



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

Mr. Stacy Irwin
Crane Electronics, Inc.
P.O. Box 97005
Redmond, WA 98073-9705

July 9, 2013

Dear Mr. Irwin:

Re: Notification of Qualification, Hybrid Microcircuits MIL-PRF-38534, FSC 5962, VQ(VQH-13-026724), Control Number 039736

Qualification of your processes and materials is granted effective July 9, 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 test report number 38534-3898-13.

The hybrid qualified by this report is identified in VQH-42H Form 11630-007 Rev 01, dated 4/11/2013. Your Qualified Manufacturers List (QML) listing will appear as in Enclosure 1 and is subject to the conditions printed in Enclosure 2.

To maintain this listing, you are required to provide a retention report every twelve months. The standard reporting period is from January 1 through December 31 and your next report is due on January 31, 2014. This report is to include the processes and materials from this qualification. For additional information regarding the retention of qualification report, please see the DLA Land and Maritime-VQH published booklet Certification and Qualification Procedures for MIL-PRF-38534 Hybrid and MCM Microcircuits.

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 utilizing this process.

If you have any questions concerning this letter, please contact Mr. Barker at (614) 692-0596.

Sincerely,

/SIGNED/

JOSEPH GEMPERLINE
Chief
Sourcing and Qualifications Division

Enclosures

Crane Electronics, Inc. (CAGE Code: 50821)

10301 Willows Road, Redmond, WA 98052, US

Company Contact: Mr. Stacy Irwin, Phone: 425-895-5038, Fax: 425-869-7402, E-mail: stacy.irwin@crane-eg.com

DSCC Contact: Mr. Richard Barker, Phone: 614-692-0596, Fax: 614-692-6942, E-mail: vqh.rb@dla.mil

Quality Management (QM) Program: Non-TRB

Periodic Inspection System: Options 1 and 2

Technologies: Linear Amplifier, Signal Processor, Data Converters, DC/DC Converters, Analog, Digital, EMI Filters

Qualification Letters: EQ(EQM-87-2838), EQ(EQM-89-0439), EQ(EQC-92-174), EQ(EQC-92-300), EQ(EQC-93-031), EQ(EQC-93-056), EQ(EQC-93-196), EQ(EQC-93-221), EQ(EQC-93-280), EQ(EQC-93-550), EQC-93-624, EQ(EQM-94-043), EQ(EQM-94-0111), ELS(ELSH-94-0297), ELS(ELSH-94-0336), ELS(ELSH-94-0364), ELS(ELSH-95-0036), ELS(ELSH-95-0375), ELS(ELSH-96-0095), ELS(ELSH-96-0139), VQ(VQH-96-0214), VQ(VQH-98-0253), VQ(VQH-99-0013), VQ(VQH-00-0131), VQ(VQH-00-0188), VQ(VQH-03-003336), VQ(VQH-03-003760), VQ(VQH-04-006128), VQ(VQH-05-007236 AMENDED), VQ(VQH-05-008263), VQ(VQH-05-008516), VQ(VQH-05-008820), VQ(VQH-07-012129), VQ(VQH-07-012467), VQ(VQH-07-013397), VQ(VQH-13-026724)

Class Level Information: See Note 6/

Class K, Class H, Class E

Substrate Fabrication Information: See Note 1/

Substrate Fabrication Flows: QA-039

Substrate Fabrication: Thick Film on Alumina, 3 Conductor Level(s), Resistors; Thick Film on Beryllia, 3 Conductor Level(s), Resistors; Thick Film on Beryllia, 1 Conductor Level(s); Purchased Direct Bonded Copper

Assembly Information: See Note 1/

Assembly Flows: QA-039

Substrate Attach: Solder, Nonconductive Epoxy, Conductive Epoxy

Element Attach: Conductive Epoxy, Nonconductive Epoxy, Solder, Eutectic, RTV

Add-on Elements: Unpackaged Die, Chip Capacitors, Tantalum Capacitors, Tabs, Chip Resistors, Inductors, Toroids, Daughter Board

Wire Bonding: Gold, Aluminum, Copper

Package Information: See Notes 1/ 2/ 3/

Package Information: Metal Package, Axial Leads, Projection Weld, 4.26 Inch Seal Perimeter, 8 Leads, Gold/Solder Lead Finish, Getter Qualified; Metal Package, Peripheral Leads, Seam Weld, 4.00 Inch Seal Perimeter, 32 Leads, Gold/Solder Lead Finish, Getter Qualified; Metal Package, Peripheral Leads, Seam Weld, 8.75 Inch Seal Perimeter, 12 Leads, Gold/Solder Lead Finish, Getter Qualified; Metal Package, Axial Leads, Seam Weld, 6.40 Inch Seal Perimeter, 5 Leads, Gold Lead Finish, Getter Qualified; Metal Package, Axial Leads, Seam Weld, 6.00 Inch Seal Perimeter, 38 Leads, Gold/Solder Lead Finish, Getter Qualified

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.