

FINDING IT ON THE NET

Parts Information

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In this month's "Finding It on the Net," we will try to help you with the ongoing problem of locating individual parts information, especially for transistors and integrated circuits. As you no doubt have discovered, looking for information on a transistor or IC part number, especially older or obsolete parts, can be problematic.

Google and other search engines often turn up hundreds of parts brokers and no parts data in a direct part number search. If what you need is information for a repair or parts substitution, this can be frustrating and time-consuming.

In addition, many semiconductor manufacturers have disappeared, having been bought out, discontinued operations, merged or gone bankrupt in the past few years, which hugely complicates the search for older information and parts. This has proven to be a problem for RF and microwave semiconductors, many of which are simply no longer in production anywhere.

To help you find this elusive data, here are some of our favorite data archive sites, which have thousands of datasheets available, all completely free of charge. These sites have all types of semiconductor data, including diodes, varactors, zeners, transistors, digital and linear integrated circuits, SCRs, Triacs and hybrid modules, plus many passive devices:

www.datasheetarchive.com

www.datasheetcatalog.com

www.datasheets.org.uk

www.alldatasheet.com

Figuring out who made something also can be quite a struggle. If all you have is a graphical logo on a part, try these sites to translate the symbol on a part into a real manufacturer's name:

<http://freespace.virgin.net/matt.waite/resource/logos/index.htm>

www.dialelec.com/semiconductorlogos.html

www.elnec.sk/support/ic-logos

Keep in mind, Asian number markings on transistors often leave off the "2S" prefix; therefore, a part might say "D436," but it is really "2SD436." It is important to know this detail when searching, as the data will not appear under the plainly marked "D436" number. It is also important to know that many Japanese transistor numbers often are available from only a single maker, unlike JEDEC-registered parts, which might have 20 competing vendors.

JEDEC-registered parts (1N, 2N, etc.) generally can be regarded as equivalent regardless of who made them, as the JEDEC registration mandates compliance with the minimum values for that registration. However, it is common for equipment manufacturers to favor specific semiconductor manufacturers in their designs. This is because it is quite common for subtle parameters, gains and frequency bandwidth to vary considerably between semiconductor makers while still meeting the minimum JEDEC specifications.

Many designs require these specific but subtle changes; so keep this in mind when sourcing parts. Replacing the defective item with the same vendor's type usually has the highest chance of success, unless the original is from a third-tier or unknown maker — in which case switching to a better-known vendor (typically with better specs) improves the chances for success.

JEDEC's website is at www.jedec.org.

You also can find an index of all these referenced links, as well as an index of many semiconductor makers (by name) and a table to explain what happened to older firms no longer in existence, at Sphere Research's engineering links at www.sphere.bc.ca/test/data.html.

If you have comments or questions about this article, send e-mails to avionicsnews@aea.net.