



# SILICONEXPERT CONNECT BOM RISK APP: CHEAT SHEET

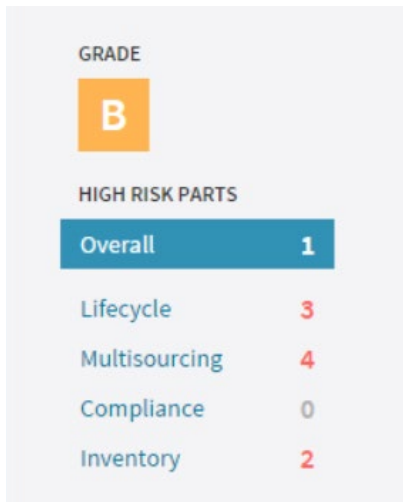


 **SILICONEXPERT**

**EMA** | Design Automation®

\*This cheat sheet is intended to provide definitions and additional explanation for categories within the SiliconExpert Connect BOM Risk App.

## 1. Grade

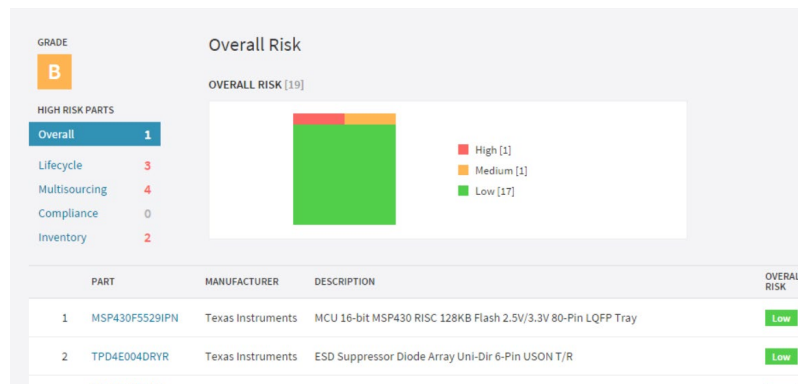


This is visible in the SiliconExpert Connect BOM Risk App as well as the exported PDF. Generated based on the combined overall risk analysis.

- o A: Low Risk
- o B: Medium Risk
- o C: High Risk
- o D: Unknown

## 2. Overall Risk

Reports the risk based on the combination of all risk categories. Provides a comprehensive analysis of the components.



### 2.1 SiliconExpert Grade

A five-star SiliconExpert grading system that grades parts based on their usage in the industry.

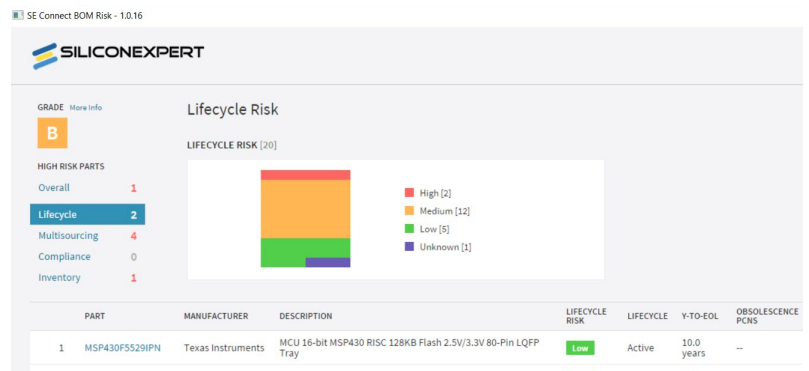
### 2.2 Crosses

Reports the cross references or similar alternative components.



### 3. Lifecycle Risk

Reports the risk based on the current product life cycle status provided by the component manufacturer.



#### 3.1 Lifecycle

Reports the status of the component from the following options:

- o Active: In full production by manufacturer
- o Obsolete: No longer in production by manufacturer
- o LTB: Last-Time Buy (Phase-Out stage)
- o Unconfirmed: Unknown

#### 3.2 Y-to-EOL

Reports the number of years until component is end-of-life.

#### 3.3 Obsolescence PCNS

Reports the number of obsolescence product change notices from the manufacturer.

