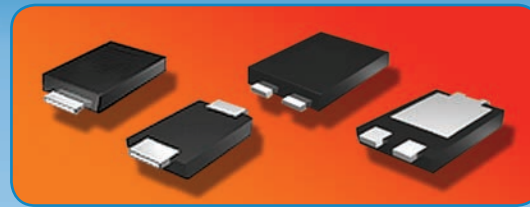


Meeting AEC-Q100 Standard

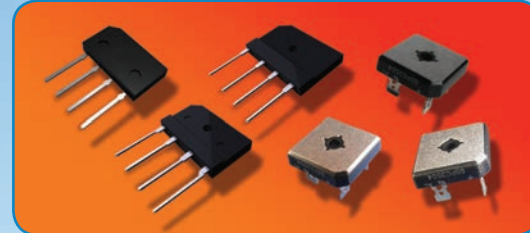
## Fast / Super-Fast / Ultra-Fast Recovery Rectifiers

- Diffused junction
- Fast switching for high efficiency (35nS-500nS)
- High current capability and low forward voltage drop
- Low reverse leakage current



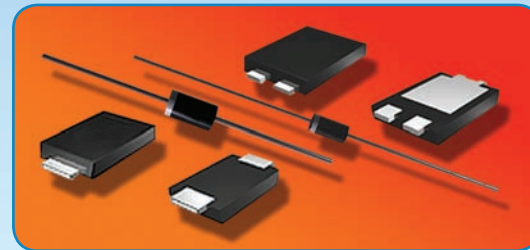
## Bridge Rectifiers

- Average rectified current up to 50 A
- Glass and silicon passivation
- In-line, square, low-profile and SMD packages
- Low leakage and low forward voltage
- Schottkys available 1 A – 3 A



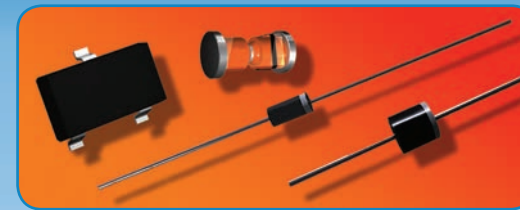
## TVS Diodes and Arrays

- Unidirectional and bidirectional polarities
- Multi line data protection
- Fast response time with excellent clamping capability
- Peak power ratings from 60 W – 1,500 W
- Low incremental surge resistance



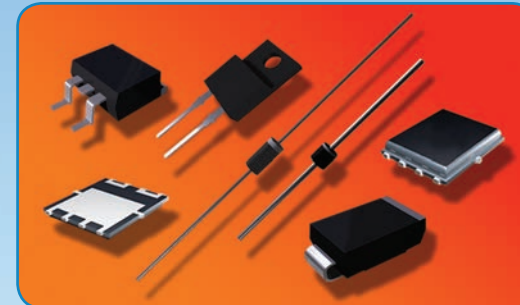
## Zener Diodes, Small Signal Products

- Fast switching speed
- Surface mount and thru-hole
- High reliability
- Voltage regulation and small footprint



## Schottky Diodes / Rectifiers

- High efficiency, low power loss
- 0.1 A – 30 A current capability
- Low forward voltage drop
- Fast switching



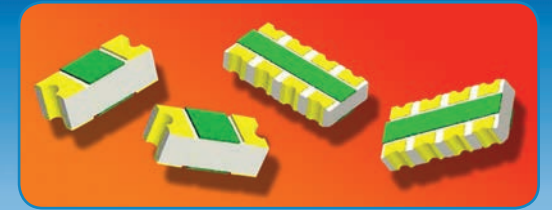
## Switching Diodes

- Voltage ranges from 35 V – 250 V
- Fast switching speeds
- Low leakage current
- Small surface mount packages



## Polymer ESD Diodes

- Optimal protection for high frequency, low voltage applications
- Extremely low capacitance
- Very low leakage current
- Fast response time
- Bidirectional ESD protection



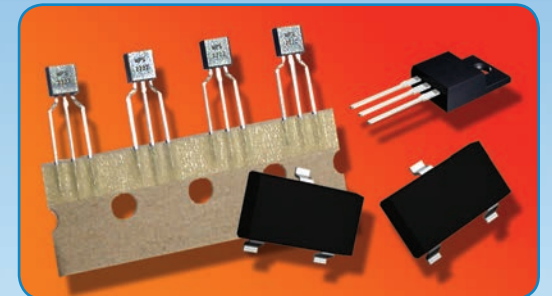
## High Voltage Diodes

- Voltage range 1,200 V – 18,000 V
- High current capability
- High temperature rated packaging
- Low forward voltage drop
- Reverse power dissipation capability



