



Wuxi Factory Fire

Supply Chain Impact Report

Joseph Lee | March 15, 2023



AGENDA

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Background: Wuxi Welnew MicroElectronics

Friday, January 6, 2023 –

On Friday evening, a semiconductor facility in the Xinwu District of Wuxi, Jiangsu Province, caught fire. Thick black smoke was reported to be billowing from the scene.



Wuxi Welnew is a major sub-tier supplier to Tier-1 semiconductor manufacturers Vishay, Infineon, BOSCH, OSRAM, Renesas, Toshiba, SONY and more.

Due to a meltdown in the electroplating production line, all production was shut down.

Shipments to major Tier-1 semiconductor manufacturers were suspended.



Major Semiconductor Supply Chain Disruption

Within 7 weeks of the fire, MOSFETs plated at Wuxi were unavailable from major distributors.



- **Impacted Manufacturers:** Vishay, Infineon, BOSCH, OSRAM, Renesas, Toshiba, SONY and more
- **Impacted Parts:** trans MOSFETs, RF Small Signal Transistors, LED Drivers



Components

High voltage power MOSFETs, Gate and Power Drivers



Production Lines

25 electroplating lines for Sn, SnBi, SnCu, Ag, ZnNi



Market Share

60% of global semiconductor plating market

SiliconExpert's Risk Management Solution

1. Get Alerted to the Situation

Receive automated alerts when an event impacts your BOM

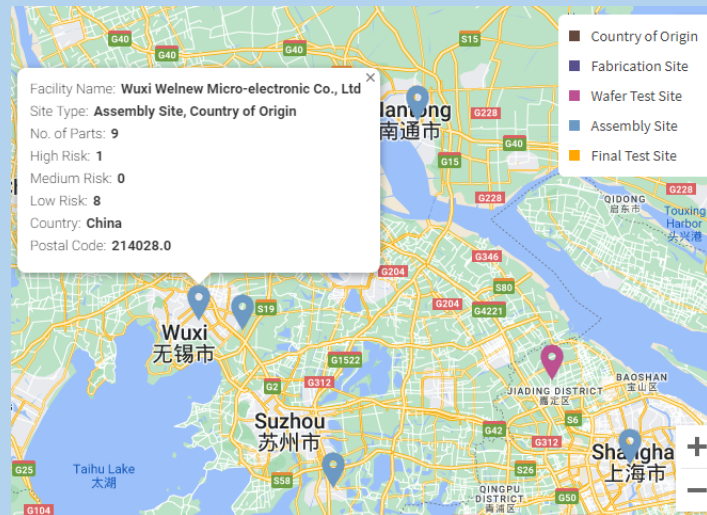
SILICONEXPERT SiliconExpert Alert Notification			
2 Supply Chain Risk Management: Events Alerts			
Event Manufacturer Impact			
Event Type	Event Name	Event Threat Level	Number of Impacted Manufacturers
Factory Fires	Wuxi Welnew's fire Impacts Infineon	CRITICAL	1
Factory Fires	Wuxi Welnew's fire	CRITICAL	1

Event Part Impact			
Event Type	Event Name	Event Threat Level	Number of Impacted Parts
Civil Unrests	France Civil unrests	MODERATE	3
Floods	La Paz, Mexico Floods Jan 2023	MODERATE	1
Global Pandemic	COVID-19 Impact South Korea Supply Chain	MODERATE	4
Military Disputes	China-Taiwan tension	MODERATE	108
Global Pandemic	COVID-19 Impact China Supply Chain	MODERATE	90
Floods	Yangtze Basin, China Floods Jan 2023	MODERATE	39
Global Pandemic	COVID-19 Impact Taiwan Supply Chain	MODERATE	3

For more information: [BOM Manager](#).