#### 3.4 Crosses

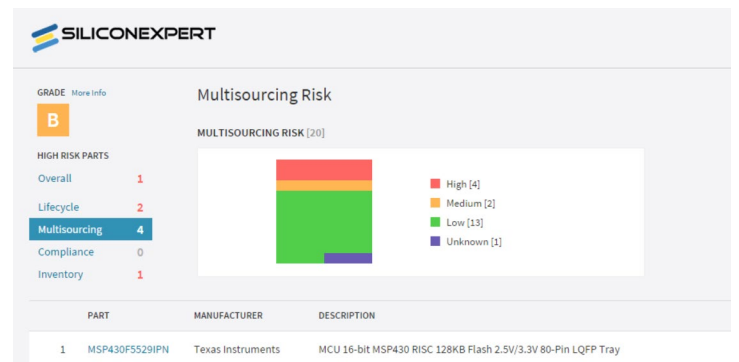
Reports the cross references or similar alternative components.

### 4. Multisourcing Risk

Reports the risk based on the number of suppliers the component can be sourced from.

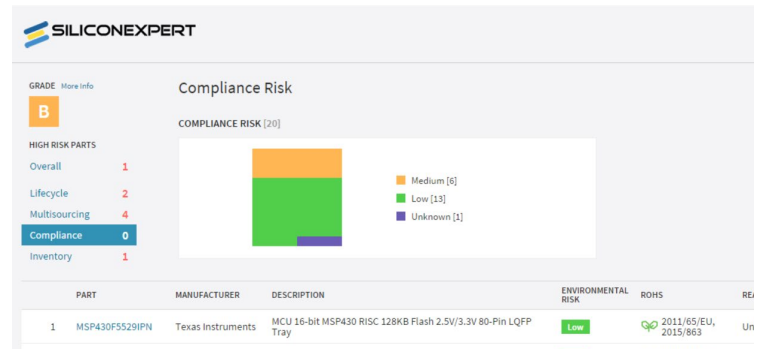
#### 4.1 Crosses

Reports the cross references or similar alternative components.



## 5. Compliance Risk

Reports the risk based on the components adhering to environmental and government regulations.



### 5.1 RoHS

Reports the RoHS compliance, directive, and exemption if applicable. RoHS stands for the "Restriction of Hazardous Substances".

### 5.2 REACH

Reports the REACH compliance information (unaffected or affected). REACH stands for the "Registration, Evaluation, Authorization, and Restriction of Chemicals".

### 5.3 Crosses

Reports the cross references or similar alternative components.

## 6. Inventory Risk

Reports the risk based on the market availability of components.



## 6.1 Inventory

Reports the number of distributors where the component is available for purchase.

## 6.2 Budgetary Prices

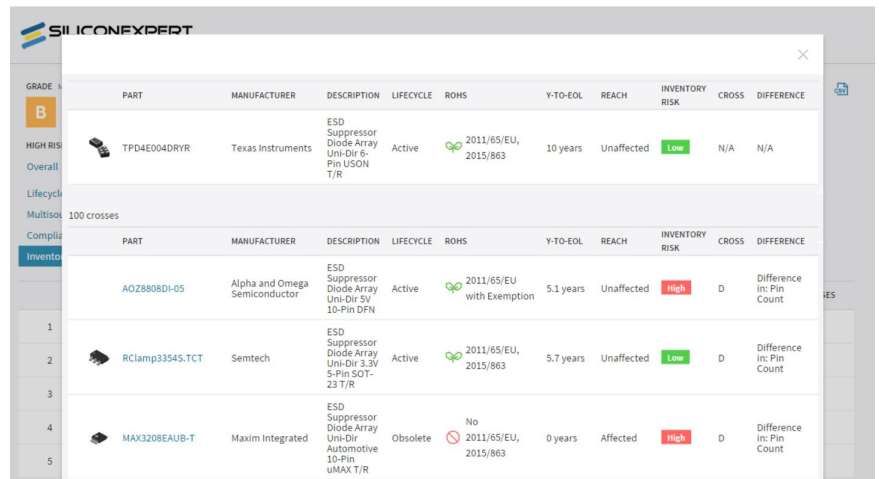
Reports the minimum and average price of the component.

## 6.3 Crosses

Reports the cross references or similar alternative components.

