

FY 04
Progress Report on QML Printed Boards
FSC 5998
2nd Quarter

Significant Events

Sourcing and usage of the MIL-PRF-31032 program continued its growth trend over the last ten quarters again in the 2nd quarter of FY04. The number of qualified manufacturers listed on QML-31032 has risen to an all time high of 27 printed board sources. DSCC-VQ associates continue to coordinate with dozens of printed board manufacturers that are in the process of developing and implementing MIL-PRF-31032 compliant programs. The growing list of prime users includes Raytheon, Lockheed Martin, Parker-Hannifin, AAI Corporation, and others.

QML-31032 gains new source: PCT Interconnect (Fort Lauderdale, FL) has qualified rigid technologies to MIL-PRF-31032/1 and MIL-PRF-31032/2. This facility has been a previous source of printed boards for military equipment through the QPL-55110 qualification program.

QML Certifications issued: Titan PCB East, Inc. (Amesbury, MA) and Colonial Circuits Inc (Fredericksburg, VA) have received QML Certification during the quarter. QML Certification signifies successful completion of follow-up actions from the initial validation audit of a company's quality management system and applicable production flows. These manufacturers must now prove the extent of their production capabilities through an initial qualification test report in order to be listed on QML-31032.

Revalidation and Initial Validation Audits Completed: DSCC-VQE accomplished two revalidation audits of QML-31032 sources during the quarter; both manufacturers remain in good standing for their QML-31032 listed capabilities. Four initial validation audits were also completed at Colonial Circuits Inc (Fredericksburg, VA), Midwest Printed Circuits Services (Round Lake Beach, IL), Graphic Electronics Inc (Tulsa, OK), and Coretec Inc (Scarborough, ON, Canada).

Alternate Constructions and Controlled Impedance: QML-31032 has multiple sources for alternate construction (such as blind & buried via, sequential lamination) and controlled impedance printed boards. QML companies are in the process of achieving QML-31032 capabilities for PTFE base material, buried resistor, buried capacitance, and embedded passive constructions. Backplane assembly continues to be under consideration.

Companies Currently QML Listed

Company, City, State	Validation Performed	QML Cert Issued	1 st Listing on QML	Company, City, State	Validation Performed	QML Cert Issued	1 st Listing on QML
Tyco Printed Circuits Group Austin, TX	30 Jul- 1 Aug 96	14 Feb 97	21 Feb 97	Sovereign Circuits North Jackson, OH	29-31 Jul 02	8 Oct 02	23 Dec 02
Teradyne Inc. Connection Systems Div. Nashua, NH	1-4 Apr 96	3 Jul 96	25 Mar 97	Sanmina-SCI Costa Mesa, CA	10-12 Sep 02	17 Dec 02	29 Jan 03
Dynamic & Proto Circuits Inc Stoney Creek, Ontario	16-18 Sep 97	22 Jul 98	22 Jul 98	Tyco Printed Circuits Group Stafford Division Stafford, CT	5-7 Nov 02	15 Jan 03	3 Feb 03
Philway Products, Inc. Ashland, OH	10-12 Feb 98	11 Sep 98	22 Aug 99	Dynamic Details Inc. Dulles, VA	10-12 Dec 02	7 Mar 03	7 Mar 03
Lockheed Martin Federal Systems Owego, NY	28-30 Sep 99	12 Nov 99	12 Nov 99	Tyco Printed Circuits Group Santa Clara Division Santa Clara, CA	14-16 Jan 03	18 Apr 03	18 Apr 03
Lockheed Martin Missiles & Fire Control Orlando, FL	24-26 Aug 99	3 Dec 99	3 Dec 99	Sanmina-SCI Wilmington, MA	4-6 Feb 03	16 Apr 03	1 May 03
Proto Circuit, Inc. Cuyahoga Falls, OH	13-16 Oct 98	4 Jan 99	14 Jan 00	Geometric Circuits, Inc. Farmingdale, NY	14-16 May 02	14 Nov 02	27 Jun 03
Printed Circuits, Inc. Minneapolis, MN	10-13 Jan 00	12 May 00	12 Oct 00	Lone Star Circuits Wylie, TX	22-25 Apr 02	23 Jun 03	3 Jul 03
Diversified Systems Indianapolis, IN	16-18 Oct 00	13 Feb 01	13 Feb 01	Sanmina-SCI Phoenix, AZ	6-8 May 03	28 Aug 03	28 Aug 03
Coretec Denver, Inc. Littleton, CO	8-11 May 01	24 Aug 01	21 Nov 01	Calumet Electronics Corp. Calumet, MI	13-15 Aug 02	19 Feb 03	29 Aug 03
Crown Circuits Inc. Carlsbad CA	29-31 Jan 02	3 Apr 02	29 Aug 02	Endicott Industries Endicott, NY	21-23 Oct 03	21 Nov 03	11 Dec 03
Ambitech, Inc. Chatsworth, CA	23-25 May 00	24 Jul 02	27 Sep 02	Strataflex Canada Corp. Toronto, Canada	5-7 Nov 02	31 Jan 03	18 Dec 03
Micom Corporation New Brighton, MN	23-25 Apr 02	11 Jun 02	29 Oct 02	PCT Interconnect Ft. Lauderdale, FL	23-25 Apr 02	15 Apr 03	31 Mar 04
Hans Brockstedt Gmbh Kiel, Germany	28-30 Jun 02	7 Oct 02	8 Oct 02				

