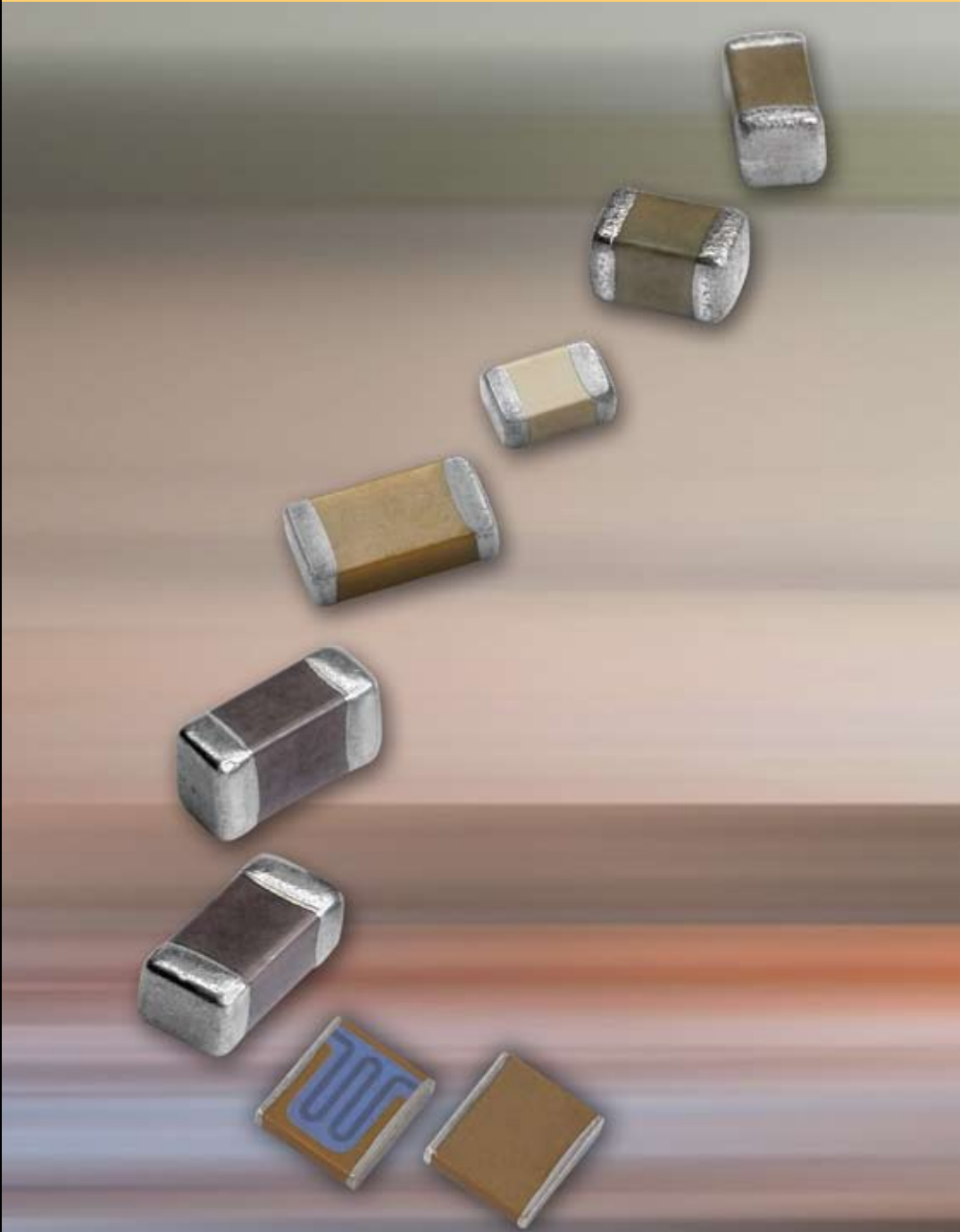




VISHAY INTERTECHNOLOGY, INC.