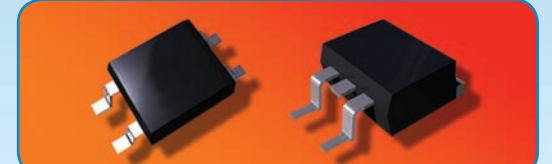
## Transistors

- Switching and general purpose
- NPN and PNP, 30 V – 500 V range
- Fast switching, Low saturation voltages
- High reliability



## MOSFETs (In Development)

- N, P and dual channels
- Low RDS (on)
- MOSFET / Schottky combinations
- ESD protection MOSFETs



Meeting AEC-Q200 Standard

## Surface Mount (V-Chip)

- 4 V ~ 450 V
- 1  $\mu$ F ~ 8,200  $\mu$ F
- 3 mm dia. ~ 21 mm dia.
- 260° C reflow ready
- Up to 5,000 hours
- Wide temperature range (-55° C to 125° C)
- Largest production capacity in China



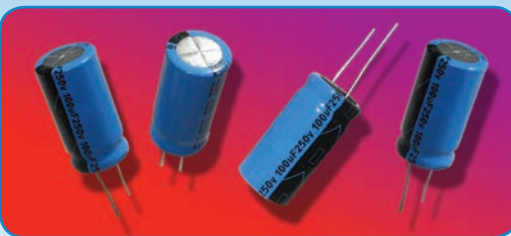
## Low Impedance

- 6.3 V ~ 450 V
- 2.2  $\mu$ F ~ 18,000  $\mu$ F
- Wide temperature range (-55° C to 125° C)
- Up to 10,000 hours
- Low-cost solution against Japanese brand



## General Purpose

- 4 V ~ 500 V
- 1  $\mu$ F ~ 33,000  $\mu$ F
- Low profile (5 mm and 7 mm height)
- Full product range
- Low leakage



## Snap In / Screw Mount

- Up to 525 V
- Up to 750,000  $\mu$ F
- 2,000 ~ 20,000 hours
- Custom specs available
- Power and inverter applications



## Solid Organic Polymer (OP-CAP)

- 2.5 V ~ 50 V
- 6.8  $\mu$ F ~ 3,500  $\mu$ F
- Ultra-low ESR
- High ripple current
- 260° C reflow ready
- Hybrid Polymer - **NEW**



## Metallized Polyester

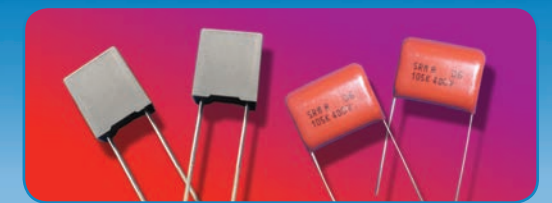
- 50 V ~ 1,250 V DC
- 0.001  $\mu$ F ~ 47  $\mu$ F
- Plastic box type (radial)
- Epoxy coated type (radial)
- Stacked type (radial)
- Non-inductive



Meeting AEC-Q200 Standard

## Metallized Polypropylene

- 100 V ~ 2,500 V DC
- 0.001  $\mu$ F ~ 47  $\mu$ F
- Film / foil type
- Non-inductive
- Plastic box type (radial)
- Epoxy coated type (radial)
- Double-sided box type (AC rated)



## Interference Suppressor

- 275 V ~ 760 V AC
- 0.001  $\mu$ F ~ 50  $\mu$ F
- X1 metallized polypropylene
- X2 metallized polypropylene
- Y2 metallized polypropylene
- Agency approvals



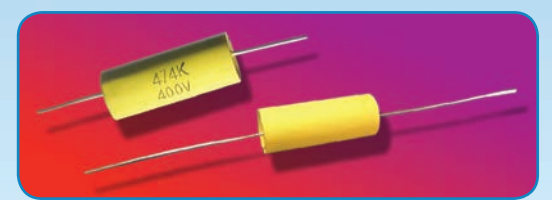
## Power Films

- DC-link for PBC
- DC-link (dry type-plastic)
- DC-link (dry type-aluminum)
- Customized
- High voltage DC-link
- IGBT snubber



## Axial Type

- 100 V ~ 1,250 V DC
- 0.01  $\mu$ F ~ 15  $\mu$ F
- Oval type
- Round type
- Longer useful life



# Thinking Beyond the Board

*The dynamics of today's component supply chain are far more complex than ever before.*

*Nowhere is this more true than in the global industrial electronics market where purchasing, engineering and supply chain management come together to produce quality products and systems that improve the way we handle power on the board and beyond.*

*As a specialist in capacitors<sup>1</sup> and discrete semiconductors<sup>2</sup> since 1981, Surge Components is among an elite group of manufacturing and marketing organizations around the world that has the capability to provide in-depth technical support, guidance and direction, and to function as the direct link to our extensive selection of high-performance components.*

1. TS16949 qualified.

2. AEC-Q101, AEC-Q200 qualified.

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# Thinking Beyond the Board

PRODUCT OVERVIEW

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