Gaining Proficiency in World-Class BOM Management

May 17-18, 2012

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Session Outline

During this proficiency training course:

Attendees will be given guidance and instruction intended to aid their organization in the strategic implementation of a proactive Bill Of Material (BOM) Management approach designed to identify, analyze and resolve current and impending part availability risks associated with obsolescence.

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2012 National Defense Authorization Act

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".

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*

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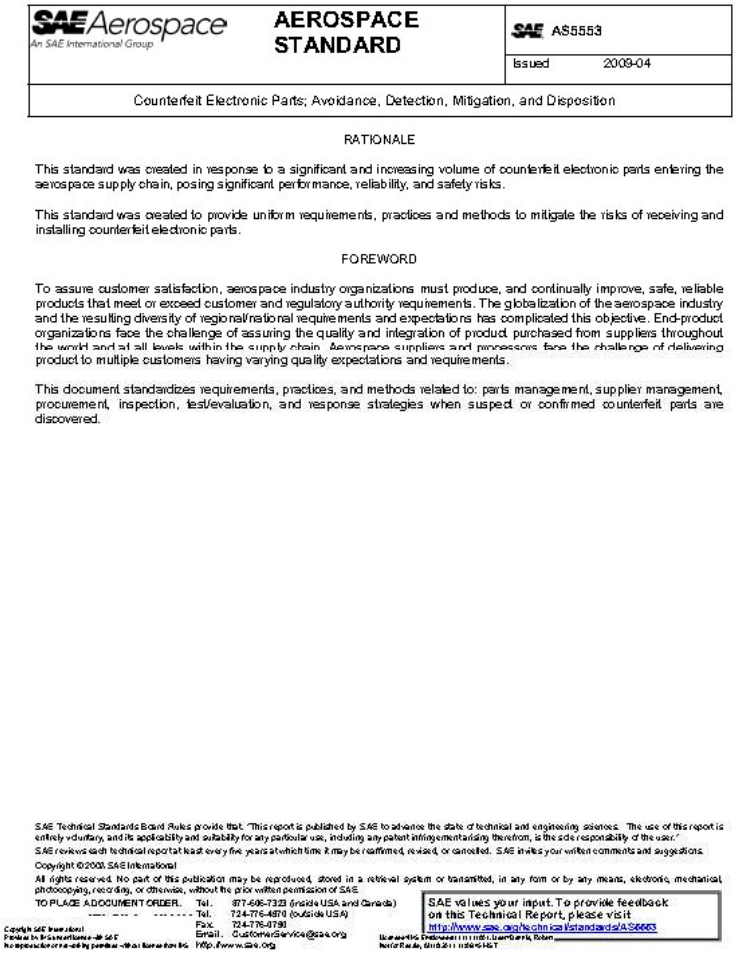
Industry Standards



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.

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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.*

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Meet Regulatory and Industry Specified Compliancy

IHS can help by providing the required tools and content for:

- *Effective BOM Management which critical in mitigating costs and risks associated with counterfeit and obsolete components and proactive identification of current and impending part availability changes.*

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IHS BOM Manager

With the IHS BOM Manager tool and Electronic Components Database, customers can:

- *Identify obsolescence and counterfeit risks as early as possible*
- *Identify alternate parts, sources and aftermarket manufacturers*
- *Manage and evaluate suppliers in a Approved Manufacturer List (AML)*
- *Receive part status, counterfeit, PCN/EOL, GIDEP notices, and price/availability updates*

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IHS Electronic Components Database

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*

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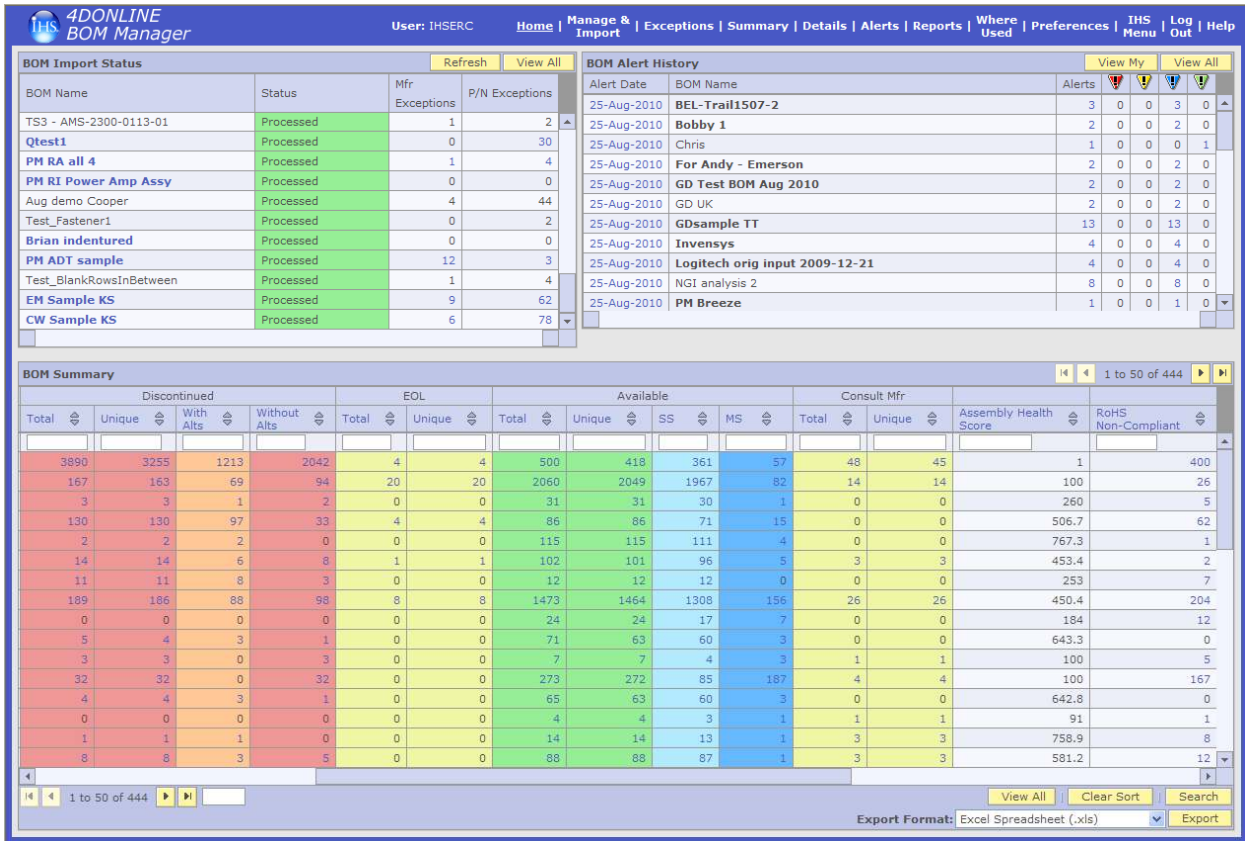

Quickly navigate to the information you need:

