



Gaining Proficiency in Component Sourcing and Selection to Ensure Parts Availability



May 17,18, 2012

Instructor: Peter Morse, IHS Inc.

Electronics Subject Matter Expert

Contact: 303-522-5667, peter.morse@ihs.com

Session Outline



During this session:

attendees will be given guidance and instruction intended to aid their organization in making wise product design, sourcing, compliance and obsolescence management decisions in less time:

thus increasing the probability of procuring authentic parts.

2012 National Defense Authorization Act



Section 818: Detection and Avoidance of Counterfeit Electronic Parts

- *Requires...processes to abolish counterfeit parts*
- *Requires...the use of trusted suppliers*
- *Requires...the design, operation, and maintenance of systems to detect and avoid counterfeit electronic parts*
- *Requires...standards and processes for identifying such trusted suppliers comply with established industry standards*

One Hundred Twelfth Congress of the United States of America

AT THE FIRST SESSION

*Begun and held at the City of Washington on Wednesday,
the fifth day of January, two thousand and eleven*

An Act

To authorize appropriations for fiscal year 2012 for military activities of the Department of Defense, for military construction, and for defense activities of the Department of Energy, to prescribe military personnel strengths for such fiscal year, and for other purposes.

*Be it enacted by the Senate and House of Representatives of
the United States of America in Congress assembled,*

SECTION 1. SHORT TITLE.

This Act may be cited as the "National Defense Authorization Act for Fiscal Year 2012".

Industry Standards



SAE AS5553

SAE Aerospace An SAE International Group	AEROSPACE STANDARD	SAE AS5553
		Issued 2009-04
Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition		
RATIONALE		
This standard was created in response to a significant and increasing volume of counterfeit electronic parts entering the aerospace supply chain, posing significant performance, reliability, and safety risks. This standard was created to provide uniform requirements, practices and methods to mitigate the risks of receiving and installing counterfeit electronic parts.		
FOREWORD		
To assure customer satisfaction, aerospace industry organizations must produce, and continually improve, safe, reliable products that meet or exceed customer and regulatory authority requirements. The globalization of the aerospace industry and the resulting diversity of regional/national requirements and expectations has complicated this objective. End-product organizations face the challenge of assuring the quality and integration of product purchased from suppliers throughout the world and at all levels within the supply chain. Aerospace suppliers and processors face the challenge of delivering product to multiple customers having varying quality expectations and requirements. This document standardizes requirements, practices, and methods related to: parts management, supplier management, procurement, inspection, test/evaluation, and response strategies when suspect or confirmed counterfeit parts are discovered.		
SAE Technical Standards Board Rules provide that, "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement liability thereon, is the sole responsibility of the user." SAE reserves all technical report rights every five years of which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions. Copyright ©2009 SAE International. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE. TO PLACE A DOCUMENT ORDER: Tel. 877-606-7323 (toll free in US and Canada) Fax 724-776-4870 (outside USA) E-mail: CustomerService@sae.org		
SAE values your input. To provide feedback on this Technical Report, please visit http://www.sae.org/technical/standards/AS5553		

SAE AS5553

- Obsolescence can increase the risk of acquiring counterfeit electronic parts. To reduce the likelihood of purchasing counterfeit parts, electronic equipment manufacturers should **proactively manage the life cycle of their products through the use of a Diminishing Manufacturing Sources and Material Shortages (DMSMS) management plan.**

- The processes shall maximize availability of authentic, originally designed and/or qualified parts throughout the product's life cycle, including **management of parts obsolescence.**

Meet Regulatory and Industry Specified Compliance



IHS can help by providing the required tools and content:

- Effective component selection is critical to mitigating costs and risks associated with counterfeit and obsolete components.
- This session will show how organizations can take a proactive approach to component selection by systematically reviewing multiple manufacturer sources for the absolute best possible component selection for your designs.

IHS Electronic Components Database - CAPS Universe



The Electronics Database contains component information on over 300 million electronic components, from more than 1,500 manufacturers representing over 450 part categories

- *Batteries*
- *Connectors*
- *Crystals / Oscillators*
- *Cylindricals*
- *Electro-Mechanical Components*
- *Fans & Blowers*
- *Fasteners & Hardware*
- *Fiber Optic Connectors*
- *Fiber Optic Devices*
- *Fuses & Circuit Protection*
- *Heat Sinks*
- *Sensors*
- *Passive Devices*
- *Power Supplies*
- *Relays*
- *RF Microwave Devices*
- *Semiconductors*
- *Transformers*

Search millions of semiconductors, passive devices, electro-mechanical and other parts



4DONLINE Parts Universe User: IHS User Home | [Advanced Search](#) | [Results](#) | [Preferences](#) | [IHS Menu](#) | [Log Out](#) | [Help](#)

