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Glenn L. Smith  
President & CEO

September 12, 2011

The Honorable John McCain and the Honorable Carl Levin  
Committee on Armed Services  
United States Senate  
Washington DC, 20510

Dear Senators McCain and Levin,

Regarding your request for information in your investigation of counterfeit electronic parts in the DOD supply chain, I provide the following additional information.

In addition to my role at Mouser Electronics, I am also a Director of the Electronic Components Industry Association (ECIA). ECIA is the organization that represents the manufacturer authorized supply chain for electronic components. ECIA members are over 100 of the leading electronic component manufacturers and their approved partners in the authorized supply chain. (Attachment A)

ECIA establishes guidelines for component purchasing, storage, handling, and traceability to provide supply chain standardization, and to prevent counterfeit and non-conforming parts from entering the supply chain. The ECIA also governs the worldwide EIA standards for the production of many of these electronic components.

The ECIA is a leading authority on counterfeit prevention. The ECIA position is that the most effective method to prevent counterfeit electronic components from entering the supply chain is to obtain those components only from the original component manufacturer (OCM) or from OCM authorized distributors. (Attachment B) The Society of Automotive Engineers International (SAE) has created Aerospace Standard AS5553 "Counterfeit Electronic Parts; Avoidance, Detection, Mitigation and Disposition" which also supports this ECIA determination.

The ECIA position is that visual inspection procedures and systems cannot reliably detect counterfeit or non-conforming electronic components and that these counterfeit detection systems are not required when those components are obtained directly from the OCM or OCM approved/authorized sources. The SAE International Aerospace Standard AS5553 supports these ECIA positions.

Mouser is an original component manufacturer authorized distributor. Mouser has incorporated the requirements of SAE Aerospace Standard AS5553 for counterfeit avoidance into our quality system. (Attachment C)

Mouser is also certified by the international certification body TUV-SUD to meet or exceed the SAE Aerospace Standard AS9120 "Quality Management Systems - Aerospace Requirements for Distributors". AS9120 certification requires rigorous purchasing, handling, storage and traceability controls to prevent counterfeit and non-conforming electronic components from entering the supply chain. (Attachment D)

In the consumer electronics world, there is a 'grey-market' that may save consumers money, but can also cause customer dissatisfaction when those products are counterfeit, non-warranted, refurbished, factory rejects, or internally damaged due to improper storage or handling. These same problems exist in the grey-market procurement of electronic components. However in the supply chain, grey-market electronic components that are assembled into military, transportation, plant safety or medical equipment can cause deadly system failures. The DOD supply chain is no place for grey-market electronic components.

Unfortunately there seems to be confusion at some DOD contractors as to the distinction between OCM authorized suppliers/distributors that preserve the integrity of the DOD supply chain and unauthorized suppliers/distributors that adversely impact DOD supply chain integrity. Mouser is also a member of the SAE International committee that is developing Aerospace Standard AS6081 "Counterfeit Electronic Parts; Avoidance Protocol - Distributors". This new international Aerospace Standard will contain additional controls to mitigate the significant supply chain risks when electronic components are obtained from suppliers/distributors that were not authorized by the original component manufacturer.

Another significant supply chain problem is the shortage of a component that is required for system/sub-system production. I am chairman of the ECIA committee that created the website [ECIAauthorized.com](http://ECIAauthorized.com). This website is designed to assist contract manufacturers in locating these missing components, while still ensuring supply chain integrity. Besides providing a list of ECIA members that are engaged in OCM authorized component distribution, this website provides a real-time search of OCM authorized inventory. The [ECIAauthorized.com](http://ECIAauthorized.com) website is the authorized supply chain's solution to the problem of locating hard-to-find components and is the only site that delivers a search that is exclusively from OCM authorized inventories. (Attachment E)

Based on these facts, it is therefore recommended that the following counterfeit prevention measures be required for all purchases of electronic components made by the Department of Defense and by DOD contractors and sub-contractors:

1. Adhere to the procurement requirements of the SAE International Aerospace Standard AS5553 "Counterfeit Electronic Parts; Avoidance, Detection, Mitigation and Disposition".
2. Purchase only from suppliers which are duly approved/authorized by the original manufacturer of that electronic component.
3. Purchase electronic components for critical systems/subsystems only from distributors that are certified to the SAE International Aerospace Standard AS9120. "Quality Management Systems - Aerospace Requirements for Distributors".
4. Use [ECIAauthorized.com](http://ECIAauthorized.com) as the DOD approved web tool to locate hard-to-find electronic components from only original component manufacturer authorized inventory sources.

