



**DEFENSE LOGISTICS AGENCY**  
LAND AND MARITIME  
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February 20, 2013

Mr. Mark Whelband  
Quality Manager  
API Technologies Corporation  
RF2M Microelectronics Limited  
Fenner Road  
South Denes  
Great Yarmouth  
Norfolk NR30 3PX, United Kingdom

Dear Mr. Whelband:

RE: Notification of Qualification, Hybrid Microcircuits, MIL-PRF-38534, FSC 5962, MIL-PRF-38534, FSC 5962, VQ (VQH-13-025883), CN # 038610

Qualification of your materials and processes using your facilities located in Great Yarmouth, United Kingdom, is granted effective February 20, 2013, under the current issue of the Performance Specification MIL-PRF-38534, Hybrid Microcircuits, FSC 5962. This action is a result of successful qualification in accordance with your qualification report for a change of thick film gold conductor material and capacitor wirebonding, received December 14, 2012. Rework is not covered at this time. Our designated number for this report is 38534-3750-13.

The materials and processes qualified by this report are identified on the VQH 42 form dated July 26, 2012 for the CMAC 15313P (NED) device and your summary of test results. Your Qualified Manufacturers List (QML) listing will appear as in Enclosure 1 and is subject to the conditions printed in Enclosure 2.

QML manufacturers shall notify the qualifying activity immediately after learning of a potential issuance of a GIDEP alert, problem advisory or major quality/reliability problem affecting QML products. Failure to provide prior notification may be grounds for removal from QML 38534.

Because we are held responsible for the accuracy and currency of this QML, please let us know if your company discontinues production using these materials or processes.

If you have any questions, please contact Mr. Buben at (614) 692-0592.

Sincerely,

/SIGNED/

JOSEPH GEMPERLINE  
Chief  
Sourcing and Qualifications Division

Enclosures

**RF2M Microelectronics Ltd. (CAGE Code: U4388)**

South Denes, Great Yarmouth, Norfolk NR30 3PX, England

**Company Contact:** Mr. Mark Whelband, Phone: 1493-743121, Fax: 1493-858536, E-mail: Mark.Whelband@apitech.com

**DSCC Contact:** Mr. Joseph Buben II, Phone: 614-692-0592, Fax: 614-692-6942, E-mail: vqh.jbu@dla.mil

**Quality Management (QM) Program:** Non-TRB

**Periodic Inspection System:** Option 1

**Technologies:** 1553 Transceiver, High Voltage Drivers, Power

**Qualification Letters:** EQ(EQC-91-835), EQ(EQC-92-084), EQ(EQC-93-139), ELS(ELSH-96-0054), ELS(ELSH-96-0161), VQ(VQH-98-0227), VQ(VQH-99-0192), VQ(VQH-99-0196), VQ(VQH-04-006510), VQ(VQH-04-007022), VQ(VQH-04-007023), VQ(VQH-05-008727), VQ(VQH-05-008978), VQ(VQH-06-010730), VQ(VQH-06-011795), VQ(VQH-09-017847), VQ(VQH-10-020173), VQ(VQH-10-020296), VQ(VQH-13-025883)

**Class Level Information: See Note 6/**

Class K, Class H, Class E

**Substrate Fabrication Information: See Note 1/**

**Substrate Fabrication Flows:** FCES 6301:15

**Substrate Fabrication:** Purchased Ceramic Co-fire; Thick Film on Alumina, 4 Conductor Level(s), Resistors; Purchased Direct Bonded Copper on Beryllia

**Assembly Information: See Note 1/**

**Assembly Flows:** FCES 6301:15

**Substrate Attach:** Conductive Epoxy, Nonconductive Epoxy, Solder

**Element Attach:** Conductive Epoxy, Nonconductive Epoxy, Eutectic

**Add-on Elements:** Unpackaged Die, Chip Capacitors, Chip Resistors, Transformers, Ceramic Tabs

**Wire Bonding:** Gold, Aluminum, Aluminum Ribbon

**Package Information: See Notes 1/ 2/ 3/**

**Package Information:** Metal Package, Axial Leads, Seam Weld, 5.30 Inch Seal Perimeter, 36 Leads, Gold/Solder Lead Finish; Metal Package, Peripheral Leads, Seam Weld, 5.30 Inch Seal Perimeter, 36 Leads, Gold/Solder Lead Finish; Metal Package, Axial Leads, Projection Weld, 4.37 Inch Seal Perimeter, 24 Leads, Gold/Solder Lead Finish; Ceramic Package, Pin Grid Array, Seam Weld, 5.00 Inch Seal Perimeter, 101 Leads, Gold Lead Finish; Metal Package, TO can, Projection Weld, 1.13 Inch Seal Perimeter, 10 Leads, Gold/Solder Lead Finish; Ceramic Co-fire Package, Dual-in-line, Seam Weld, 2.53 Inch Seal Perimeter, 24 Leads, Gold Lead Finish; Ceramic Package, Dual-in-line, Seam Weld, 5.38 Inch Seal Perimeter, 32 Leads, Gold Lead Finish; Ceramic Package, Quad Flat Pack, Seam Weld, 3.48 Inch Seal Perimeter, 68 Leads, Gold Lead Finish

Notes:

1/ The QML listing can be expanded provided appropriate qualification testing is performed and passed. Therefore the manufacturer may accept an order for compliant product not covered by his QML listing, but shall not ship the compliant product until the testing has been successfully completed.

2/ Package seal perimeter is listed by largest perimeter successfully tested in inches.

3/ Package lead counts are listed by maximum number of leads covered by qualification.

4/ Caution. Do not use this number for item acquisition. Item acquired to this number may not satisfy the performance requirements of the listed SMD.

5/ Inactive for new design, no longer available from manufacturer.

6/ Class E devices are devices, which meet all of the requirements of one of the other classes (K, H, or G), with some exceptions taken. Therefore any manufacturer qualified to G, H or K is eligible to produce and mark product as compliant to class E.

## CONDITIONS REGARDING QUALIFICATION APPROVAL

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 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.
6. Continued qualification listing is dependent upon the manufacturer's compliance with the retention of qualification, verification of qualification, to which his products are qualified.