2. View Event Threats

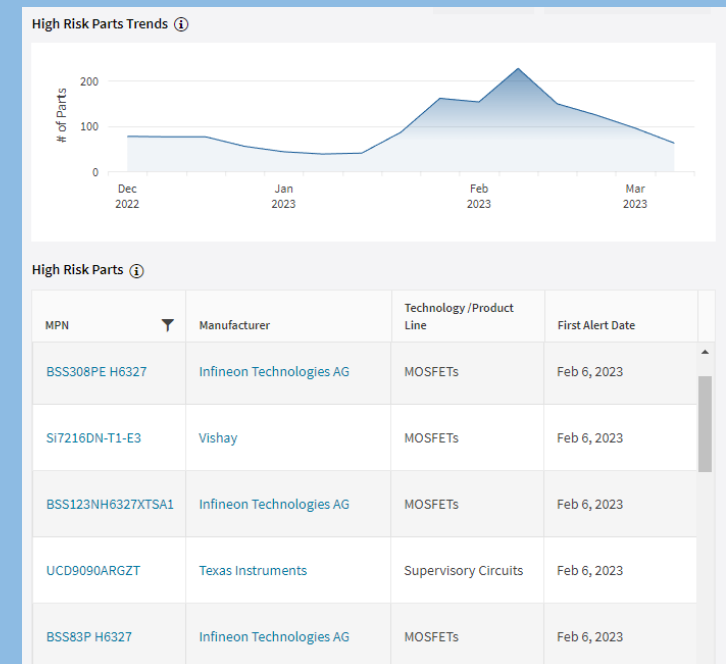
View critical events and any updates that may disrupt your supply chain



For more information: [SCRM](#)

3. Identify Impending Shortages

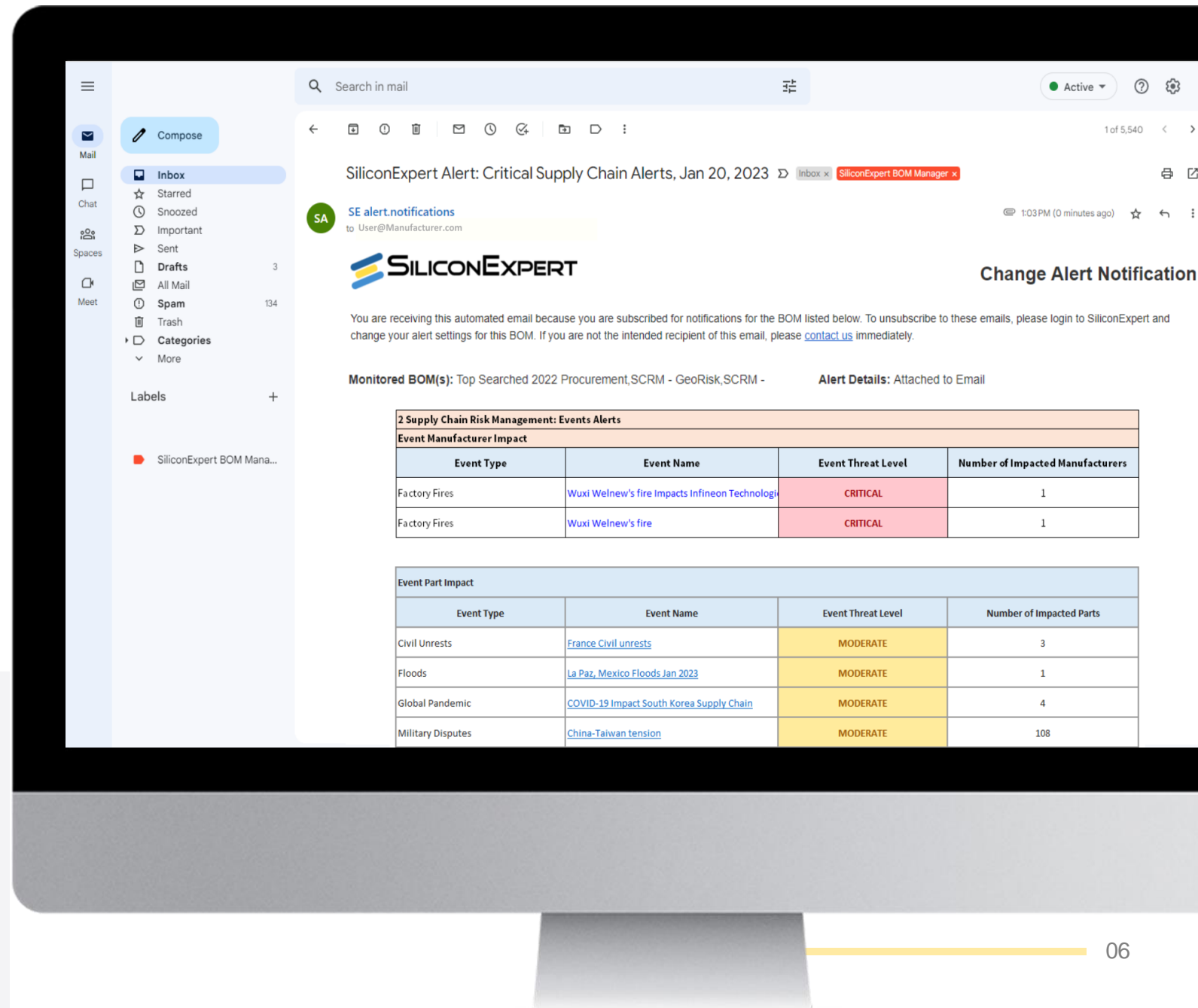
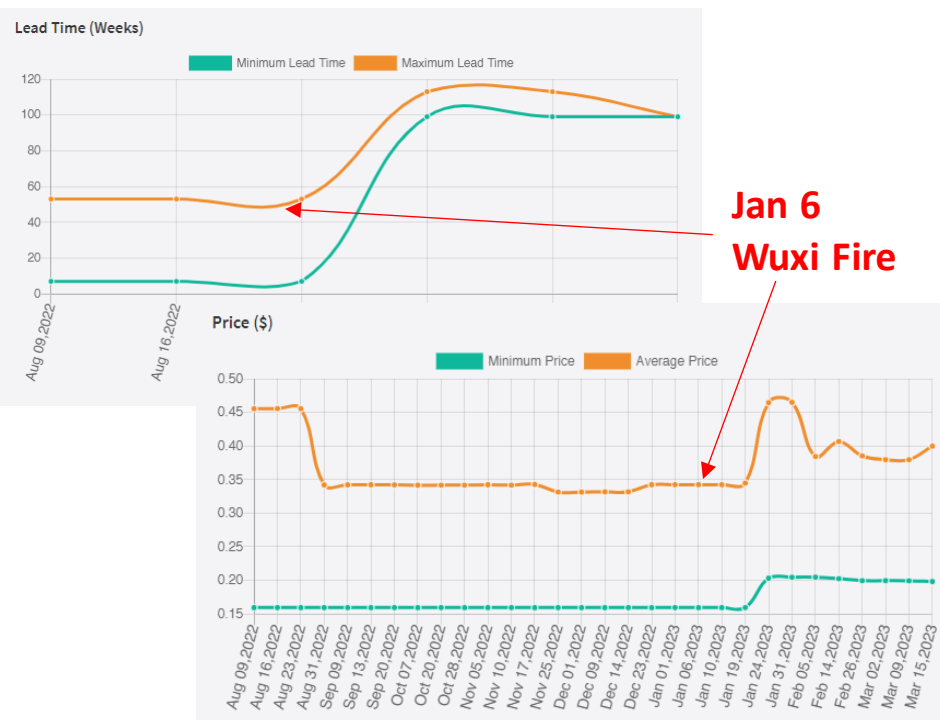
Find major shortage risks on the Open Market



