



**DEFENSE LOGISTICS AGENCY**  
 LAND AND MARITIME  
 POST OFFICE BOX 3990  
 COLUMBUS, OH 43218-3990

June 29, 2016

Mr. Terry Lichte  
 TTM Technologies, Inc.  
 Santa Ana Division  
 2630 South Harbor Blvd.  
 Santa Ana, CA 92704

RE: Notification of Add-On Qualification, MIL-PRF-31032, FSC 5998, CAGE Code 1WQ42;  
 VQ(VQE-16-030524), CN051124/051125

Dear Mr. Lichte:

Qualification of your products is granted under the current issue of the specification as a result of successful add-on qualification testing to Military Performance Specification MIL-PRF-31032, Printed Circuit Board/Printed Wiring Board, and associated specification MIL-PRF-31032/1 and /2. These add-on qualifications are based on your technical review board (TRB) review and approval of the material and classification indicated below. Your add-on qualifications expanded the following capabilities.

CAPABILITIES BY TECHNOLOGY / PRINTED BOARD TYPE:		
MIL-PRF-31032/1, /2	FROM:	TO:
Max. Number of Layers (GF Base Materials)	24	30
Min. Plated Through Hole Size (GF Base Materials)	0.013"	0.0098"
Additional Fab Capabilities (GF Base Materials)	Blind Vias, Buried Vias, Sequential Lamination	Blind Vias, Buried Vias, Sequential Lamination, Foil Lamination
Controlled Impedance (GF Base Materials)	-	Differential, Single-Ended

CAPABILITIES BY TECHNOLOGY / PRINTED BOARD TYPE:		
MIL-PRF-31032/1, /2	FROM:	TO:
Max. Number of Layers (GI Base Materials)	24	26
Min. Plated Through Hole Size (GI Base Materials)	0.013"	0.0118"
Additional Fab Capabilities (GI Base Materials)	Blind Vias, Buried Vias, Sequential Lamination	Blind Vias, Buried Vias, Sequential Lamination, Foil Lamination
Controlled Impedance (GI Base Materials)	-	Differential, Single-Ended

Test report number 31032-4701-16 has been assigned to your test data for the GF base material add-on qualifications and test report number 31032-4702-16 has been assigned to your test data for the GI base material add-on qualifications. These qualifications are based on your MIL-PRF-31032 certification and are 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.

Because we are held responsible for the accuracy and currency of this QML, please let us know if your company discontinues production utilizing these materials or processes. If you have any questions, please contact Mr. Lowell Sherman at [vqe.ls@dla.mil](mailto:vqe.ls@dla.mil) or 614-692-0627.

Sincerely,

for ALAN J. WILL  
Chief  
Sourcing and Qualifications Division

Enclosure