Should you require further information on counterfeit prevention in the DOD supply chain, please do not hesitate to contact me.

Respectfully Submitted,



Glenn Smith  
President & CEO  
Mouser Electronics, Inc.  
a TTI, Inc / Berkshire Hathaway Company





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## MEMBERSHIP

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- » **Joining ECIA**
- » **Benefits**
- » **Members**
- » **Non-Member Participation (Associate)**

## Files

### » **Membership Application**

Download and complete your membership application.

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## ECIA MEMBERS AND ASSOCIATES

### Manufacturers

3M Electronics  
 Aavid Thermalloy  
 AEM Electronics  
 Allegro MicroSystems, Inc.  
 American Conec  
 Amphenol Corporation  
 Analog Devices, Inc.  
 API Delevan  
 Astrolab, Inc.  
 AVX Corp.  
 B&K Precision  
 Belden  
 Bivar, Inc.  
 Bourns, Inc.  
 Bud Industries, Inc.  
 CalRamic Tech  
 Cherry Electrical Products  
 Cirrus Logic  
 Contech Research, Inc.  
 Cooper Bussmann, Inc.  
 Cornell Dubilier Electronics, Inc.  
 Corning, Inc.  
 Coto Technology  
 Crydom  
 CTS Corp.  
 CUI Inc.  
 Dantona Industries, Inc.  
 Dialight Corp.  
 e2v Inc./QP Semiconductor  
 ebm-papst Inc.  
 Edison Opto USA  
 EGS Electrical Group/Sola HD  
 Emerson Network Power  
 EPCOS, Inc.  
 ERNI Electronics, Inc.  
 Fair-Rite Products Corporation  
 Faradox Energy  
 FCI USA, LLC  
 Fischer Connectors, Inc.  
 Fluke Corp.  
 Freescale Semiconductor  
 General Cable  
 Glenair, Inc.  
 Hammond Mfg. Inc.  
 Harting, Inc.  
 Hirose Electric (U.S.A.), Inc.  
 Holystone  
 Honeywell Sensing & Control  
 IBM Global Procurement  
 Illinois Capacitor, Inc.  
 Infineon Technologies  
 Intel Corp.  
 International Rectifier  
 ITT  
 ITW Switches  
 Kapp Alloy and Wire, Inc.  
 KEMET Electronics Corp.  
 Keystone Electronics Corp.  
 Knight Electronics/Orion Fans  
 Koa Speer Electronics, Inc.  
 Laird Technologies  
 Lattice Semiconductor  
 L-com Global Connectivity  
 LEMO USA, Inc.  
 Littelfuse, Inc.  
 Lumex  
 Marathon Special Products