- Identify parts of concern
- Monitor alerted parts

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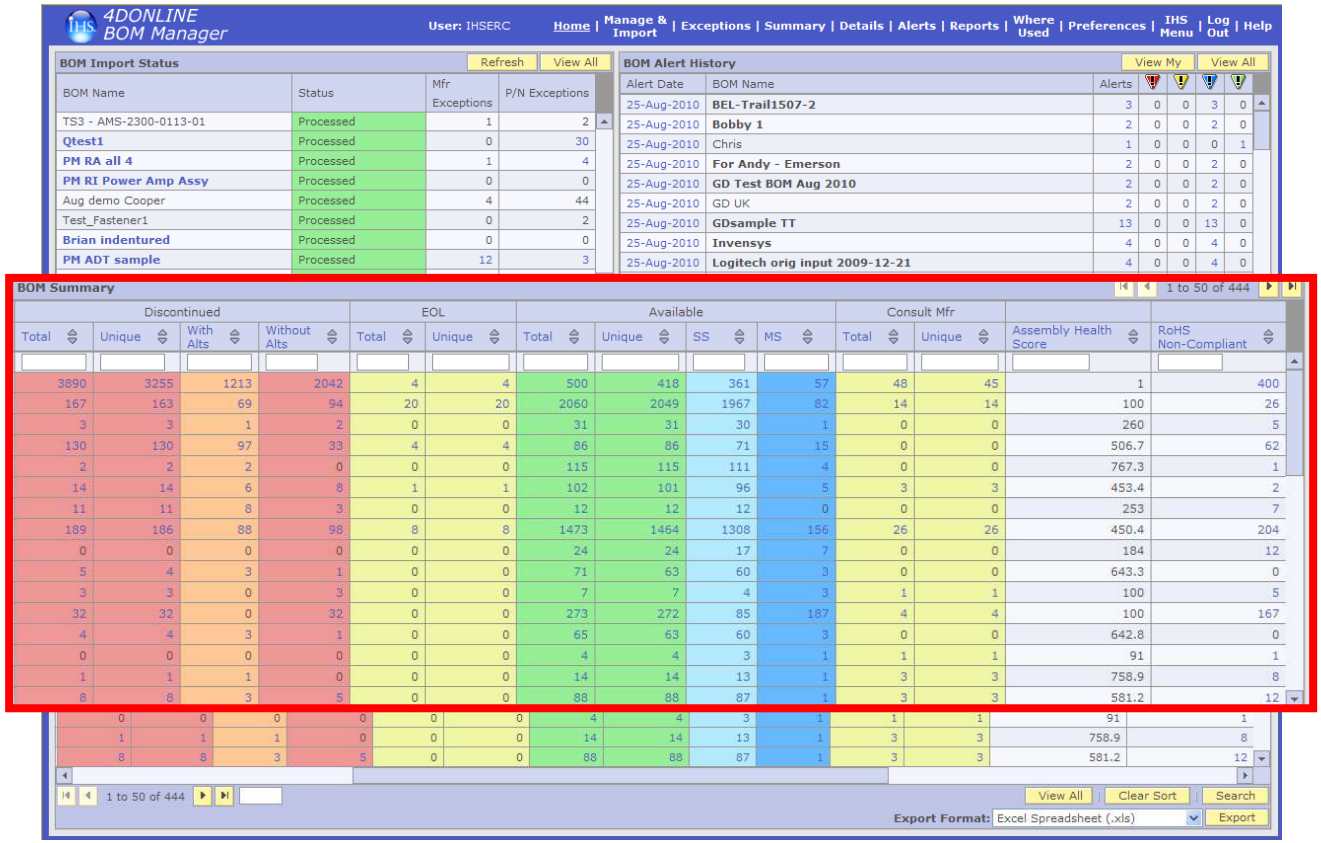

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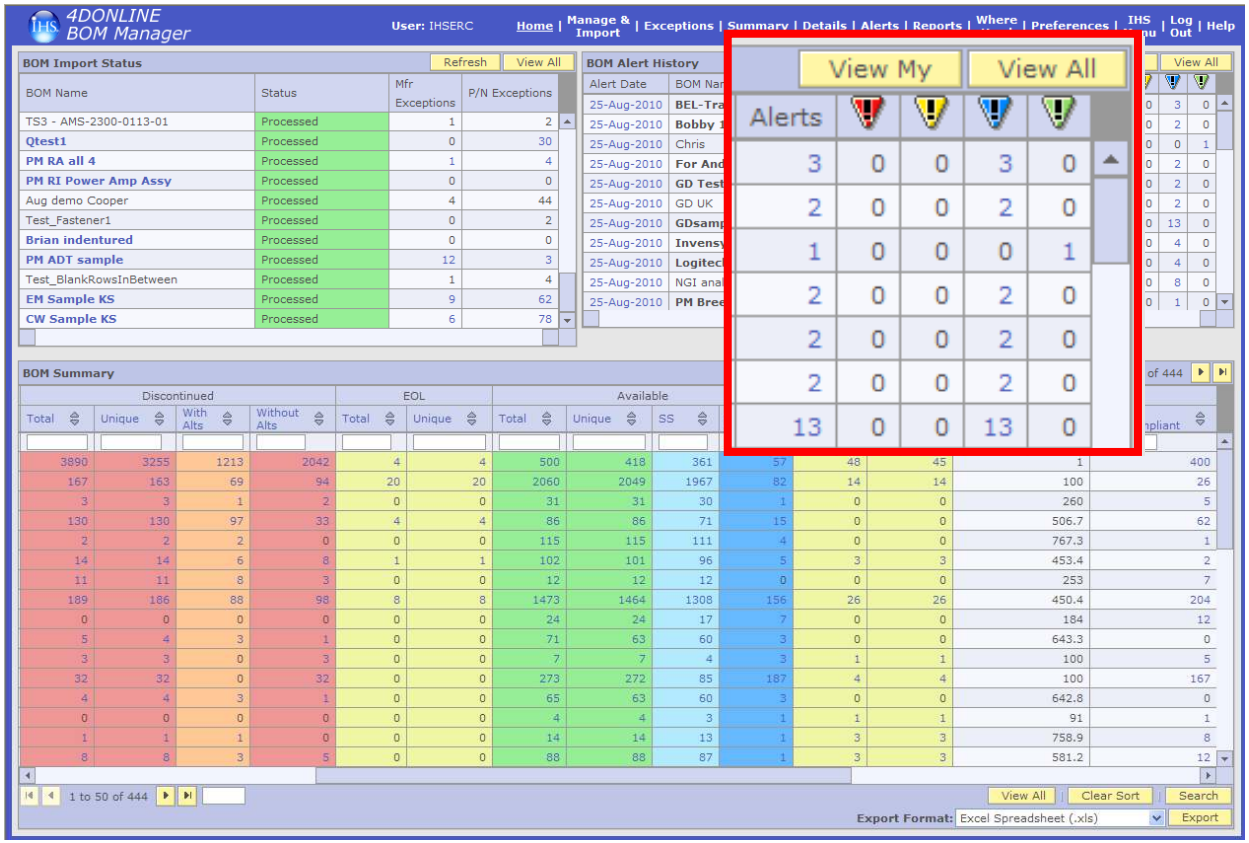

