



DEFENSE LOGISTICS AGENCY
 DEFENSE SUPPLY CENTER, COLUMBUS
 POST OFFICE BOX 3990
 COLUMBUS OH 43218-3990

IN REPLY
REFER TO

DSCC-VQ (VQE-10-020323 / Mr. Jonathan Stone / 614-692-3022 / jds)

May 17, 2010

SUBJECT: Notification of Qualification, MIL-PRF-31032; FSC 5998; CAGE Code 45032

Mr. Mike Lyrek
 Universal Circuits Inc.
 8860 Zachary Lane North
 Maple Grove, MN 55369-4524

Dear Mr. Lyrek:

Qualification of products is granted as a result of successful qualification testing to Military Performance Specification MIL-PRF-31032, Printed Circuit Board/Printed Wiring Board, and associated specification MIL-PRF-31032/1 and /2. The capabilities qualified for each base material and slash sheet indicated below shall be listed on Qualified Manufacturers List QML-31032. The effective date of this qualification is May 17, 2010.


MANUFACTURER INFORMATION Universal Circuits 8860 Zachary Lane North Maple Grove, MN 55369-4524	BASIC PLANT LOCATION Same	CONTACT: Mike Lyrek PHONE: (763) 315-1706 FAX: (763) 425-0999 CAGE CODE: 45032																																
CAPABILITIES BY TECHNOLOGY / PRINTED BOARD TYPE: MIL-PRF-31032 /1, /2 <table border="0"> <tr> <td>Base Materials</td> <td>Hybrid GF and Hyrdocarbon / Ceramic</td> </tr> <tr> <td>Max. Panel Size</td> <td>18" X 24"</td> </tr> <tr> <td>Max. Board Thickness</td> <td>0.180"</td> </tr> <tr> <td>Min / Max Drilled Thru Hole</td> <td>0.021" / Not Specified</td> </tr> <tr> <td>Aspect Ratio</td> <td>8.57 : 1</td> </tr> <tr> <td>Number of Layers</td> <td>18</td> </tr> <tr> <td>Min. Conductor Width</td> <td>0.005"</td> </tr> <tr> <td>Min. Conductor Spacing</td> <td>0.005"</td> </tr> <tr> <td>Part Mounting</td> <td>SMT, THM, MIX</td> </tr> <tr> <td>Hole Preparation</td> <td>Plasma Etchback,, Chemical Desmear</td> </tr> <tr> <td>Through Hole Metallization</td> <td>Direct Metallization</td> </tr> <tr> <td>Copper Plating</td> <td>Acid Copper</td> </tr> <tr> <td>Solder Resist</td> <td>LPI</td> </tr> <tr> <td>Finish Systems</td> <td>Hot Air Solder Level (HASL), Electroless Nickel Immersion Gold (ENIG)</td> </tr> <tr> <td>Alternate Construction</td> <td>Foil Lamination Sequential Lamination Blind Vias</td> </tr> <tr> <td>Controlled Impedance</td> <td>Differential 77.5+/- 7.5, 90+/-13.5, 98+/-13, 100+/-10, 120 +/-12, 150+/-7 ohms Single-ended 50 +/-2.5, 55+/-5 ohms</td> </tr> </table>		Base Materials	Hybrid GF and Hyrdocarbon / Ceramic	Max. Panel Size	18" X 24"	Max. Board Thickness	0.180"	Min / Max Drilled Thru Hole	0.021" / Not Specified	Aspect Ratio	8.57 : 1	Number of Layers	18	Min. Conductor Width	0.005"	Min. Conductor Spacing	0.005"	Part Mounting	SMT, THM, MIX	Hole Preparation	Plasma Etchback,, Chemical Desmear	Through Hole Metallization	Direct Metallization	Copper Plating	Acid Copper	Solder Resist	LPI	Finish Systems	Hot Air Solder Level (HASL), Electroless Nickel Immersion Gold (ENIG)	Alternate Construction	Foil Lamination Sequential Lamination Blind Vias	Controlled Impedance	Differential 77.5+/- 7.5, 90+/-13.5, 98+/-13, 100+/-10, 120 +/-12, 150+/-7 ohms Single-ended 50 +/-2.5, 55+/-5 ohms	QUALIFICATION LETTERS: VQE-10-020323
Base Materials	Hybrid GF and Hyrdocarbon / Ceramic																																	
Max. Panel Size	18" X 24"																																	
Max. Board Thickness	0.180"																																	
Min / Max Drilled Thru Hole	0.021" / Not Specified																																	
Aspect Ratio	8.57 : 1																																	
Number of Layers	18																																	
Min. Conductor Width	0.005"																																	
Min. Conductor Spacing	0.005"																																	
Part Mounting	SMT, THM, MIX																																	
Hole Preparation	Plasma Etchback,, Chemical Desmear																																	
Through Hole Metallization	Direct Metallization																																	
Copper Plating	Acid Copper																																	
Solder Resist	LPI																																	
Finish Systems	Hot Air Solder Level (HASL), Electroless Nickel Immersion Gold (ENIG)																																	
Alternate Construction	Foil Lamination Sequential Lamination Blind Vias																																	
Controlled Impedance	Differential 77.5+/- 7.5, 90+/-13.5, 98+/-13, 100+/-10, 120 +/-12, 150+/-7 ohms Single-ended 50 +/-2.5, 55+/-5 ohms																																	

The test report number assigned to this qualification is 31032-2753-10. This qualification is based on your MIL-PRF-31032 certification and is subject to the conditions stated below:

1. A listing on the Qualified Manufacturers List (QML) does not guarantee acceptance of the product(s) in any future purchase.
2. QML listing does not constitute a waiver of any requirements of the specification or of the provisions of any contract.
3. Advertising of qualification information is permitted. Permission to use such information for advertising or publicity purposes is granted provided that such publicity or advertising does not state or imply that the product(s) is the only product of that type qualified or that the Department of Defense in any way recommends or endorses the manufacturer's product.
4. The listing applies only to products produced in the plant(s) specified in this letter of notification of qualification and applies to future amendments or revisions of the specification, unless otherwise notified.
5. The listing applies only to materials and manufacturing construction techniques identical to or covered by that (those) qualified. The qualifying activity must be advised in advance of any change to the materials and manufacturing construction techniques. Failure to notify the qualifying activity of any change to the materials and manufacturing construction techniques is cause for removal from the QML.

Manufacturers are required to inform this office immediately if a failure occurs during PCI or CVI testing, if production of this qualification is discontinued, or prior to issuance of a GIDEP Alert and/or Problem Advisory on their QML products. If you have any questions, please contact Mr. Jonathan Stone, (614) 692-3022 or vqe.js@dla.mil.

Sincerely,



JOSEPH GEMPERLINE
Chief
Sourcing and Qualification Division

Visit us on the web at www.dscc.dla.mil/offices/sourcing_and_qualification