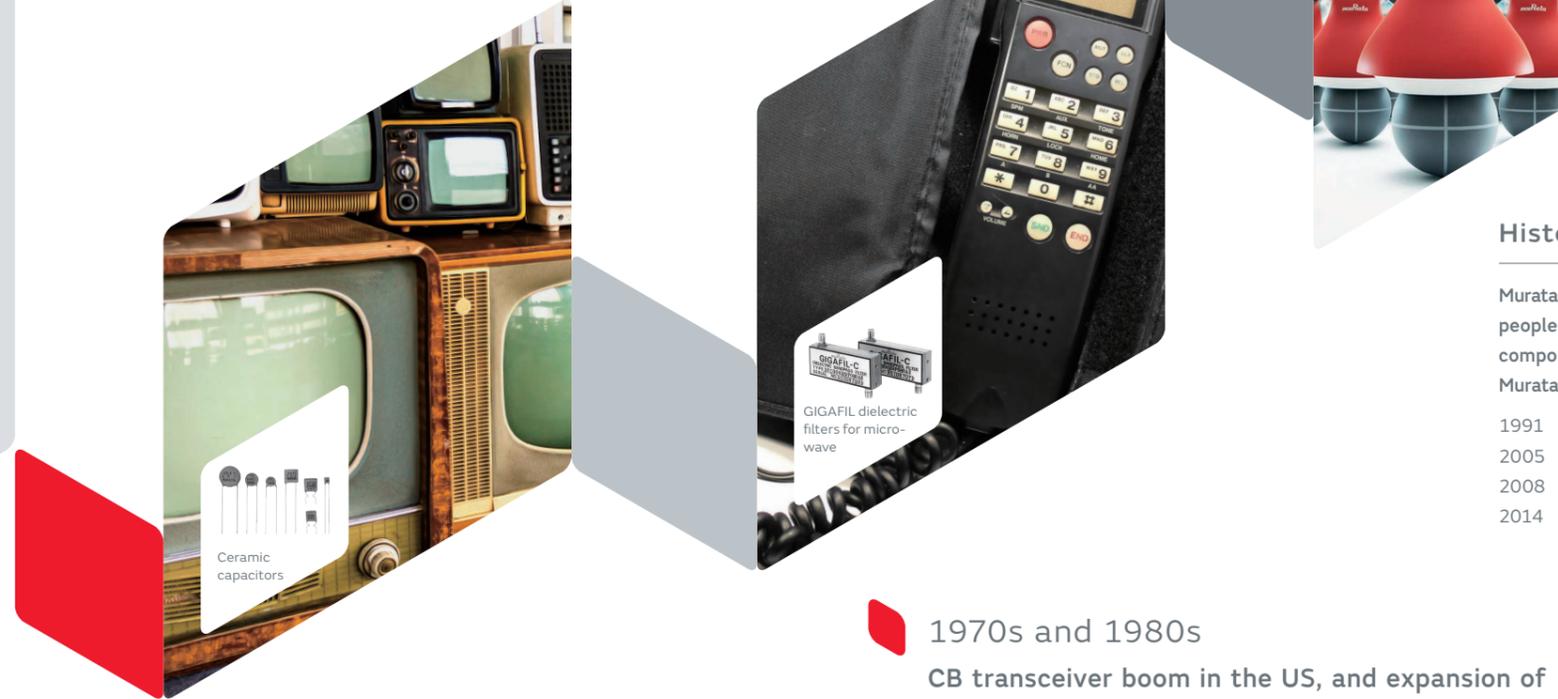


About Murata

History of value provision

The evolution of electronics has been enriching people's lives and realizing various dreams. Murata's electronic components have been among the driving forces of that history. What was necessary for that era? What symbolized dreams for the next era? It can be said that electronic components represent the times, and such items also quietly begin to tell of the future.



History of robots

Murata has taught many children and other people about the workings of electronic components using robots equipped with Murata electronic components.

- 1991 First MURATA BOY
- 2005 Second MURATA BOY
- 2008 MURATA GIRL
- 2014 Murata Cheerleaders



MURATA BOY and MURATA GIRL

1940s

Establishment

Spread of communication equipment after the start of commercial radio broadcasting

- 1944 Murata Manufacturing founded
- 1949 Japan's first mass production of temperature compensating barium titanate ceramic capacitors for radios



Barium titanate ceramic capacitor

1950s

Spread of black-and-white television and expansion of telegraph and telephone market

- 1950 Murata Manufacturing Co., Ltd. established
- 1953 Began manufacturing ceramic disc capacitors
- 1955-56 Established Murata Technology Research Laboratory Co. and moved thereto
- 1959 Launch of ceramic semiconductors "POSISTOR" PTC thermistors

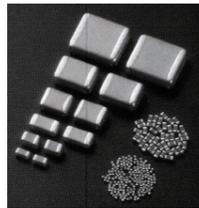


PTC thermistors "POSISTOR"

1960s

Launch of color television broadcasting and increased demand for electronic components as the Tokyo Olympics drove economic growth

- 1962 Commercialization of ceramic filters for communications equipment
- 1966 Launch of multilayer ceramic capacitors
- 1967-69 Established mass production system of multilayer ceramic capacitors



Multilayer ceramic capacitors

1970s and 1980s

CB transceiver boom in the US, and expansion of markets for audio-visual equipment, car phones (mobile phones), and information equipment in Japan

- 1975 Launch of GIGAFIL dielectric filter for microwave
- 1977 Commercialization of ceramic resonator CERALOCK
- Around 1986 Commercialization of chip ferrite beads
- 1989 Commercialization of multilayer LC filters



Chip ferrite beads

1990s and 2000s

Arrival of the age of the Internet owing to the miniaturization of mobile phones and the spread of personal computers

- Around 1997 Commercialization of SWITCHPLEXER
- Around 2000 Commercialization of Bluetooth® modules
- 2004 Development of multilayer ceramic capacitor in 0402 (0.4×0.2mm) size
- 2005 Commercialization of MEMS gyro sensors



Bluetooth® modules

2010 and after

Expansion of telecommunications field centered on smartphones, and progress in the vehicle electrification

- 2012 Development of multilayer ceramic capacitor in 0201 (0.25×0.125mm) size
- 2017 Enhancement and reinforcement of battery business



Multilayer ceramic capacitors

77,571 persons

1,575.0 billion yen

Net sales (grey bars) Number of employees at end of year (red line)

* Consolidated basis

1944 1950 1960 1970 1980 1990 2000 2010 2018 (FY)