# MULTILAYER CERAMIC CHIP CAPACITOR PRODUCT ROAD MAP

Vishay Vitramon



CAPACITORS

PRODUCT OVERVIEW



## Surface-Mount Products

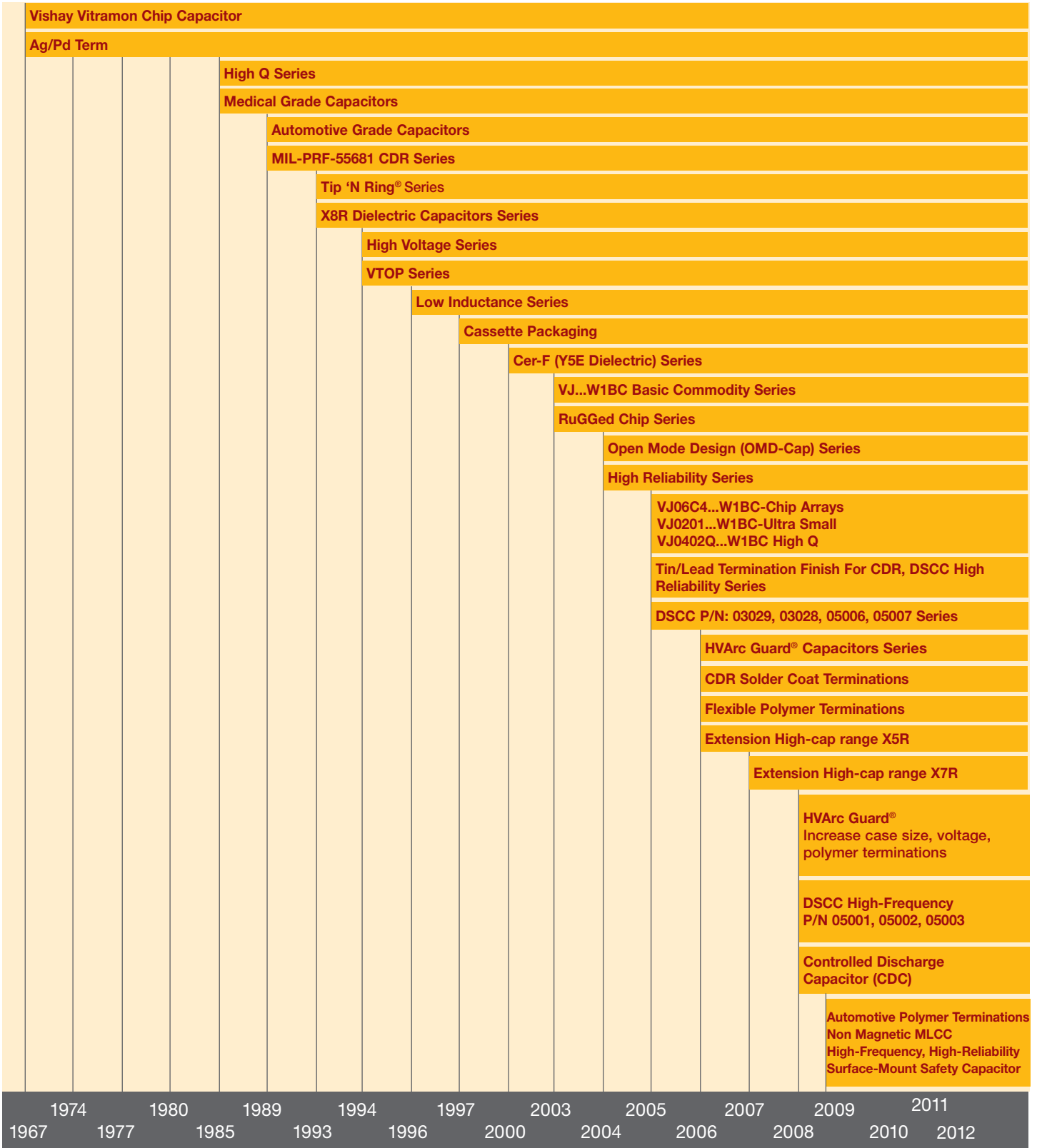
- **Vishay Vitramon Chip Capacitor** – VJ series surface-mount product, a reliable replacement for leaded capacitors
- **High-Q Series** – C0G (NP0) ultra-stable, high-frequency capacitors
- **Medical Grade Capacitors** – For implantable cardiovascular control applications
- **Automotive Grade Capacitors** – Qualified to AEC Q200 guidelines for reliable automotive electronics
- **MIL-PRF-55681** – Complies with Department of Defense specification requirements for CDR military grade series
- **High-Voltage Series** – For application voltages above 200 V
- **X8R Dielectric** – Stable capacitance with reliable performance up to + 150 °C
- **Tip ‘N Ring® Series** – Replaces high-voltage leaded film capacitors in telecommunications line filtering
- **VTOP Series** – Low-profile controlled thickness to less than 0.026" [0.66 mm]
- **Low Inductance Series** – Typically half the inductance of standard products
- **Cassette Packaging** – Bulk case package increases pick and place productivity, reduces storage area and packaging materials
- **Cer-F Series** – An alternative to film capacitors with stable temperature coefficient of capacitance
- **RuGGed Chip Series** – Advanced X7R dielectric, low power consumption, high voltage breakdown compared to standard designs, and excellent thermal shock performance
- **Open Mode Design Capacitors (OMD-Cap)** – Reduces risk of shorts and low insulation resistance from capacitor cracks due to board flex, with high voltage breakdown compared to standard designs
- **High-Reliability Series** – A broad product range manufactured with a combination of design, materials, and tight process controls to achieve high field reliability
- **Tin/Lead (Sn/Pb) Termination Finish for CDR, DSCC, High-Reliability Series** – Base metallization 100 % tin plate barrier with tin/lead plate matte finish with a minimum 4 % lead
- **DSCC Part Numbers** – 03029 (0402 case size), 03028 (0603 case size), 05006 (0805 case size), 05007 (1206 case size)
