit boards / printed wiring boards (hereafter referred to as printed boards) covered by Department of Defense Performance Specification MIL-PRF-31032. Listing of a manufacturer is not intended and does not connote endorsement of the manufacturer by the Department of Defense. All listings herein have been qualified under the requirements as specified in the latest effective issue of MIL-PRF-31032. This list is subject to change without notice; revision or amendment of this list will be issued as necessary. The listing of a manufacturer does not in any way release the manufacturer from compliance with the individual item specification requirements.

THE ACTIVITY RESPONSIBLE FOR THIS QML IS THE DEFENSE SUPPLY CENTER COLUMBUS (DSCC-VQ), COLUMBUS, OH 43216-5000.

If a manufacturer desires to have test data considered for qualification, it must be certified and meet all qualification test requirements of MIL-PRF-31032 and the applicable associated specification.

The listing of printed board manufacturing lines in the QML applies only to printed boards produced in the plant(s) specified herein. Therefore, only those printed boards that have been manufactured and tested within the United States and its territories and as provided by international agreement(s) establishing reciprocal and equivalent quality systems and procedures, can be supplied as QML printed boards.

QML-31032 is available from the DSCC-VQ World Wide Web pages at the following addresses:

Web pages:<http://www.dscclia.mil/V/VQ/index.html>

QML: <http://www.dscclia.mil/V/VQ/VQE/commodity/pwbqml/download/adobe/qml31032.pdf>

QML is a definition of a manufacturer's verified capabilities. Manufacturers may use the add-on qualification process to qualify capabilities that are not currently listed on the QML. The user is encouraged to contact the manufacturer or DSCC to make arrangements for QML availability.

SECTION I

LIST OF MANUFACTURERS BY ASSOCIATED SPECIFICATION

MIL-PRF-31032/1 -Printed Wiring Board, Rigid, Multilayered, Woven E-Glass Reinforced Thermosetting Resin Base Material, With Plated Through Holes, For Soldered Part Mounting.

AAI Corporation
P.O. Box 126
Hunt Valley, MD 21030-0126

Lockheed Martin Electronics & Missiles
498 Oak Road
Ocala, FL 34472-3009

Raytheon Company
350 Lowell Street
Andover, MA 01810-4499

Raytheon TI Systems
12501 Research Blvd. 78759
Austin, TX 78714-9149

Teradyne Circuits Operation
4 Pittsburgh Avenue
Nashua, New Hampshire 03060

MIL-PRF-31032/2 -Printed Wiring Board, Rigid, Single and Double Layer, Woven E-Glass Reinforced Thermosetting Resin Base Material, With or Without Plated Through Holes, For Soldered Part Mounting.

AAI Corporation
P.O. Box 126
Hunt Valley, MD 21030-0126

Lockheed Martin Electronics & Missiles
498 Oak Road
Ocala, FL 34472-3009

Raytheon Company
350 Lowell Street
Andover, MA 01810-4499

Raytheon TI Systems
12501 Research Blvd. 78759
Austin, TX 78714-9149

Teradyne Circuits Operation
4 Pittsburgh Avenue
Nashua, New Hampshire 03060

MIL-PRF-31032/3 -Printed Wiring Board, Flexible, Single and Double Layer, With or Without Plated Through Holes, With or Without Stiffeners, For Soldered Part Mounting.

Lockheed Martin Electronics & Missiles
498 Oak Road
Ocala, FL 34472-3009

SECTION II

LIST OF MANUFACTURERS' QUALIFIED CAPABILITIES FOR EACH TECHNOLOGY

MANUFACTURER NAME & ADDRESS Raytheon Company 350 Lowell Street Andover, MA 01810-4499	PLANT LOCATION Same	CAGE CODE: 05716 CONTACT: Tom Rowe PHONE #: 508-470-7641 FAX #: 508-470-5970																																							
CAPABILITIES BY TECHNOLOGY / ASSOCIATED SPECIFICATION:		QUALIFICATION LETTER:																																							
MIL-PRF-31032/1 MIL-PRF-31032/2 <table border="0"> <tr> <td>Base Material</td> <td>GF (Epoxy resin)</td> <td>GI (Polyimide resin)</td> </tr> <tr> <td>Panel Size</td> <td>18"X 24"</td> <td>18" X 24"</td> </tr> <tr> <td>Max. Board Thickness</td> <td>0.092"</td> <td>0.130"</td> </tr> <tr> <td>Max/Min Hole Size</td> <td>/0.022"</td> <td>/0.022"</td> </tr> <tr> <td>Aspect Ratio</td> <td>4:1</td> <td>4:1</td> </tr> <tr> <td>Max. Number of Layers</td> <td>12</td> <td>16</td> </tr> <tr> <td>Min. Conductor Width</td> <td>0.004"</td> <td>0.004"</td> </tr> <tr> <td>Min. Conductor Spacing</td> <td>0.004"</td> <td>0.004"</td> </tr> <tr> <td>Part Mounting</td> <td>SM, THM</td> <td>SM, THM</td> </tr> <tr> <td>Finish System</td> <td>IR Reflow</td> <td>HASL, IR Reflow</td> </tr> <tr> <td>Hole Preparation</td> <td>Plasma</td> <td>Plasma</td> </tr> <tr> <td>Copper Plating</td> <td>Acid Copper</td> <td>Acid Copper</td> </tr> <tr> <td>Solder Resist</td> <td>N/A</td> <td>Dry Film</td> </tr> </table>		Base Material	GF (Epoxy resin)	GI (Polyimide resin)	Panel Size	18"X 24"	18" X 24"	Max. Board Thickness	0.092"	0.130"	Max/Min Hole Size	/0.022"	/0.022"	Aspect Ratio	4:1	4:1	Max. Number of Layers	12	16	Min. Conductor Width	0.004"	0.004"	Min. Conductor Spacing	0.004"	0.004"	Part Mounting	SM, THM	SM, THM	Finish System	IR Reflow	HASL, IR Reflow	Hole Preparation	Plasma	Plasma	Copper Plating	Acid Copper	Acid Copper	Solder Resist	N/A	Dry Film	VQE-97-0933
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SECTION II