### Distributors

Abacus Technologies  
 AESCO Electronics, Inc.  
 Allied Electronics, Inc.  
 All-West Components & Fasteners  
 Altex-Mar Electronics, Inc. dba Altex Engineered Electronic Solutions  
 Area51-ESG, Inc.  
 Ambar Industries  
 Arrow Electronics, Inc.  
 Astrex, Inc.  
 Avnet, Inc.  
 Beyond Components Inc.  
 BKT Supply Company, Inc.  
 Bluff City Electronics  
 Brothers Electronics, Inc.  
 Calgreg Electronics, Inc.  
 Capacitors Plus, Inc.  
 Carlton-Bates Company  
 CDM Electronics, Inc.  
 Channel Comp  
 Components Center, Inc.  
 Connex Electronics Corp.  
 Cumberland Electronics  
 Dee Electronics, Inc.  
 Digi-Key Corp.  
 Dove Electronic Components  
 Electro Enterprises, Inc.  
 Electro Sonic, Inc.  
 Electronic Connector Corp.  
 Electronic Precepts of Florida  
 Falcon Electronics  
 Future Electronics  
 Garrett Electronics Corp.  
 Genelco Industries, Inc.  
 Genie Group Inc.  
 Gopher Electronics Company  
 Hammond Electronics, Inc.  
 Hawk Electronics, Inc.  
 Heilind Electronics, Inc.  
 HMC Electronics  
 IBS Electronics, Inc.  
 Industrial Electronics Inc.  
 JRH Electronics, Inc.  
 Koehlke Components  
 Kreger Components, Inc.  
 Marlac Electronics, Inc.  
 Marsh Electronics, Inc.  
 Master International  
 Metuchen Capacitors, Inc.  
 Midstate Electronics  
 Mouser Electronics  
 NAC  
 Newark  
 North Coast Components, Inc.  
 Norvell Electronics, Inc.  
 Octera Solutions Inc.  
 Peerless Electronic Supplies  
 PEI-Genesis, Inc.  
 Powell Electronics, Inc.  
 Pridmore Corp.  
 Progressive Image  
 PUI  
 Rochester Electronics  
 RPA Electronic Distributors, Inc.  
 RS Electronics

### Representatives

Alliance Electronics Marketing Group  
 Brainard Nielsen Marketing  
 CFE-DC Technology  
 Coakley, Boyd & Abbott  
 Crowley Associates  
 ELCOM  
 GSA Optimum  
 Harper & Two  
 Kruvand Assoc.  
 Luscombe Engineering  
 Mel Foster Company  
 Millennium Alliance  
 Norris & Assoc.  
 O'Donnell Associates North  
 O'Donnell South  
 Sumer Inc.  
 Vision Technical Sales  
 West Electronic Sales

### Vendor Associates

Electronics Sourcing N.A.  
 (MMG Publishing)  
 GCommerce, Inc.  
 Hearst Business Media  
 InfoNow Corp  
 Loftware.com  
 netCOMPONENTS  
 Oracle

# Attachment A

Maxim Integrated Products	Sager Electronics
Micro Commercial Components (MCC)	Schuster Electronics
Microchip Technology	Source Research Inc. (SRI)
Molex, Inc.	Southern Electronics Supply, Inc.
Murata Electronics N.A.	Spemco Switches
MW Industries	Spirit Electronics, Inc.
National Semiconductor	Straight Road Electronics
NKK Switches	Symmetry Electronics
NMB Technologies Corp.	Taitron Components Inc.
NTE Electronics, Inc.	Tim-Co/CALRF
NXP Semiconductors	Tonar Industries, Inc.
Ohmite Manufacturing Co.	TTI, Inc.
Omron Elecs. LLC/C&C Division	URS Electronics
ON Semiconductor	US Micro Products
Panasonic Electric Works	USI Electronics
Panasonic Industrial Co.	Waldom Electronics, Inc.
Panduit Corp.	Wes-Garde Components Group, Inc.
PCX, Inc.	WireXpress
Pentair Technical Products	
Phoenix Contact	
PMC Sierra	
Precision, Inc.	
Presidio Components, Inc.	
Projects Unlimited, Inc.	
Qualtek Electronics	
RAF Electronic Hardware	
RECOM Power, Inc.	
Renesas Electronics America	
Richco, Inc.	
ROHM Semiconductor USA	
RTI Electronics	
Sanyo Denki America	
Schaffner EMC, Inc.	
Schneider Electric/Crouzet	
Sharp Microelectronics of the Americas	
Silicon Microstructures	
Souriau USA, Inc.	
Spacecraft Components Corp.	
Spectrum Control, Inc.	
Stackpole Electronics, Inc.	
Switchcraft, Inc.	
TDK-Lambda Americas	
TE Connectivity	
Texas Instruments	
Times Microwave Systems	
Toshiba America Electronic Comp	
Triad Magnetics	
TRU Corporation	
TT Electronics	
Vishay Intertechnology	
Visual Communications Co.	
Weidmuller, Inc.	
Wright Capacitors, Inc.	