Category: General Fixed Inductor

☒ All ☒ Electrical ☒ Environmental ☒ General ☒ Life Cycle ☒ Mechanical

Results: Advanced Documents Details Environmental Compare Transfers Mfr Info Alerts Life Cycle Export

Category: General Fixed Inductor [Edit Search](#) 11 items

Clr	Rel. Info	Part Number	Mfr Name	PS	Part Description	Manufacturer Part Description
☐		0603-15NGG	API Delevan	A	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD	OPEN CONSTRUCTION WIREWOUND S
☒		CT0805CS-150G	Central Tec	A	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD	OPEN - WIRE-WOUND CHIP INDUCTOR
☐		LLQ2012-E15NG	Toko	A	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD	WIREWOUND CHIP INDUCTOR
☐		0805-15NG	API Delevan	A	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD	OPEN CONSTRUCTION WIREWOUND S
☐		LLQ1608-A15NG	Toko	A	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD	WIREWOUND CHIP INDUCTOR
☐		CI0603-15N-GBQ	RCD	A	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD	CERAMIC CORE WIREWOUND CHIP IN
☐		CI0603-15N-GTQ	RCD	A	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD	CERAMIC CORE WIREWOUND CHIP IN
☐		IMC0603RK15NG01	Dale	A	1 ELEMENT, 0.015 uH, GENERAL PURPOSE INDUCTOR, SMD	WIRE WOUND SURFACE MOUNT INDUC
☐		CI0603-R015-GBQ	RCD	A	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD	CERAMIC CORE WIREWOUND CHIP IN
☐		CI0603-R015-GTQ	RCD	A	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD	CERAMIC CORE WIREWOUND CHIP IN
☐		CT0603CS-15NG	Central Tec	A	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD	OPEN WIRE-WOUND CHIP INDUCTOR

11 items ☒ All ☒ Electrical ☒ Environmental ☒ General ☒ Life Cycle ☒ Mechanical [Export](#) [Compare](#) [Search](#)

[Results History](#) [Save Search](#) Recall Search... [ERA I](#)

View technical specifications, datasheets, and environmental compliance documents



IHS 4DOnline Parts Universe Results

User: IHS User Home | Advanced Search | Results | Preferences | IHS Menu | Log Out | Help

Results: Advanced Documents Details **Environmental** Compare Transfers Mfr Info Alerts Life Cycle Distributors Export

Part Number: CT0805CSF-150G Mfr Name: Central Tec PS: A Print Preview

RoHS Attributes		Reach Attributes	
RoHS Compliant	NO	SVHC Presence	NO
Document(s)	YES	SVHC List	SVHC-73(19-DEC-2011)
RoHS Exemption(s)		Source	REACH COFC
China RoHS Compliant		CAS Accounted for Weight (%)	0
Environmentally Friendly Use Period		PDSL Presence	
RoHS Compliance Identifier	PART NUMBER	PDSL List	
RoHS Compliant Number	CT0805CSF-150G		
Additional Feature			

EU Material Attributes		China Material Attributes	
Lead (ppm)		Pb: <= 1000 ppm	
Lead (mg)		Cd: <= 100 ppm	
Cadmium (ppm)		Cr VI: <= 1000 ppm	
Cadmium (mg)		Hg: <= 1000 ppm	
Chromium VI (ppm)		PBB: <= 1000 ppm	
Chromium VI (mg)		PBDE: <= 1000 ppm	
Mercury (ppm)			
Mercury (mg)			
PBB (ppm)			
PBB (mg)			
PBDE (ppm)			
PBDE (mg)			
Item Weight (mg)			

Lead-Free Attributes	
Lead Free	NO
Terminal Finish	NOT SPECIFIED
JESD-609 Code	

No.	Substance of very high concern	CAS number	EC number	Reason for Inclusion
1	Anthracene	120-12-7	204-371-1	PBT (article 57d)
2	4,4'- Diaminodiphenylmethane	101-77-9	202-974-4	Carcinogenic (article 57a)
3	Dibutyltin dilaurate (DBDL)	84-74-2	201-553-1	Toxic for reproduction (article 57b)

Done Done Internet 100%

Identify equivalent parts, upgrades, downgrades, and RoHS-compliant substitutes



IHS 4DOnline Parts Universe Results

User: IHS User Home | Advanced Search | Results | Preferences | IHS Menu | Log Out | Help

Results: Alternates Documents Details Environmental Compare Transfers Mfr Info Alerts Life Cycle Export

