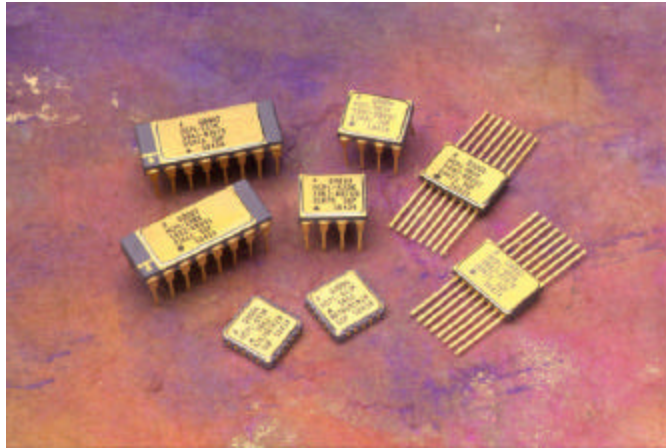


Hermetic Optocouplers

Frequently Asked Questions



Are Source Control Drawings still accepted? Does Avago Technologies, Inc. still support custom products?

Yes. Full custom product requests are reviewed for feasibility by our engineering staff. Source Control Drawings are given detailed reviews with concise clarifications and exceptions provided.

Will Avago Technologies provide up-screening?

Yes. While we prefer the standard DSCC SMD approach, we recognize that some customers may require a slightly different flow such as additional burn-in and/or x-ray. We can provide this service at a competitive price, you won't be charged for any fall-out, and your parts will remain under warranty!

Does Avago Technologies provide Rad-Hard hermetic optocouplers?
Is radiation test data available?

"Rad-Hard" is a processing method that Avago Technologies does not utilize. Most devices are tolerant to radiation effects though and we have plenty of data available to share. Please register as a user on our web site (www.avagotech.com) and submit your request.



What data is included on standard procurements?

Commercial level: A product C of C (Certificate of Conformance) is provided with these devices.

Class H: A product C of C and Attribute Data Summaries are provided with this level of device.

Class K: A product C of C, element evaluation C of C, and Attribute Data Summary are provided. Options to procure recorded data (including x-ray reports), actual x-ray films, SEM photos and final CSI (Customer Source Inspection) are available.

Are Avago Technologies hermetic optocouplers QPL?

No. Avago Technologies hermetic optocouplers fall under the scope of hybrids. The governing military specification is MIL-PRF-38534, which does not recognize the QPL (Qualified Parts List). Avago Technologies is a Certified and Qualified supplier of Class H, E and Class K products and is included as a qualified manufacturer in QML-38534.

Do you offer Industrial Grade product?

No. We do not manufacture typical "Industrial Grade" devices and recommend the use of our commercial grade product. These parts exceed the "Industrial" requirements. All parts, commercial through space level Class K, are guaranteed to operate over the full military operating temperature range of -55° C to +125° C.

Explain the marking on the devices. What does it all mean?

Avago Technologies dual marks devices with corresponding DSCC SMD's (Standard Microcircuit Drawings). As such, on all Class level H, E and K parts, both the Avago Technologies part number and the SMD number, including lead configuration and finish designator will be marked on the device.

The date code is marked in the yyww format. A "CH" prior to the date code, with no space between, means that the device is processed in compliance to MIL-PRF-38534. A "Q" prior to the date code, again with no space means that the device has a corresponding DSCC SMD.

The country of origin (Singapore) is marked on the product as "SGP".



ESD (Electrostatic Discharge) is tested per MIL-STD-883, Test Method 3015 on each type of device. The ESD designator is marked on all devices and also represents the pin 1 indicator. A ▲ marked on the device indicates a Class 1 (rated 0-1,999V). A ▲▲ marked on the device indicates a Class 2 (rated 2,000-3,999V). Lastly, a ● marked on the device indicates a Class 3 (rated 4,000V and above).

The Cage Code, or FSCN number assigned to the product line (50434) is marked on the devices.

NOTE: Marking of commercial devices is minimal and may not include all marking noted above.

What are COTS devices?

Avago Technologies definition of Commercial-Off-The-Shelf (COTS) devices is any product that has a published data sheet and/or is listed in the standard price book. This definition has been supported by DSCC (Defense Supply Center, Columbus). In effect, all of our standard product, from commercial to space grade Class K fits this description and are considered COTS.

How do you process Class H and Class K Level devices?

Processing for these levels is per MIL-PRF-38534, the Performance Specification for Hybrid Microcircuits. QCI for Class H is per Option 1. Class K is processed per Option 2. Both of these options allow for Group A electrical tests to be run in-line with Screening. Option 1 allows for verification testing, whereas Option 2 has full sample testing.

How is lot traceability ensured?

Each device manufactured has a backside mark (underside of the package) that provides full traceability applicable to the device level. Traceability is not required on a commercial level device, whereas a class K device is traceable all the way to piece-part lots and the individual wafers used.

How is change control notification managed?

Generally, change control notification is made through both PCNAAlert and GIDEP. The notices are also posted on the Avago Technologies web site. Individual, or personalized, notifications are sent to buyers of Class K level product and on custom product when required by a Source Control Drawing. Factory personnel maintain records of change notifications sent and approvals received.



What changes were made to the product and process when manufacturing moved to Singapore?

The only change was in the marking. "Made in USA" changed to "Made in Singapore". Assembly and test processes were duplicated for the Singapore operation.

How much does a hermetic optocoupler weigh?

The following weights are typical of a finished product. Certain configurations may cause slight alterations.

- 8-Pin DIP: 0.79 grams
- 16-Pin DIP: 1.5 to 1.6 grams
- 20 Terminal LCCC: 0.53 grams
- 16-Pin Flat Pack: 0.8 grams

What is the product obsolescence policy for hermetic optocouplers?

Since the inception of this product line in 1975 there has been zero product obsolescence. We are trying to keep it that way. Should we at some time feel it necessary to obsolete a product, every effort will be made to be as non-impactive as possible by allowing a generous life-time buy opportunity.



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