Membership in ECIA is open to all facets of the electronic components industry: manufacturers, authorized distributors and manufacturer's representatives working together as a stronger voice for our entire industry. The dues structure is based on dollar sales of electronic components in North America and applies to distributor, manufacturer and representative members.

[Application](#)



June 1, 2011

## **ECIA Statement on the Reliability Impact of Procuring Devices through Non-Authorized Sources**

Over the past decade, the number of non-authorized sources for electronic components has greatly increased. These sources range from individuals selling electronic components out of their homes, to large web-based traders and independent distributors/brokers. Frequently, more than one of these traders/brokers is involved in fulfilling an order placed with a non-authorized source. There is no way to conclusively determine the storage/handling conditions and legitimacy of origin of products bought through non-authorized sources. Product supplied through non-authorized sources may appear to be legitimate, but issues with such product can include:

- Electronic components with seemingly proper markings and package labeling (including logos) are actually counterfeits. For details on one form of counterfeiting (salvaging and re-marking) common to all types of electronic components, see the BusinessWeek article and video at [http://www.businessweek.com/magazine/content/08\\_41/b4103034193886.htm](http://www.businessweek.com/magazine/content/08_41/b4103034193886.htm).
- Moisture-sensitive products are supplied by non-authorized sources without dry-pack, or these products are not properly baked prior to dry-packing.
- ESD-sensitive products are not properly handled by non-authorized sources.
- Electronic components with OEM-specific markings are re-sold to brokers that then sell them to others. Note: This re-sale is easily recognized by manufacturers and frequently voids the original warranty.

The net result of the above issues is that products that pass electrical testing after board mounting may still result in significant field reliability problems for integrated circuits (ICs) and other electronic components such as:

- Die-level corrosion during field use due to chemicals used by counterfeiters (to strip markings and/or to clean components) penetrating plastic packages over time.
- Time-/temperature-dependent lifted wire-bonds due to package delamination induced during board mounting of ICs that were not properly dry-packed.
- Die and/or package cracking due to improper component rework or storage/handling.
- Time-dependent electrical failures due to latent ESD damage from mishandling.

Customers that buy components from non-authorized sources may save money in the short-term, but they run the risk of major reliability issues that can damage their reputation and prove enormously expensive in the long-term due to warranty expenses, field replacements, and liability claims. Customers that nonetheless turn to non-authorized channels for electronic components trade risk for reliability. For these reasons, ECIA strongly encourages all customers to buy electronic components exclusively through manufacturer authorized sources.

### **ECIA Officers 2011 – 2012**

#### **Chairperson**

John Denslinger  
Murata Electronics N.A.

#### **Chairperson-elect**

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TTI, Inc.

#### **Past Chairperson**

Brian McNally  
Arrow Electronics, Inc.

#### **President & CEO**

Robin B. Gray, Jr.

#### **Chief Technical Officer**

Bob Willis



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## AUTHORIZED DISTRIBUTOR CERTIFICATE

Mouser Electronics is dedicated to providing manufacturer warranted, first quality genuine components and adhering to the highest standards in customer service.

We hereby certify that Mouser Electronics is an original component manufacturer (OCM) authorized distributor.

We hereby certify that all electronic components sold by Mouser Electronics:

- Were obtained directly from the original component manufacturer or from OCM authorized channels.
- Were handled and stored in accordance with industry quality standards.

We also hereby certify that Mouser Electronics is a member in-good-standing of the Electronic Component Industry Association (ECIA) and China Electronics Distributor Alliance (CEDA).

ECIA represents electronic component manufacturers and their authorized partners in the authorized supply chain. ECIA members consist of component manufacturers, authorized distributors and sales representatives. ECIA also governs the worldwide EIA standards that cover the production standards for many electronic components. ECIA is a result of the merger of the National Electronic Distributors Association (NEDA) and the Electronic Components Association (ECA). ECIA brings together all of the elements of the authorized electronic components supply chain.