- **HVArc Guard® Capacitor Series** – Higher capacitance, surface-mountable, high-voltage, multilayer ceramic capacitors designed to prevent surface arc-over
- **CDR Solder Coat Termination** – Base metallization-barrier metal-solder-coated tin/lead alloy (Sn/Pb), with a minimum of 4 % percent lead. Solder has a melting point + 200 °C or less. Solder coat thickness is a minimum of 60 micro-inches
- **Flexible Polymer Terminations** – Enhance the robustness of the terminations to resist board flexure failures
- **VJ...W1BC** – Basic commodity series with base metal electrode (BME) for X7R/X5R/Y5V and noble metal electrodes (NME) for NP0 dielectric
- **VJ06C4...W1BC** – Chip arrays for space-constrained applications and filtering in data communication lines. Four capacitors in one package, built on NP0, X7R or Y5V dielectric
- **VJ0201...W1BC** – Ultra-small series - Built with NP0, X5R, X7R and Y5V dielectric for miniaturization in portable applications
- **VJ0402Q..W1BC** – 0402 High-Q with excellent Q-factor and low ESR enable miniaturization in wireless data communication applications
- **Extension High Cap X5R** – High-capacitance X5R values replace tantalum capacitors
- **Extension High Cap X7R** – High-capacitance X7R values for excellent performance in temperatures up to + 125 °C

## Hybrid Products

- **Silver/Palladium (Ag/Pd) Terminations** – Improved resistance to solder leaching



## SURFACE-MOUNT PRODUCTS



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## SEMICONDUCTORS:

Rectifiers • High-Power Diodes and Thyristors • Small-Signal Diodes • Zener and Suppressor Diodes  
• FETs • RF Transistors • Optoelectronics • ICs • Modules and Assemblies

## PASSIVE COMPONENTS:

Resistive Products • Magnetics • Capacitors • Strain Gage Transducers and Stress Analysis Systems



One of the World's Largest Manufacturers of  
**Discrete Semiconductors and Passive Components**

## WORLDWIDE SALES CONTACTS

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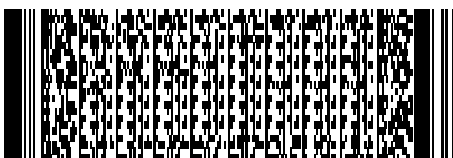
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