For more information: [Open Market](#)

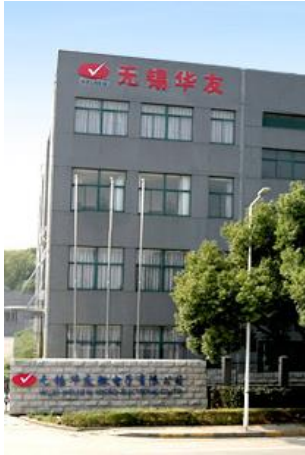
1. BOM Manager Alerts – Get Notified of Events Immediately

- **Alert Manager** - Keep a pulse on the threat before it becomes a major disruption
- Check **Part Detail – Market Availability** to see changes to lead time and price



2. Supply Chain “Event Browser” – Timeline and Threat Levels

Keep a pulse on the threat before it becomes a major disruption



JAN 06, 2023 **Critical**
Wuxi Welnew Factory Fire

Wuxi Huayou Microelectronics Co. LTD – “Welnew” factory catches on fire.



JAN 26, 2023 **Moderate**
Manufacturers’ Report Impact

Epson, Toshiba, Renesas, and Onsemi report no impact or alternative production.



FEB 13, 2023 **Critical**
Open Market Shortage Risk

MOSFETs from Infineon and Vishay (originating from Wuxi) are requested on the Open Market and marked “high risk” for shortage.



JAN 19, 2023 **Critical**
All Production Suspended

Wuxi Welnew announces suspension of all production activities.
Affected: Vishay, Onsemi, NXP, OSRAM, Toshiba, Infineon, Epson, BOSCH, STMicroelectronics

FEB 7, 2023 **Moderate**
Infineon Relocates Production

Infineon’s plating production has been relocated to Infineon Technologies in Malaysia and Shanghai Welnew in Shanghai, China.