The ECIA encourages all customers to establish internal controls to ensure that all parts are purchased only from the original component manufacturer or the original component manufacturer's authorized distributors.

For more information visit: <http://www.eciaonline.org/>

CEDA (China Electronics Distributor Alliance) is a not-for-profit industrial organization serving the needs of authorized electronics component distributors with operations in Greater China. CEDA's mission is to represent authorized distribution services in the China market, to strengthen cooperation between distributors and suppliers, encourage technical and service innovation, and work with the Chinese government to shape policies. For more information visit: <http://www.cedachina.org/>

If you have any questions about this certificate please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Chuck Amsden".

Charles H. Amsden  
Director of Quality  
Phone: 817-804-3630  
Fax: 817-804-3803  
email: [chuck.amsden@mouser.com](mailto:chuck.amsden@mouser.com)  
website: [www.mouser.com](http://www.mouser.com)





America

# CERTIFICATE

The Certification Body of  
**TÜV SÜD AMERICA INC.**

hereby certifies that

**Mouser Electronics Incorporated**  
1000 N. Main St  
Mansfield, TX 76063 USA

has implemented a Quality Management System  
in accordance with:

**AS9120:2009 and ISO 9001:2008**

The assessment was performed in accordance with the requirements of AS9104A.  
TÜV SÜD America Inc. is accredited under the aerospace Registrar Management Program.

The scope of this Quality Management System includes:

**Distribution of Electronic Components and Supplies,  
Including Optoelectronics, Embedded Solutions,  
Semiconductors, Circuit Protection, Passive  
Components, Interconnects, Wire and Cable,  
Electromechanical, Sensors, Enclosures, Thermal  
Management, Power, Test and Measurement and Tools**

Certificate Expiry Date: July 26, 2014

Certificate Registration No: 951 11 5681

Effective Date: July 27, 2011



  
Gary W. Minks  
VP, Regulatory Affairs





## Search ECIA Authorized Distributors



The [eciaauthorized.com](#) site is the fastest and most complete authorized electronics inventory search available on the Internet.

Don't risk your product, your customer, or your reputation. Look for the "Authorized Source" logo to ensure you purchase from a legitimately authorized company. ECIA authorized sources are your safest source for any electronic component. Start your search on [eciaauthorized.com](#).



### Sponsoring ECIA Members



### Participating ECIA Authorized Distributors

<a href="#">AESCO ELECTRONICS</a>	<a href="#">ELECTRO SONIC</a>	<a href="#">MARSH ELECTRONICS</a>	<a href="#">PUI</a>
<a href="#">ALLIED ELECTRONICS</a>	<a href="#">FALCON ELECTRONICS</a>	<a href="#">MASTER DISTRIBUTORS</a>	<a href="#">Rochester Electronics</a>
<a href="#">AREA51-ESG</a>	<a href="#">FUTURE ELECTRONICS</a>	<a href="#">MOUSER ELECTRONICS</a>	<a href="#">RS E</a>
<a href="#">ARROW ELECTRONICS</a>	<a href="#">GARRETT ELECTRONICS</a>	<a href="#">NAC</a>	<a href="#">SAGER ELECTRONICS</a>
<a href="#">AVNET</a>	<a href="#">GENIE GROUP</a>	<a href="#">NEWARK</a>	<a href="#">SRE</a>
<a href="#">BROTHERS ELECTRONICS</a>	<a href="#">GOPHER ELECTRONICS</a>	<a href="#">NORTH COAST COMPONENTS</a>	<a href="#">SYM</a>
<a href="#">CUMBERLAND ELECTRONICS</a>	<a href="#">HAMMOND ELECTRONICS</a>	<a href="#">PEI-GENESIS</a>	<a href="#">Tonar</a>
<a href="#">DIGI-KEY</a>	<a href="#">HEILIND ELECTRONICS</a>	<a href="#">POWELL ELECTRONICS</a>	<a href="#">tti</a>
<a href="#">DOVE ELECTRONIC</a>	<a href="#">KREGER COMPONENTS</a>	<a href="#">PRIDMORE CORPORATION</a>	<a href="#">View ECIA Distributor Members</a>