LIST OF MANUFACTURERS' QUALIFIED CAPABILITIES FOR EACH TECHNOLOGY

MANUFACTURER NAME & ADDRESS Raytheon TI Systems 12501 Research Blvd. 78759 Austin, TX 78714-9149	PLANT LOCATION Same	CAGE CODE: 96214 CONTACT: Nanci Baggett PHONE #: (512) 250-6089 FAX #: (512) 250-7010 EMAIL: baggett@ti.com
CAPABILITIES BY TECHNOLOGY / ASSOCIATED SPECIFICATION:		QUALIFICATION LETTER:
MIL-PRF-31032/1 MIL-PRF-31032/2 Panel Size 18" X 24" Max. Board Thickness 0.150" Max/Min Hole Size /0.010" Aspect Ratio 9:1 Max. Number of Layers 20 Min. Conductor Width 0.004" Min. Conductor Spacing 0.004" Part Mounting THM, SM Base Material BI (Nonwoven aramid reinforced polyimide resin) GF (Epoxy resin) GI (Polyimide resin) Finish System Fused SnPB Hot Air Solder Leveling OSP Nickel Gold Hole Preparation Plasma Desmear/Etchback Copper Plating Acid Copper		VQE-97-0509 VQE-97-0718

SECTION II

MANUFACTURER NAME & ADDRESS Teradyne Circuits Operation 4 Pittsburgh Avenue Nashua, New Hampshire 03060	PLANT LOCATION Same	CAGE CODE: 3T000 CONTACT: Lisa Greenleaf PHONE #: 603-791-3118 FAX #: 603-791-3042 EMAIL: greenleaf.lisa@tcs.teradyne.com
CAPABILITIES BY TECHNOLOGY / ASSOCIATED SPECIFICATION:		QUALIFICATION LETTER:
MIL-PRF-31032/1 MIL-PRF-31032/2 Panel Size 24" X 36" Max. Board Thickness 0.322" Max/Min Hole Size /0.016" Aspect Ratio 8:1 Max. Number of Layers 27 Min. Conductor Width 0.004" Min. Conductor Spacing 0.004" Part Mounting THM, Compliant Pin, SMT Base Material GF (Epoxy resin) GI (Polyimide resin) Finish System Fused SnPB Nickel Gold Hole Preparation Permanganate Desmear/Etchback Copper Plating Acid Copper		VQE-97-0649 VQE-97-0721

SECTION III

ALPHABETICAL LIST OF QUALIFIED MANUFACTURERS

MANUFACTURER NAME & ADDRESS	PLANT LOCATION	OTHER INFORMATION
AAI Corporation P.O. Box 126 Hunt Valley, MD 21030-0126	AAI Corp York Road & Industry Lane Cockeysville, MD 21030	CAGE CODE: 02128 CONTACT: Teresa M. Rowe PHONE #: 410-628-3704 FAX #: 410-628-3110 EMAIL: rowetm@aaicorp.com
Lockheed Martin Electronics & Missiles 498 Oak Road Ocala, FL 34472-3009	Same	CAGE CODE: 04939 CONTACT: Shirley Berry PHONE #: 352-687-5676 FAX #: 352-687-5625 EMAIL: shirleyberry&usa.net
Raytheon Company 350 Lowell Street Andover, MA 01801-4499	Same	CAGE CODE: 05716 CONTACT: Mr. Tom Rowe PHONE #: 508-470-7641 FAX #: 508-470-5970
Raytheon TI Systems 12501 Research Blvd. 78759 Austin, TX 78714-9149	Same	CAGE CODE: 96214 CONTACT: Nanci Baggett PHONE #: (512) 250-6089 FAX #: (512) 250-7010 EMAIL: baggett@ti.com
Teradyne Circuits Operation 4 Pittsburgh Avenue Nashua, NH 03060	Same	CAGE CODE: 3T000 CONTACT: Lisa Greenleaf PHONE #: 603-791-3118 FAX #: 603-791-3042 EMAIL: greenlead.lisa@tcs. teradyne.com