Affect on the Market:
FEB 21, 2023
Distributors’ Supply Depleted

MOSFETs from Infineon and Vishay experience 300% spikes in price and lead times over 100 weeks.





3. Identify Impending Shortages

SiliconExpert's Open Market flagged MOSFETs from Infineon and Vishay as high shortage risk following the Wuxi Fire

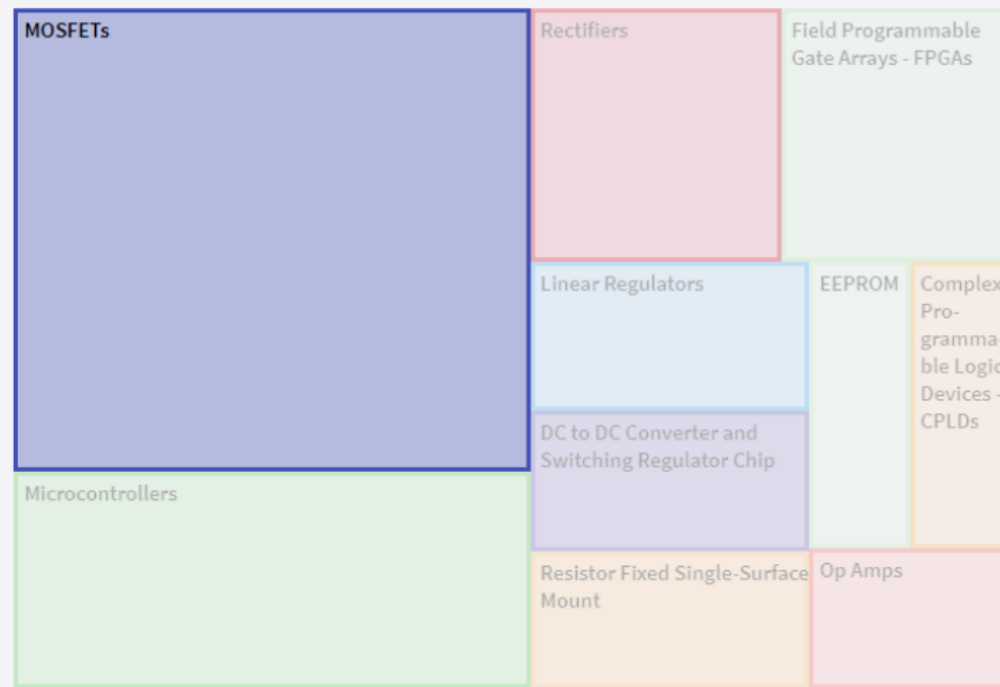


Jan 6
Wuxi Fire

Jan 23
Increased Orders

Feb 21
Distributors Depleted

Top 10 Technologies/Products Lines with High Risk Parts ⓘ



High Risk Parts Trends ⓘ



High Risk Parts ⓘ

MPN	Manufacturer	Technology /Product Line	First Alert Date
MMBF170LT1G	onsemi	MOSFETs	Mar 13, 2023
STD3NK100Z	STMicroelectronics	MOSFETs	Mar 13, 2023
NTF2955T1G	onsemi	MOSFETs	Mar 13, 2023
IXFX230N20T	Littelfuse	MOSFETs	Mar 13, 2023
SI7431DP-T1-GE3	Vishay	MOSFETs	Mar 13, 2023
SQJ459EP-T1-GE3	Vishay	MOSFETs	Mar 13, 2023
NTD2955T4G	onsemi	MOSFETs	Mar 13, 2023

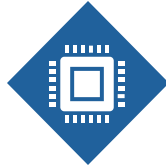
Manage Risk from Concept to Cash Flow



Multi-Source Your Design Strategy

With BOM Manager, reduce the impact of possible disruptions.

Select alternative parts sourced from different regions and suppliers.



Select Low-Risk Parts

Machine learning powers our risk prediction model.

Part risk metrics include inventory, compliance, obsolescence, multi-sourcing, and counterfeit risk.



Identify the Impact of Disruptions

Monitor supply chain disruption events and PCNs impacting your BOM/product.

Predict changes to pricing and lead time.



Gain Insights Shortage Risks in the Open Market

Gain a competitive edge by seeing trends in the electronics open market.

Identify magnitude of global event impact on open market activity.



Critical Event



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