Category: General Fixed Inductor Print Preview

	☐ Select ☒ Remove	☒ Selected	☐ Select ☒ Remove	☐ Select ☒ Remove
Part Number	CT0805CSF-150G	CT0805CS-150G	0805R-15NH	LLQ2012-F15NG
Mfr Name	Central Tec	Central Tec	API Delevan	Toko
PS	A	A	A	A
Part Description	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD
Manufacturer Part Description	OPEN-WIRE-WOUND CHIP INDUCTOR	OPEN - WIRE-WOUND CHIP INDUCTOR	OPEN CONSTRUCTION WIREWOUND SURFACE MOUNT INDUCTOR	WIRE WOUND CHIP INDUCTOR
Manufacturer Package Description	CHIP, 0805, ROHS COMPLIANT	CHIP, 0805		CHIP, 0805, ROHS COMPLIANT
CAGE Code			99800	SJ923
RoHS Compliant	YES	NO	YES	YES
RoHS Exemption(s)				
SVHC Presence	NO	NO	NO	
PDSL Presence				
China RoHS Compliant				
Lead Free	YES	NO	YES	YES
HTS Code				
SB Code				
ECCN				
ECCN Governance				
Manufacturer Series	CT0805CSF	CT0805CS	0805	LLQ2012
Manufacturer Part Description	GENERAL PURPOSE INDUCTOR	GENERAL PURPOSE INDUCTOR	GENERAL PURPOSE INDUCTOR	GENERAL PURPOSE INDUCTOR

Done Internet 100%

Analyze lifecycle stage, availability, predicted or actual EOL, and part LTB information

The screenshot shows the IHS 4D ONLINE Parts Universe web application. The top navigation bar is blue with the IHS logo, "4D ONLINE Parts Universe", and a title "1819417230: V2) PRODUCT DISCONTINUANCE NOTIFICATION (2011/09/06)". A "Close Window" button is on the right. The main content area has a white background with a blue border. The subject line is "SUBJECT: Notice of Discontinuation of Wire-Wound Chip Inductor (LQH6PP series & LQH88P series)". The body of the notice starts with "Dear Valued Customer," followed by a thank you and a statement of discontinuation. It then lists applicable products, a schedule for last orders and production, the reason for discontinuation, and substitution information. The interface includes a left sidebar with a search menu and a right sidebar with a help menu. The bottom status bar shows "Done" and "Internet" with a 100% zoom level.

SUBJECT: Notice of Discontinuation of Wire-Wound Chip Inductor
(LQH6PP series & LQH88P series)

Dear Valued Customer,

Thank you very much for your patronage on our products.
We have regrettably decided to say that our Wire-Wound Chip Inductor "LQH6PP series & LQH88P series" will be discontinued as per the following schedule.

1. Applicable Products
Wire-Wound Chip Inductor (LQH6PP series, LQH88P series)

Please refer to attached sheet "Appendix 1" for details.

- We have indicated the affected Part No's in Appendix 1, which have been ordered or have been registered in our system within the last two years.
- The current registration will be invalid after Discontinuation.

2. Schedule
Last Order: by the end of June, 2012
End of Production: by the end of September, 2012

3. Reason for discontinuation
These two series were launched in 2009. Since then, an unexpected decline in market prices has deteriorated our business circumstances.

4. Substitution

Access PCN/EOL alerts and counterfeit reports



4DONLINE

IHS 4DONLINE Parts Universe Results

User: IHS User Home | Advanced Search | Results | Preferences | IHS Menu | Log Out | Help

Results: Advanced Documents Details Environmental Compare Transfers Mfr Info Alerts Life Cycle Export

Category: General Fixed Inductor Edit Search 11 items

Clr	Rel. Info	Part Number	Mfr Name	PS	Part Description	Manufacturer Part Description
☐		0603-15NGG	API Delevan	A	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD	OPEN CONSTRUCTION WIREWOUND S
☒		CT0805CS-150G	Central Tec	A	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD	OPEN - WIRE-WOUND CHIP INDUCTOR
☐		LLQ2012-E15NG	Toko	A	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD	WIREWOUND CHIP INDUCTOR
☐		0805-15NG	API Delevan	A	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD	OPEN CONSTRUCTION WIREWOUND S
☐		LLQ1608-A15NG	Toko	A	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD	WIREWOUND CHIP INDUCTOR
☐		CI0603-15N-GBQ	RCD	A	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD	CERAMIC CORE WIREWOUND CHIP IN
☐		CI0603-15N-GTQ	RCD	A	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD	CERAMIC CORE WIREWOUND CHIP IN
☐		IMC0603RK15NG01	Dale	A	1 ELEMENT, 0.015 uH, GENERAL PURPOSE INDUCTOR, SMD	WIRE WOUND SURFACE MOUNT INDUC
☐		CI0603-R015-GBQ	RCD	A	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD	CERAMIC CORE WIREWOUND CHIP IN
☐		CI0603-R015-GTQ	RCD	A	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD	CERAMIC CORE WIREWOUND CHIP IN
☐		CT0603CS-15NG	Central Tec	A	1 ELEMENT, 0.015 uH, CERAMIC-CORE, GENERAL PURPOSE INDUCTOR, SMD	OPEN WIRE-WOUND CHIP INDUCTOR

