

7 BEST PRACTICES FOR EVALUATING CROSS REFERENCES

Help thousands of engineers make component selection decisions every day. Here are seven best practices to consider before selecting an alternative component to solve an immediate obsolescence or supply chain issue.

1 Ensure Form-Fit-Function Match

Compare all parametric attributes

Use only the latest datasheet version from manufacturer to ensure form fit match.



Use SiliconExpert Grade

Compare the new and old component with the SiliconExpert Grade.

| | A | B | C | D | F |
|------------|----|----|----|----|----|
| FORM | ✓+ | ✓+ | ✓ | ✗ | ✗ |
| FIT | ✓+ | ✓+ | ✓ | ✗ | ✗ |
| FUNCTION | ✓+ | ✓+ | ✓ | ✓+ | ✓+ |
| PACKAGE | ✓+ | ✓ | ✓- | ✗ | ✗ |
| PARAMETRIC | ✓+ | ✓ | ✓- | ✓ | ✗ |

✓+ exact
 ✓ minor differences
 ✓- major differences
 ✗ not equivalent

Use SiliconExpert cross upgrades and downgrades to get a better cross

2 Lifecycle and Forecast Obsolescence Date

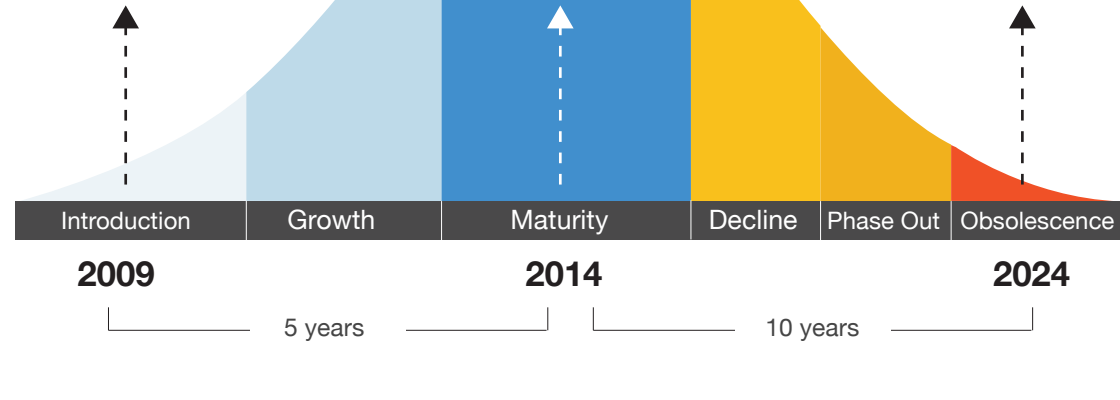
Confirm Lifecycle Status

Get a good confirmation from a reliable source that the component is active.



Forecast Obsolescence Date

Use forecasting tools and/or manufacturer confirmation to forecast the obsolescence date.



3 Comply with Regulations

Check material declarations and databases like SiliconExpert to confirm regulation compliance statuses



4 Survey Market Availability



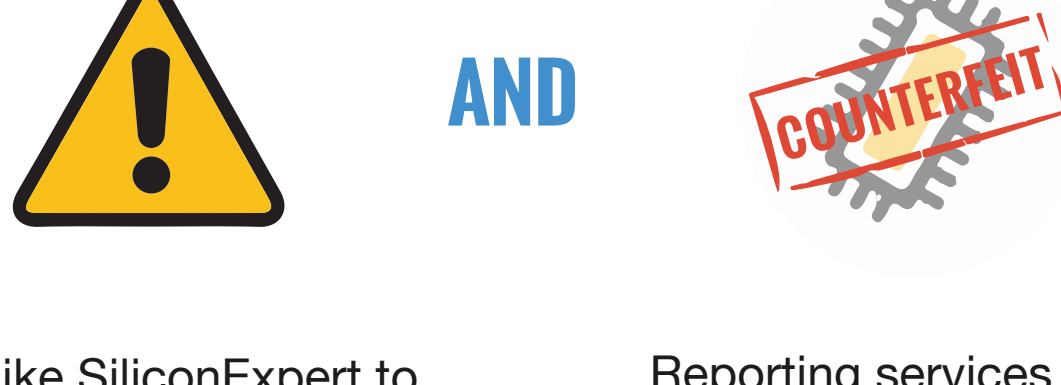
Use multiple distributor sites to ensure your parts are multi-sourced



Having only one distributor with stock should be a concern

5 Look for Counterfeit Reports

Keep up with industry reports of counterfeit components with...



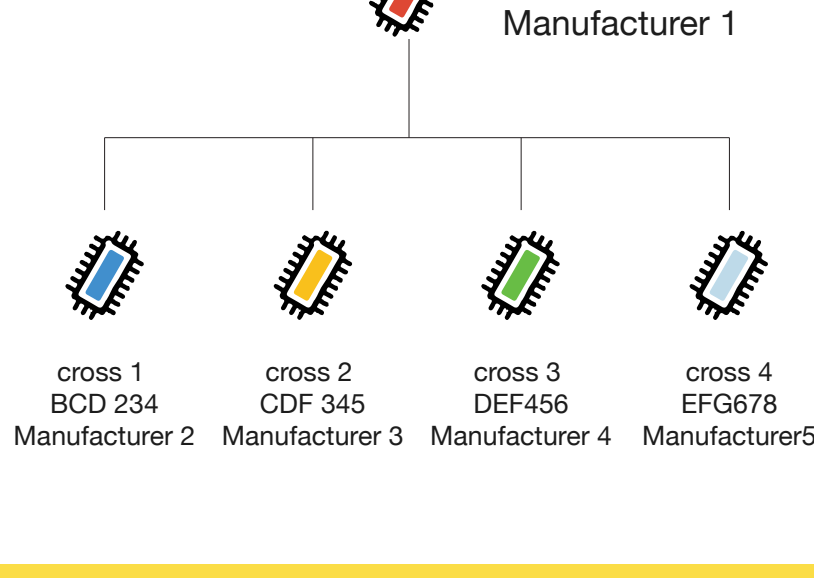
Tools like SiliconExpert to confirm counterfeit reports

Reporting services from GIDEP (gidep.org)

...to stay updated with industry reports of known counterfeit components.

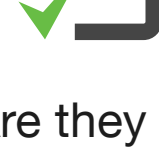
6 Gather Additional Crosses

Find as many viable replacement parts as possible. A true multi-sourced component has more than one alternate.

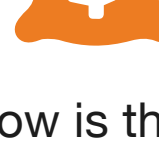


7 Part Manufacturer Reliability

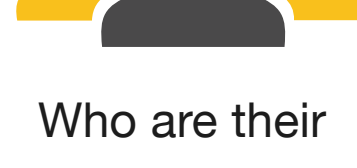
Use additional sources to evaluate the reliability of a new manufacturer



Are they in your AVL?



How is their financial background?



Who are their top customers?