
CAL
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BERKELEY
ALBANY
LAKE MERRIT
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SAN PABLO
RICHMOND
BAY BRIDGE
leadwire
RICHMOND SAN RAFAEL BRIDGE
ANGEL ISLAND
FAIRCHILD
SAN RAFAEL
ALCATRAZ
TIBURON
MISSION SAN RAFAEL
GOLDEN GATE BRIDGE
GHIRADELL
SAUSALITO
MARIN CIVIC CENTER
MILL VALLEY
MUIR WOODS
MT. TAMALPAIS
STINSON BEACH

San Rafael: the Place. the People. the Products

Where Does Fairchild Fit In?

Fairchild Semiconductor moved to marvelous Marin in 1960. The plant was established to produce diodes — a specialized semiconductor device. The vigorous demand for the diode plant's solid state products required additional production facilities. So, in December, 1960, all Diode employees picked up their belongings on Jordan Street in San Rafael and moved into the $1 million plant just off of Redwood Highway a few miles north of San Rafael. By the end of 1960, more than 300 employees were working at the new plant, and today (a few additions later), there are 550 employees working at that same San Rafael facility.

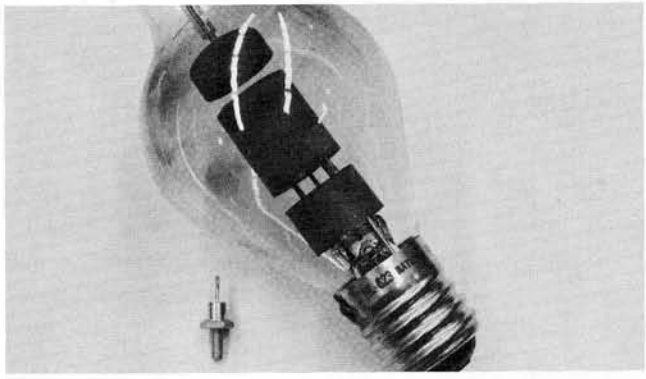
What's A Diode? What Do Diodes Do?

A diode is a small glass capsule about a quarter of an inch long with a wire lead protruding from each end. Diodes come in two basic flavors, Germanium (a grayish-white metallic chemical element) and Silicon (a non-metallic chemical element). The Germanium market is fast being replaced by Silicon diodes which are very "in" today.

In fact, Fairchild only makes Silicon diodes and makes them for a market growing quite rapidly — 11% per year. Silicon diodes come in all shapes and sizes and fall into three categories. Glass Switching diodes are the most popular and inexpensive. Fairchild manufactured about two billion units in 1969, worldwide, with one billion sold in the U.S. Production should grow about 10% this year to keep up with market demands. These diodes go into computers, instruments, radio and TV sets.

The second category is Zener diodes. Zeners are found in computers, power supplies, regulators, and protective circuitry.

The last category is known as Assemblies. Diode assemblies consist of groups of diodes living in the same package, with each individual diode usually matched for compatibility with its cohorts. Living arrangements may be in pairs, quads, bridges, or other arrays of individual diodes. One of the most popular arrangements is eight or sixteen diodes in a core driver array for computer use. A variant on this latter device is the monolithic core driver array, with sixteen junctions on the same silicon chip. The mono array is the coming thing, and the market for such devices should grow at a very rapid rate in the future.



Some of the most powerful things come in small packages! The first Vacuum Tube Diode, a 10 amp 250 volt rectifier measured 8" x 12" in diameter at its widest point, and made its appearance in the marketplace in 1917.

1970's version, the Zener Diode, a 15 amp 150 volt rectifier measures 1.2" x .5" and has a warranty of 50 years as opposed to a warranty of 2,000 hours or one year for the Vacuum Tube Diode.

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Our Market Position—Where We're At

Fairchild Semiconductor's position in the wonderful world of diodes is good and getting better. According to Wilf Corrigan, Group Director of Discrete Devices, "the diode sales will be 20% over 1969 sales." Technologically, Fairchild is the leader in the industry. Fairchild is shipping in excess of one million diodes a day and supplying 95% of all diode products with silicon-nitride passivation. This process has resulted up to ten-fold increases in reliability. Combined with Fairchild's unique sealing methods and chip contact metalization, the nitride process makes possible the industry's most reliable diodes. With nitride passivation, Fairchild also enjoys greatly improved production yields. The resulting cost savings are passed along to customers, enabling Fairchild to continue as the price leader in the diode market. Elimination of lengthy reliability screening ensures faster delivery.

High reliability products are now a standard San Rafael commodity. Introduced to San Rafael in October of 1969, and presently operating on a single shift basis with eight fully qualified operators, the Hi-Rel assembly area has not reached full capacity. The operations include 100% visual inspection post assembly and 100% electrical inspection prior to lead conditioning and environmental testing. The creation and operation of the Hi-Rel assembly is Fairchild's way of saying: "We want Hi-Rel business."

Our Customers—Where They Are At

Fairchild diode assemblies and arrays are specifically designed for and used in everything from the most critical military space application to the simplest electrically powered hand tool for the home handyman. While making world history walking on the moon's surface, American astronauts carried Fairchild diode arrays in the S-band communicators strapped on their backs. Fairchild diode arrays and assemblies are used in a number of other high-reliability military communications systems, as well as numerous industrial and consumer products such as core drivers for computer memories, and RF applications, for example balance mixers or UHF TV tuners.

A Fairchild customer has the assurance of knowing that if there are any design snags or circuit troubles, the applications group is available for advice. This group is backed with seven years experience in manufacturing and using special diode products. All Fairchild application engineers have broad experience in a wide variety of product applications. Regardless of the customer's application, whether it be control circuitry, RF, data processing or anything that calls for multiple diodes, Fairchild applications group is there to help.

Some of the Fairchild Semiconductor's key accounts for these devices are Burroughs, Collins, Control Data Corporation, General Electric, Hewlett-Packard, IBM, Honeywell, Magnavox, RCA, and Zenith.

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What Makes It All Click?

San Rafael, like any other company has one common denominator — PEOPLE! These people make a company grow. More than 550 employees make San Rafael go! In Fab #1, there are 10 girls who have worked a combination of 85 years with Fairchild. There are people like Betty Little, Engineering, and Tomiko Middleton, Special Products, who have not missed one working day since joining Fairchild — Betty for 8 years, and Tomiko for 3 years. There are accountants, assemblers, production schedulers, mechanics, foremen, engineers, inspectors, personnel administrators, and secretaries. They come in all sizes and shapes, and they bring to work every day many talents which when combined are the things that make San Rafael click. Dave Marriott, Director of Diode Operations, can easily say, "San Rafael and its people are an integral part of Fairchild Semiconductor's world — racing ahead to new projects and meeting new challenges."