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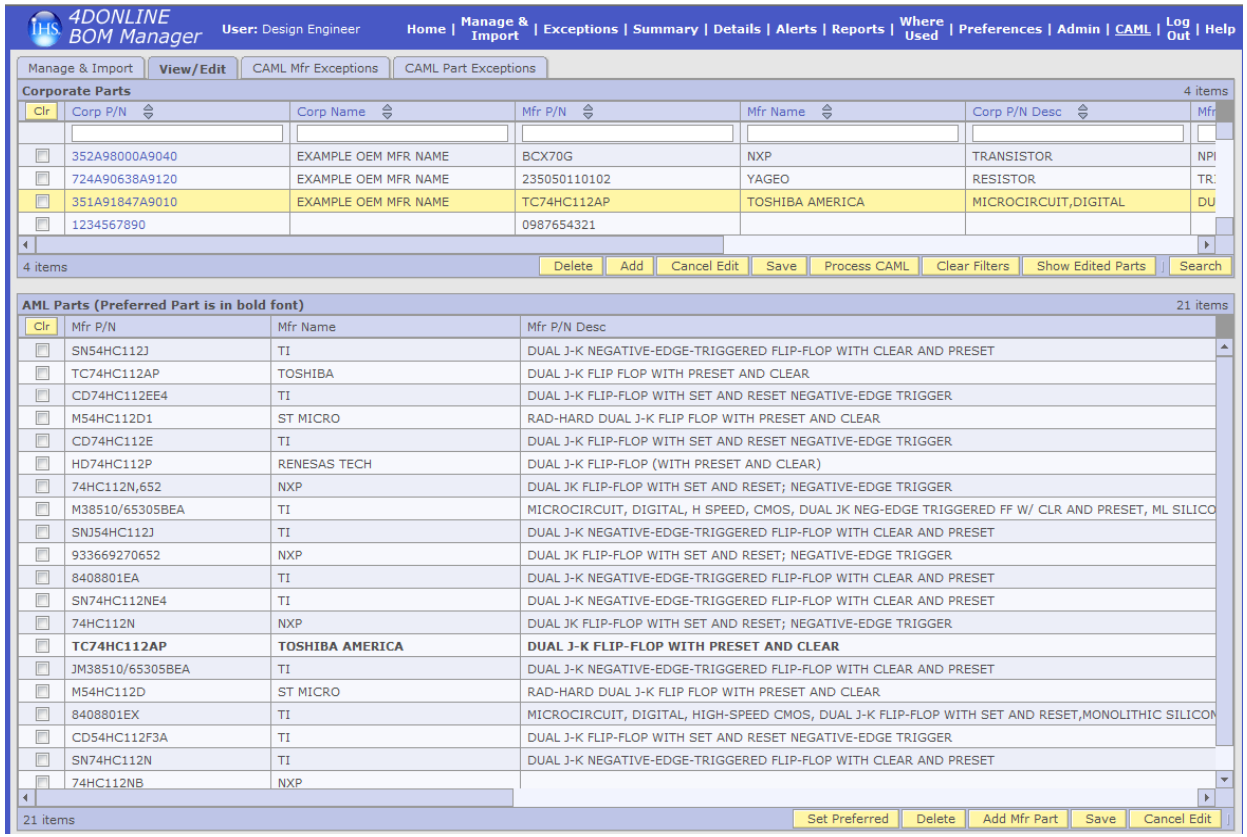

Approved Manufacturer List (AML):

- Create and manage your corporate AVL – Reduce part number and supplier redundancy

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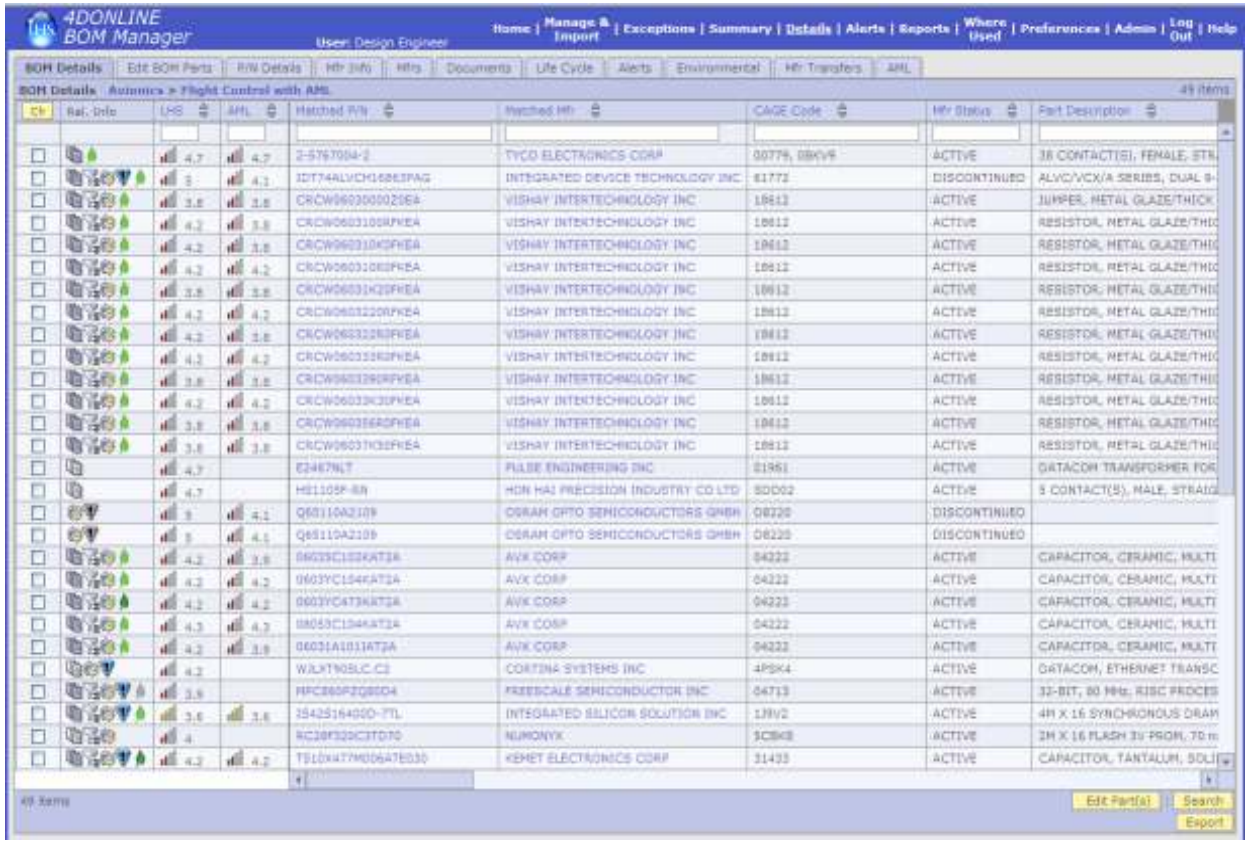

Easy access to part information:

- Datasheets
- Lifecycle
- Alerts / Notices
- Technical attributes
- Alternates

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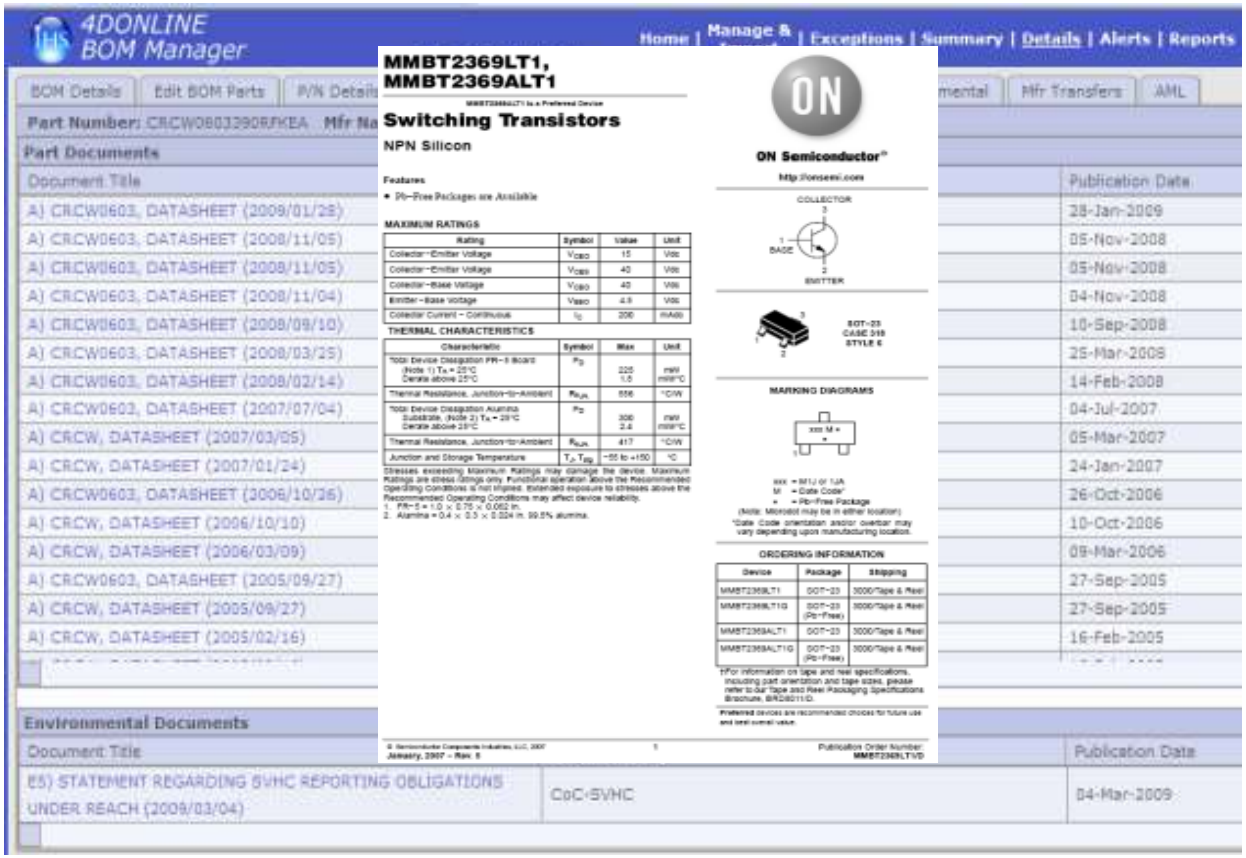

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BOM Details | Edit BOM Parts | P/N Details | Mfr Info | Mfrs | Documents | Life Cycle

Part Number: SN74LVT8996PW **Mfr Name:** TI **PS:** A

Category	Microprocessor IC:Other
Manufacturer Part Description	3.3V 10B ADD SCN PRT MTDRP-ADD TRNS
Manufacturer Package Description	GREEN, PLASTIC, TSSOP-24
CAGE Code	01295
RoHS Compliant	YES
RoHS Exemption(s)	
SVHC Presence	NO-SEE ENV DOC
PDSL Presence	NO-SEE ENV DOC
China RoHS Compliant	YES
Lead free	YES
Generic Number	74LVT8996
Microprocessor Circuit Type	MICROPROCESSOR CIRCUIT
Qualification Status	COMMERCIAL
Temperature Grade	INDUSTRIAL
Supply Voltage-Nom (Vsup) (V)	3
Supply Voltage-Min (Vsup) (V)	2.7
Supply Voltage-Max (Vsup) (V)	3.6
Technology	BICMOS
Number of Functions	1
Package Code	TSSOP
JESD-30 Code	R-PDSO-G24
Package Shape	RECTANGULAR
Package Body Material	PLASTIC/EPOXY
Terminal Position	DUAL
Package Style	SMALL OUTLINE, THIN PROFILE, SHRINK PITCH
Terminal Form	GULL WING
Number of Terminals	24
Surface Mount	YES
Length (mm)	7.8
Width (mm)	4.4
Seated Height-Max (mm)	1.2
Terminal Pitch (mm)	0.65

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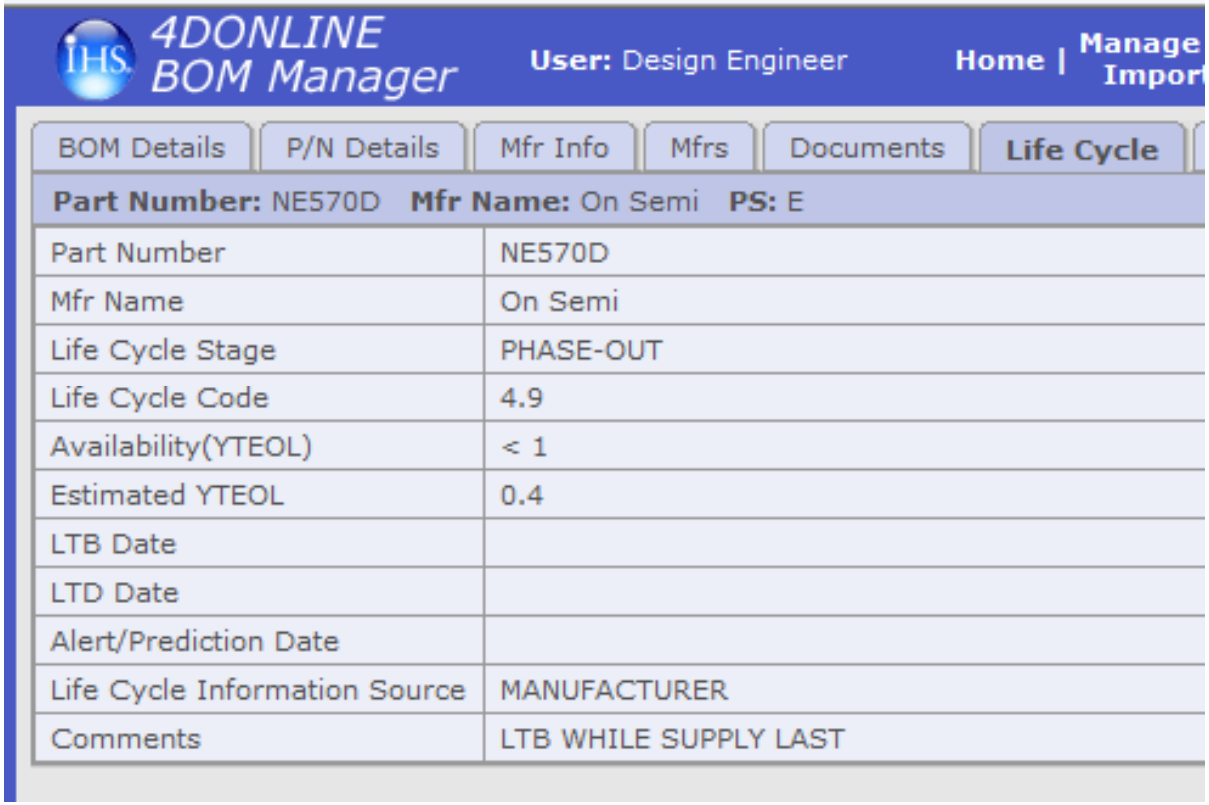

Part Number	NE570D
Mfr Name	On Semi
Life Cycle Stage	PHASE-OUT
Life Cycle Code	4.9
Availability(YTEOL)	< 1
Estimated YTEOL	0.4
LTB Date	
LTD Date	
Alert/Prediction Date	
Life Cycle Information Source	MANUFACTURER
Comments	LTB WHILE SUPPLY LAST