## 7. Crosses

Reports the cross references or similar alternative components.



GRADE	PART	MANUFACTURER	DESCRIPTION	LIFECYCLE	ROHS	Y-TO-EOL	REACH	INVENTORY RISK	CROSS	DIFFERENCE
B	TPD4E004DRYR	Texas Instruments	ESD Suppressor Diode Array Uni-Dir 5-Pin USON T/R	Active	2011/65/EU, 2015/863	10 years	Unaffected	Low	N/A	N/A
HIGH RISK	AOZ8808DI-05	Alpha and Omega Semiconductor	ESD Suppressor Diode Array Uni-Dir 5V 10-Pin DFN	Active	2011/65/EU with Exemption	5.1 years	Unaffected	High	D	Difference in: Pin Count
Overall	RClamp3354S-TCT	Semtech	ESD Suppressor Diode Array Uni-Dir 3.3V 5-Pin SOT-23 T/R	Active	2011/65/EU, 2015/863	5.7 years	Unaffected	Low	D	Difference in: Pin Count
Lifecycle	MAX3208EAUJ-T	Maxim Integrated	ESD Suppressor Diode Array Uni-Dir Automotive 10-Pin uMAX T/R	Obsolete	No 2011/65/EU, 2015/863	0 years	Affected	High	D	Difference in: Pin Count
Multisort	100 crosses									
Compliance										
Inventory										

## 7.1 Lifecycle

Reports the status of the component from the following options:

- o Active: In full production by the manufacturer
- o Obsolete: No longer in production by the manufacturer
- o LTB: Last Time Buy (Phase-Out stage)
- o Unconfirmed: Unknown

## 7.2 RoHS

Reports the RoHS compliance, directive, and exemption if applicable.

RoHS stands for the "Restriction of Hazardous Substances".

## 7.3 Y-to-EOL

Reports the number of years until component is end-of-life.



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## 7.4 REACH

Reports the REACH compliance information (unaffected or affected).

REACH stands for the "Registration, Evaluation, Authorization, and Restriction of Chemicals".

## 7.5 Cross

Reports how similar the cross is to the original component:

- o A: pin-to-pin drop in replacement with the exact package and parametric features
- o B: pin-to-pin compatible with minor differences in package dimensions or parametric features
- o C: pin-to-pin compatible with major differences in package dimensions or parametric features
- o D: not pin-to-pin compatible

## 7.6 Difference

Reports the differences between the original part and the alternative.



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## 8. Additional Environmental Definitions

### 8.1 RoHS

RoHS stands for “Restrictions of Hazardous Substances”. The EU RoHS Directive 2002/95/RC requires certain parts be free (except for trace impurities) of mercury, cadmium, hexavalent chromium, PBB, PBDE, and leads as of July 1st, 2006. Certain exemptions are allowed like lead used as an alloying additive in copper, steel, and aluminum.

### 8.2 RoHS Exemption

Exemptions to RoHS are granted to narrowly-defined applications for which the elimination of the prohibited substance is technically or scientifically impracticable or when the only available substitution produces more negative than positive benefits to the environment, health, or consumer safety.

### 8.3 Halogen Free

The halogens are five non-metallic elements found in Group 7 of the periodic table. The term “halogen” means “salt-former” and compounds containing halogens are called “salts”. The Halogens are: Fluorine, Chlorine, Bromine, Iodine, and Astatine.

### 8.4 REACH

REACH is a regulation of the European Union which stands for “Registration, Evaluation, Authorization, and Restriction of Chemicals”. Adopted to improve the protection of human health and the environment from the risks that can be posed by chemicals while enhancing the competitiveness of the EU chemicals industry. It also promotes alternative methods for the hazard assessment of substances in order to reduce the number of tests on animals and requires substances manufactured in or imported into the European Union to be registered. For the full list of substances that are a candidate for REACH regulation: <http://echa.europa.eu/candidate-list-table>.

### 8.5 SVHC

“Substances of Very High Concern” under the REACH regulation.

### 8.6 ODC

ODC (Ozone Depleting Chemicals) is the list of substances banned by EPA used to describe various chemicals that deplete the ozone layer of our atmosphere.