Companies In-Process for QML Listing: ^{1/}

Interested Company	QM Plan Submitted	Validation Scheduled	Validation Performed	QML Cert Issued	1st Listing on QML
North Texas Circuit Board Inc Grand Prairie, TX	21 Aug 02	12-14 May 03	12-14 May 03	23 Jun 03	
Titan PCB East Amesbury, MA	20 Jun 03	12-14 Aug 03	12-14 Aug 03	9 Feb 04	
Colonial Circuits, Inc. Fredricksburg, CA	8 Oct 03	20-23 Jan 04	20-23 Jan 04	20 Feb 04	
Unicircuit Inc. Littleton, CO	24 Sep 02	10-12 Jun 03	10-12 Jun 03		
Midwest Printed Circuits Round Lake Beach, IL	12 Sep 03	10-13 Feb 04	10-13 Feb 04		
Coretec, Inc. Scarborough, ON, Canada	28 Oct 03	24-26 Feb 04	24-26 Feb 04		
Graphic Electronics Inc. Tulsa, OK	29 Aug 03	22-25 Mar 04	22-25 Mar 04		
Cosmotronic Company Irvine, CA	22 Dec 03	11-13 May 04			
Saturn Electronics Corp. Romulus, MI	10 Dec 02				
Compunetics Inc. Monroeville, PA	12 Dec 02				
Cirexx Inc. Santa Clara, CA	8 Aug 03				
Vermont Circuits Battleboro, VT	10 Oct 03				
Electropac Canada, Inc. Pointe-Claire, QC, Canada	2 Feb 04				
Westak of Oregon Forest Grove, OR	18 Feb 04				

^{1/} These companies have submitted Quality Management Plans.

Other Participating Companies: ^{2/}

- Photo Circuits Corp.
Glen Cove, NY
- IMI, Inc.
Haverhill, MA
- Electropac Co.
Manchester, NH
- Universal Circuits, Inc.
Maple Grove, MN
- Unicircuit - Roseville
Roseville, MN
- ITO Industries
Bristol, WI
- Electrotek Corp.
Oak Creek, WI
- Advanced Interconnection Technology
Tucker, GA
- RJR Circuits, Inc.
Denver, CO
- Printed Circuit Solutions
Galax, VA
- Waytec Electronics Corp.
Lynchburg, VA
- Armel
Northberger, NJ
- Advanced Circuit Technology
Nashua, NH
- EMDS
Gaithersburg, MD
- Ozark Circuits
Springfield, MO
- Electro Plate Circuitry Inc.
Carrollton, TX
- Sierra Proto Express
Sunnyvale, CA
- Dynamic Details Inc.
Milpitas, CA
- Silicon Valley Printed Circuits
Santa Clara, CA
- Syncom Engineering
Van Nuys, CA
- Hamby Corp.
Van Nuys, CA
- Cirtech, Inc.
Orange, CA
- Speedy Circuits,
Huntington Beach, CA
- TTM Technologies
Santa Ana, CA
- Pioneer Circuits
Santa Ana, CA
- U.S. Circuits, Inc.
Escondido, CA
- Eltek Ltd.
Petach-Tikva, Israel
- RexCan Circuits, Inc.
Belleville, Ontario, Canada
- Dynamic Details Inc.
Toronto, Ontario, Canada
- Firan Technology Group
Scarborough, Ontario, Canada
- MPC Circuits
Ottawa, Ontario, Canada
- Printca A/S
Strendborgvej, Denmark

^{2/} These companies are currently developing and implementing their Quality Management Plans.