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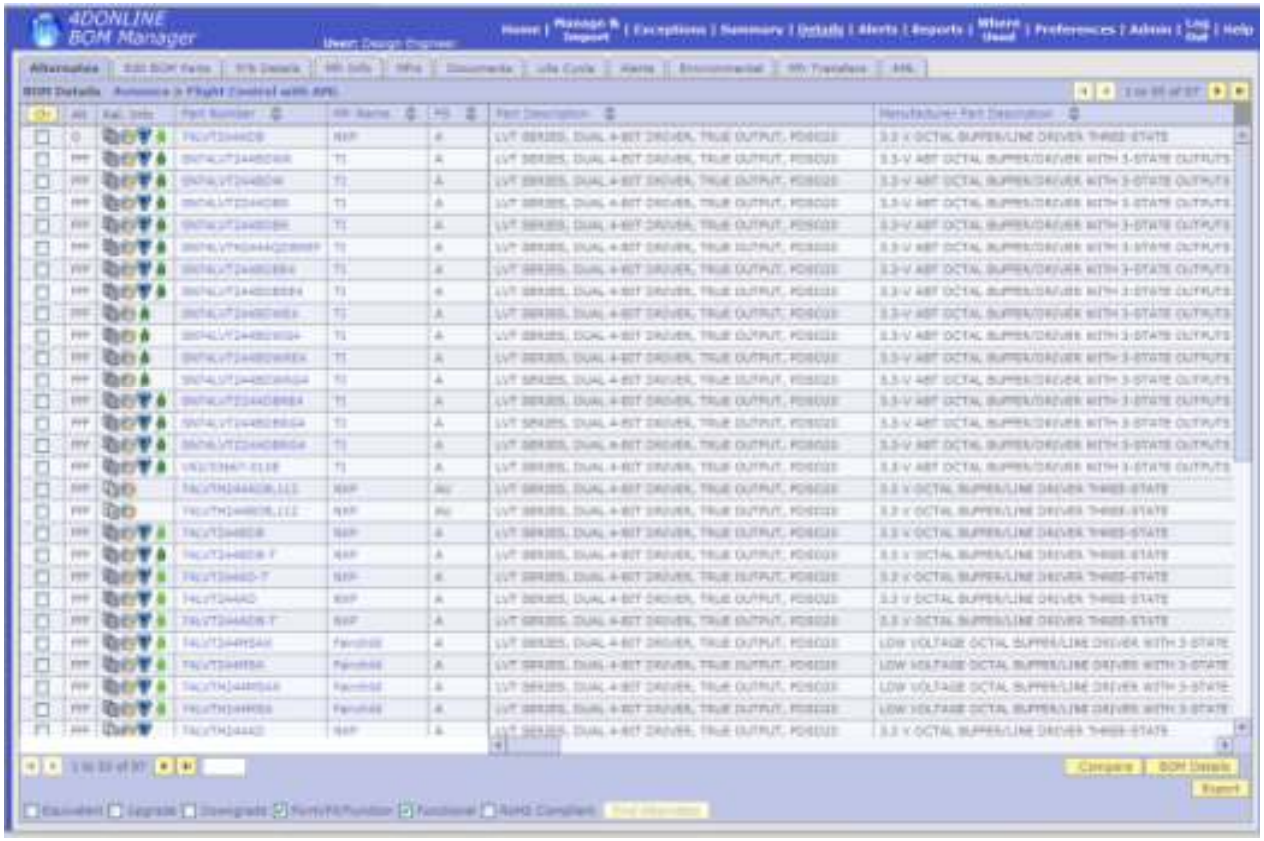

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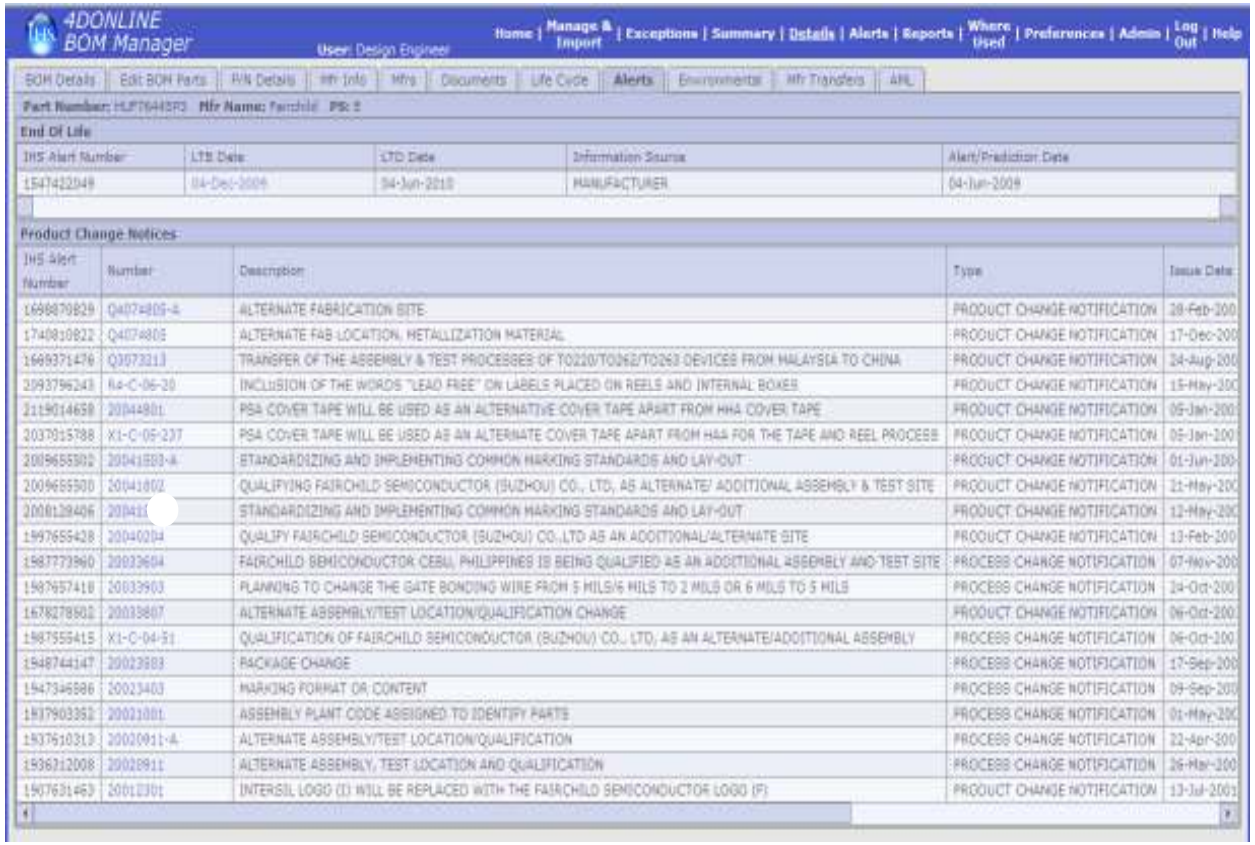