11 items

☒ All ☒ Electrical ☒ Environmental ☒ General ☒ Life Cycle ☒ Mechanical | Export Compare Search

Results History Save Search Recall Search... ERAI

Evaluate price, availability, and sources for parts and substitute parts



4DONLINE Parts Universe

Results: Advanced Documents Details Environmental

Part Number: CT0805CS-150G Mfr Name: Central Tec PS:

Manufacturer

Manufacturer Name	CENTRAL TECHNOLOGIES
Manufacturer Web Site	http://www.ctparts.com/
Short Mfr Name	Central Tec
Business Status	SUPP. PARTS
Content Coverage	
Address-1	ONE PARK PLAZA,

Manufacturer Category: Power Sup Ceramic C Tantalum Signal Dio Voltage Re Data Line

CENTRAL TECHNOLOGIES
Manufacturer of Passive Components

Home | What's New | Search | Products | Customs | Samples & Quotes | Eng. Kits | Resources | About Us | Environmental | Contact Us

Products

IHS 4DONLINE Parts Universe Results

4DONLINE Parts Universe

User: IHS User Home | Advanced Search | Results | Preferences | IHS Menu | Log Out | Help

IHS 4DONLINE Parts Universe Results

4DONLINE Parts Universe

User: IHS User Home | Advanced Search | Results | Preferences | IHS Menu | Log Out | Help

Results: Advanced Documents Details Environmental Compare Transfers Mfr Info Alerts Life Cycle Distributors Export

Part Information : Part Number: MAX195BCWE+

Part Number	MAX195BCWE+
Manufacturer Name	MAXIM INTEGRATED PRODUCTS INC
Status	ACTIVE
Part Description	1-CH 16-BIT SUCCESSIVE APPROXIMATION ADC, SERIAL ACCESS, PDSO16
Industry Avg Price (\$)	70.06

Distributor Data: Part Number: MAX195BCWE+

Source	Quantity in Stock	Lead Time (Weeks)	Price	Currency	Quantity-Min	Quantity-Max	Quantity-Multiples	Packaging	Packag
AVNET	2226	9	84.09	USD	9		1		
Digi-Key	529	9	56.04	USD				TUBE	

2 items

ERA1

Search

Retrieve RoHS, REACH, and other compliance information and documentation



IHS 4DOnline Parts Universe Results

1572900047: E5 120-12-7 REACH DECLARATION(2012/01/09) Close Window

Part Num	Part Description	RoHS Code	REACH Declaration
24	2,4-Dinitrotoluene	121-14-2	204-450-0
25	Diisobutyl phthalate	84-69-5	201-553-2
26	Lead chromate	7758-97-6	231-846-0
27	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8	235-759-9
28	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	215-693-7
29	Tris(2-chloroethyl)phosphate	115-96-8	204-118-5
30	Acrylamide	79-06-1	210-173-7
31	Trichloroethylene	79-01-6	201-167-4
32	Boric acid	10043-35-3	233-139-2
33	Disodium tetraborate, anhydrous	1303-96-4	215-540-4
34	Tetraboron disodium heptaoxide, hydrate	12267-73-1	235-541-3
35	Sodium chromate	7775-11-3	231-889-5
36	Potassium chromate	7789-00-6	232-140-5
37	Ammonium dichromate	7789-00-6	232-143-1
38	Potassium dichromate	7778-50-9	231-906-6
39	Cobalt(II) sulphate	10124-43-3	233-334-2
40	Cobalt(II) dinitrate	10141-05-6	233-402-1
41	Cobalt(II) carbonate	513-79-1	208-169-4
42	Cobalt(II) diacetate	71-48-7	200-755-8
43	2-Methoxyethanol	109-86-4	203-713-7
44	2-Ethoxyethanol	110-80-5	203-804-1
45	Chromium trioxide	1333-82-0	215-607-8

NEXT Steps



1. *Gain access to a parts research tool that effortlessly exposes multiple manufacturer FFF component sources to chose from.*
2. *Gain access to a parts research tool to maximum your decision support. Allowing access to a rich set of technical parametric data, Life Cycle prediction, FFF alternates search/compare, datasheets, environmental documents, PCNs, EOLs, GIDEP and ERAI counterfeit alerts.*
3. *Gain access to a parts research tool that supports sourcing from trusted manufacturers and franchised distribution sources.*