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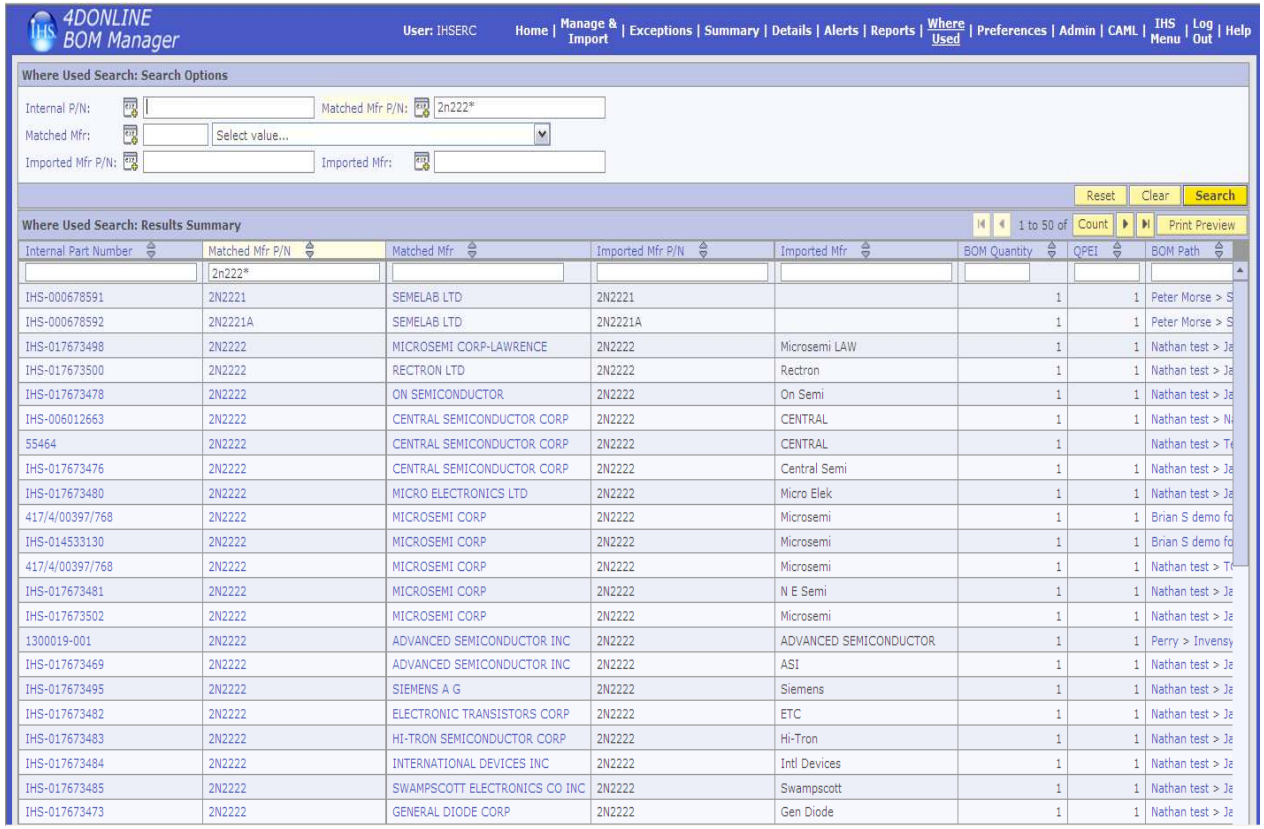

Internal Part Number	Matched Mfr P/N	Matched Mfr	Imported Mfr P/N	Imported Mfr	BOM Quantity	QPEI	BOM Path
	2n222*						
IHS-000678591	2N2221	SEMELAB LTD	2N2221		1	1	Peter Morse > S
IHS-000678592	2N2221A	SEMELAB LTD	2N2221A		1	1	Peter Morse > S
IHS-017673498	2N2222	MICROSEMI CORP-LAWRENCE	2N2222	Microsemi LAW	1	1	Nathan test > Ja
IHS-017673500	2N2222	RECTRON LTD	2N2222	Rectron	1	1	Nathan test > Ja
IHS-017673478	2N2222	ON SEMICONDUCTOR	2N2222	On Semi	1	1	Nathan test > Ja
IHS-006012663	2N2222	CENTRAL SEMICONDUCTOR CORP	2N2222	CENTRAL	1	1	Nathan test > Na
55464	2N2222	CENTRAL SEMICONDUCTOR CORP	2N2222	CENTRAL	1		Nathan test > Te
IHS-017673476	2N2222	CENTRAL SEMICONDUCTOR CORP	2N2222	Central Semi	1	1	Nathan test > Ja
IHS-017673480	2N2222	MICRO ELECTRONICS LTD	2N2222	Micro Elek	1	1	Nathan test > Ja
417/4/00397/768	2N2222	MICROSEMI CORP	2N2222	Microsemi	1	1	Brian S demo fo
IHS-014533130	2N2222	MICROSEMI CORP	2N2222	Microsemi	1	1	Brian S demo fo
417/4/00397/768	2N2222	MICROSEMI CORP	2N2222	Microsemi	1	1	Nathan test > Te
IHS-017673481	2N2222	MICROSEMI CORP	2N2222	N E Semi	1	1	Nathan test > Ja
IHS-017673502	2N2222	MICROSEMI CORP	2N2222	Microsemi	1	1	Nathan test > Ja
1300019-001	2N2222	ADVANCED SEMICONDUCTOR INC	2N2222	ADVANCED SEMICONDUCTOR	1	1	Perry > Invensy
IHS-017673469	2N2222	ADVANCED SEMICONDUCTOR INC	2N2222	ASI	1	1	Nathan test > Ja
IHS-017673495	2N2222	SIEMENS A G	2N2222	Siemens	1	1	Nathan test > Ja
IHS-017673482	2N2222	ELECTRONIC TRANSISTORS CORP	2N2222	ETC	1	1	Nathan test > Ja
IHS-017673483	2N2222	HI-TRON SEMICONDUCTOR CORP	2N2222	Hi-Tron	1	1	Nathan test > Ja
IHS-017673484	2N2222	INTERNATIONAL DEVICES INC	2N2222	Intl Devices	1	1	Nathan test > Ja
IHS-017673485	2N2222	SWAMPSCOTT ELECTRONICS CO INC	2N2222	Swampscott	1	1	Nathan test > Ja
IHS-017673473	2N2222	GENERAL DIODE CORP	2N2222	Gen Diode	1	1	Nathan test > Ja

Identify other lists that are impacted by the same event:

- Search across lists using a variety of methods
- Identify duplicate parts

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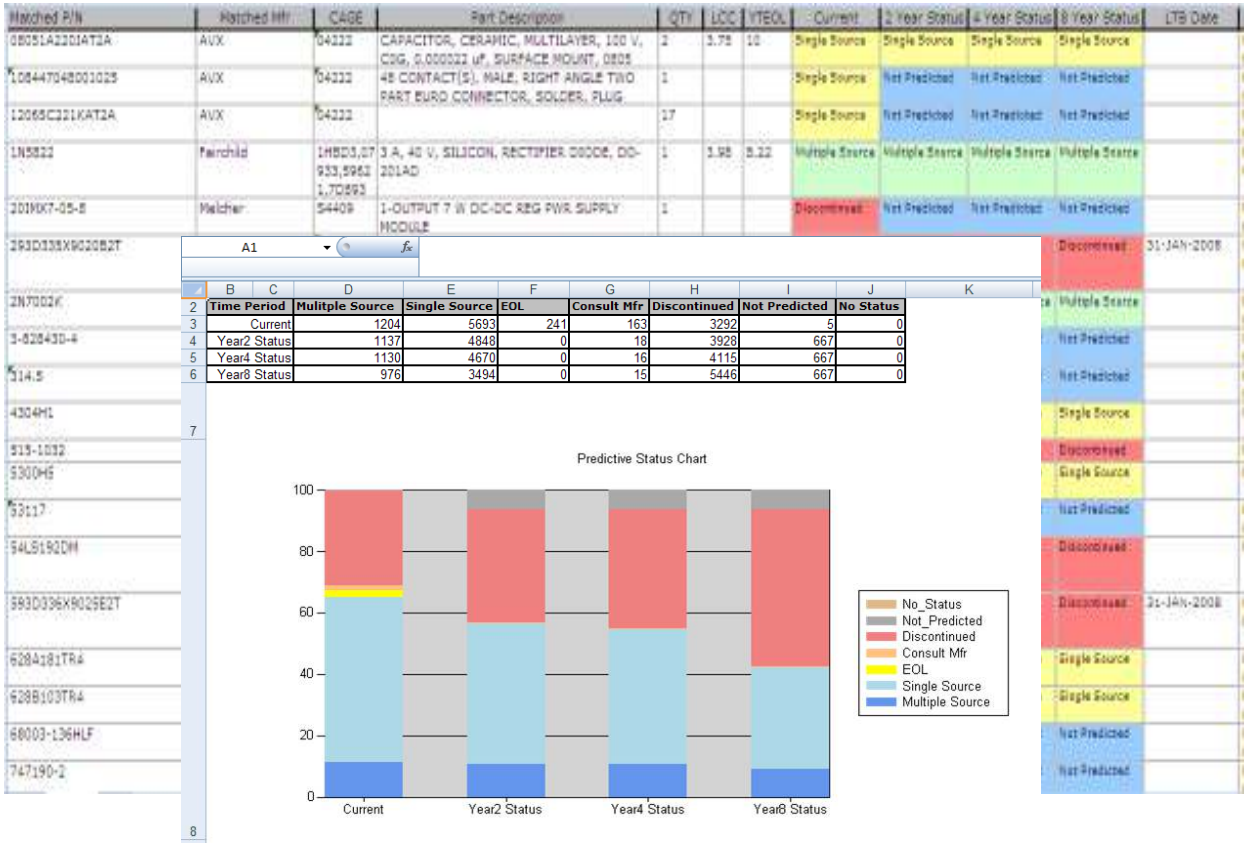

Time Period	Mulitple Source	Single Source	EOL	Consult Mfr	Discontinued	Not Predicted	No Status
Current	1204	5693	241	163	3292	5	0
Year2 Status	1137	4848	0	18	3928	667	0
Year4 Status	1130	4670	0	16	4115	667	0
Year8 Status	976	3494	0	15	5446	667	0

Easy access to specialized information:

- Predicted Status
- Health Analysis

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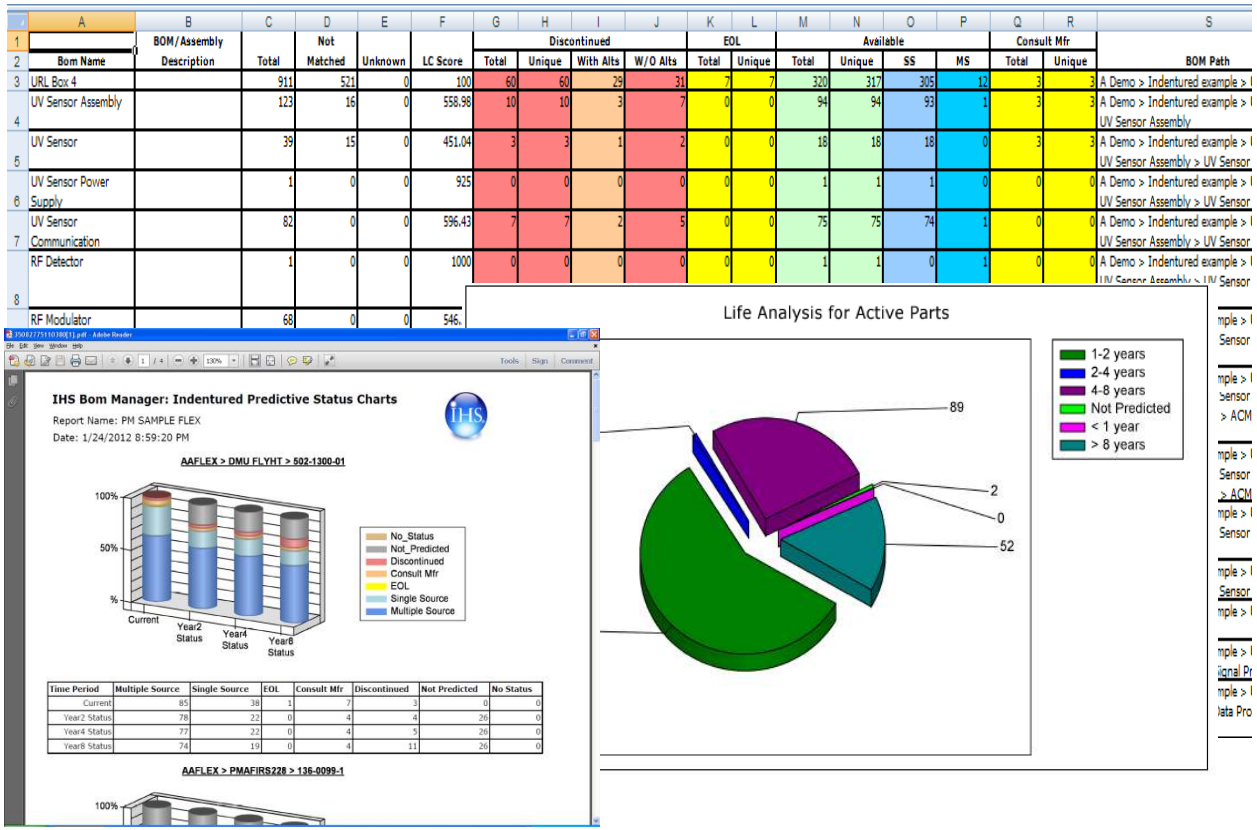

Easy access to specialized information:

- Predicted Status
- Health Analysis

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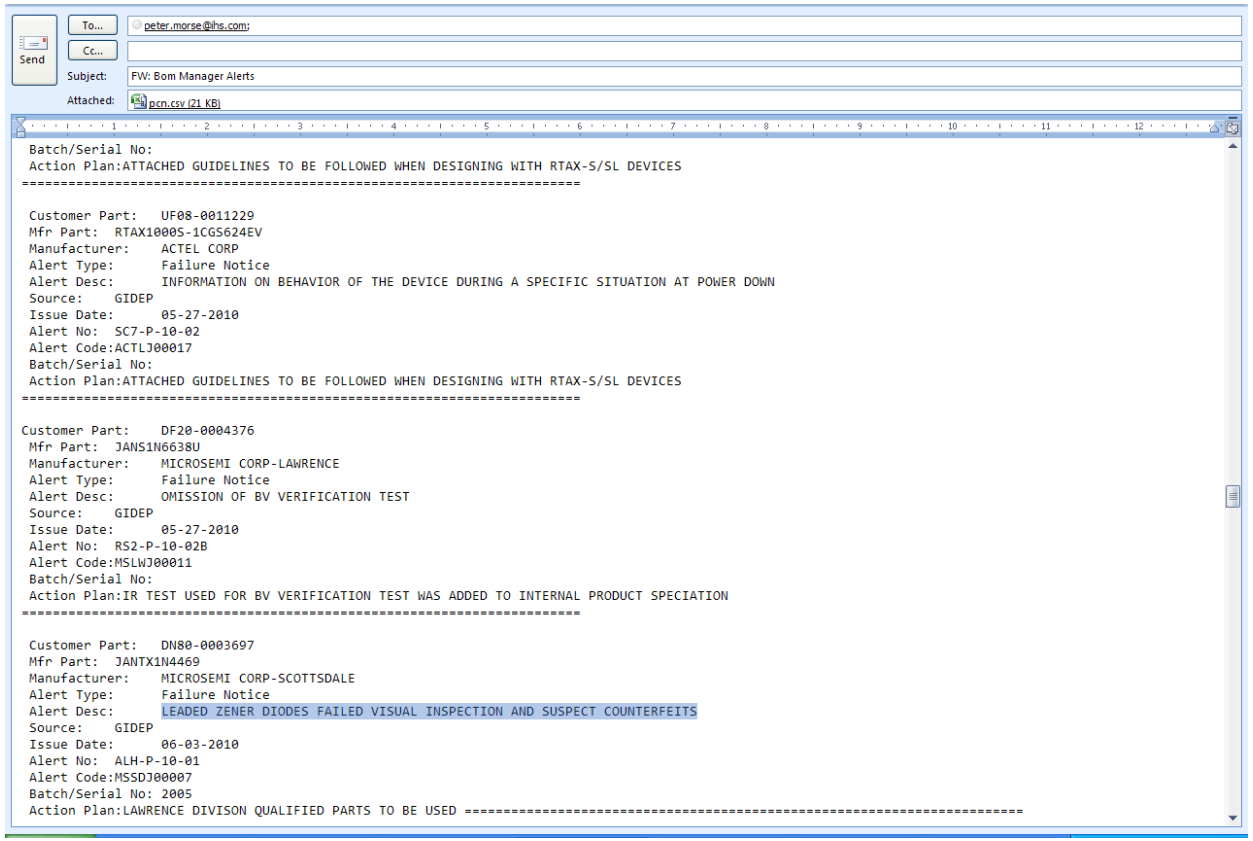

Automatically Receive Email Notifications:

- Part availability changes, suspect counterfeit
- PCN and EOLs

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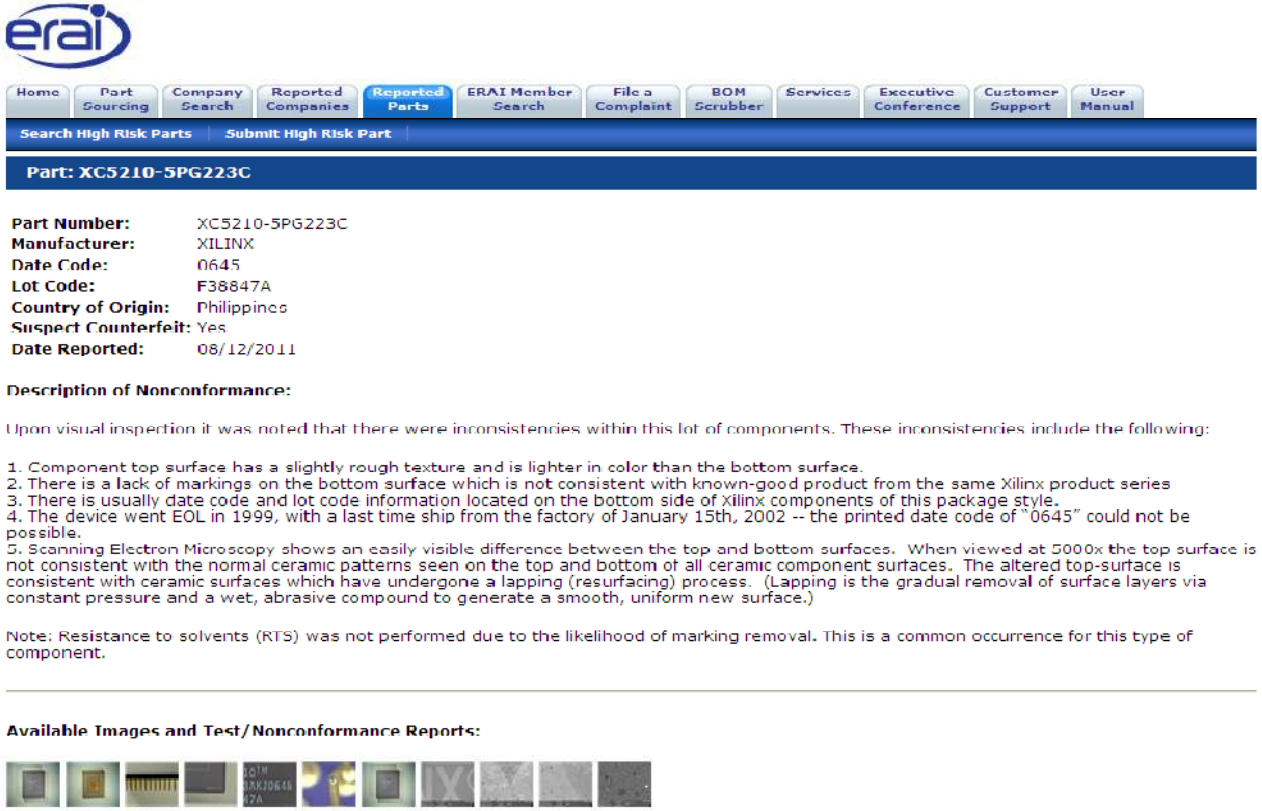

erai

Home | Part Sourcing | Company Search | Reported Companies | Reported Parts | ERAI Member Search | File a Complaint | BOM Scrubber | Services | Executive Conference | Customer Support | User Manual

Search High Risk Parts | Submit High Risk Part

Part: XC5210-5PG223C

Part Number: XC5210-5PG223C
Manufacturer: XILINX
Date Code: 0645
Lot Code: F38847A
Country of Origin: Philippines
Suspect Counterfeit: Yes
Date Reported: 08/12/2011

Description of Nonconformance:

Upon visual inspection it was noted that there were inconsistencies within this lot of components. These inconsistencies include the following:

1. Component top surface has a slightly rough texture and is lighter in color than the bottom surface.
2. There is a lack of markings on the bottom surface which is not consistent with known-good product from the same Xilinx product series
3. There is usually date code and lot code information located on the bottom side of Xilinx components of this package style.
4. The device went EOL in 1999, with a last time ship from the factory of January 15th, 2002 -- the printed date code of "0645" could not be possible.
5. Scanning Electron Microscopy shows an easily visible difference between the top and bottom surfaces. When viewed at 5000x the top surface is not consistent with the normal ceramic patterns seen on the top and bottom of all ceramic component surfaces. The altered top-surface is consistent with ceramic surfaces which have undergone a lapping (resurfacing) process. (Lapping is the gradual removal of surface layers via constant pressure and a wet, abrasive compound to generate a smooth, uniform new surface.)

Note: Resistance to solvents (RTS) was not performed due to the likelihood of marking removal. This is a common occurrence for this type of component.

Available Images and Test/Nonconformance Reports:

Direct access to the ERAI web site for detailed counterfeit part activity

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Next Steps

Part Obsolescence Management:

1. Gain access to a BOM Management tool to analyze parts and designs for potential risk and proactively monitor changes.
2. Improve your supply chain by identifying approved alternate sources and aftermarket manufacturers.
3. Apply Life Cycle forecasters to component selection decisions.
4. Utilize specialized reporting capabilities to help make informed decisions.
5. Evaluate parts for known counterfeit activity and suspect suppliers.

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