



40 years of excellence

# YAGEO

Featured products





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### AC Series

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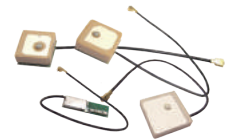
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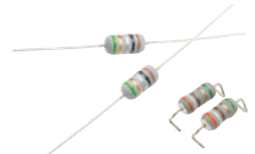
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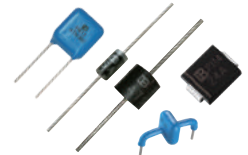
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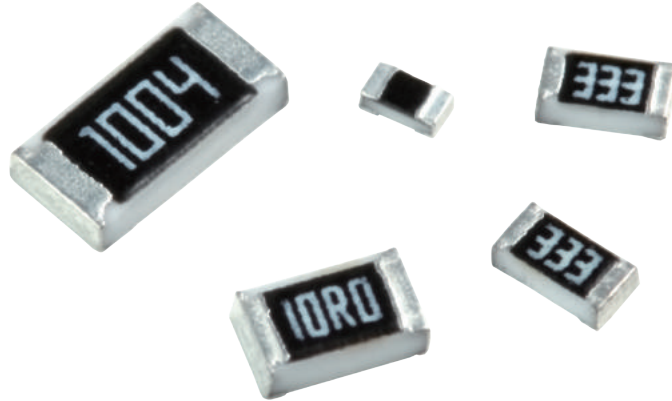
**ESD Series**  
Electrostatic Discharge Protection Devices





## AC Series

### Automotive Grade Thick Film Chip Resistor



AEC  
Q200



## Features

- AEC-Q200 qualified
- Production Part Approval Process (PPAP) available
- Soldering is compliant with J-STD-020D
- Highly reliable electrode construction
- 100% performed by automatic optical inspection prior to taping



## Specifications

- Case size: 0201 to 2512, 0612, 1020, 1225 (wide-termination)
- Resistance range: 1 ~ 22 M $\Omega$
- Tolerance :  $\pm 0.5\%$ ,  $\pm 1\%$ ,  $\pm 5\%$
- TCR :  $\pm 100$ ,  $\pm 200$ ppm/ $^{\circ}\text{C}$  (50ppm available in size 0402~1206)
- Offer high power rating and wide-termination for excellent heat dissipation



## Applications

- All general purpose applications
- Automotive - Infotainment, lighting, BMS
- Power systems
- Industrial

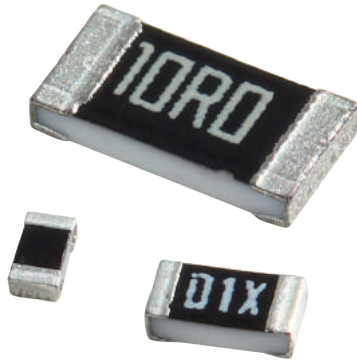


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## AT Series

### Automotive Grade Sulfur Resistant Thin Film Chip Resistor



## Features

- AEC-Q200 qualified, Production Part Approval Process (PPAP) available
- Superior resistance against sulfur-containing environments
- High accuracy:  $\pm 0.1\%$ ,  $\pm 0.25\%$ ,  $\pm 0.5\%$ ,  $\pm 1\%$
- High precision and stability
- Low TCR, low electrical noise



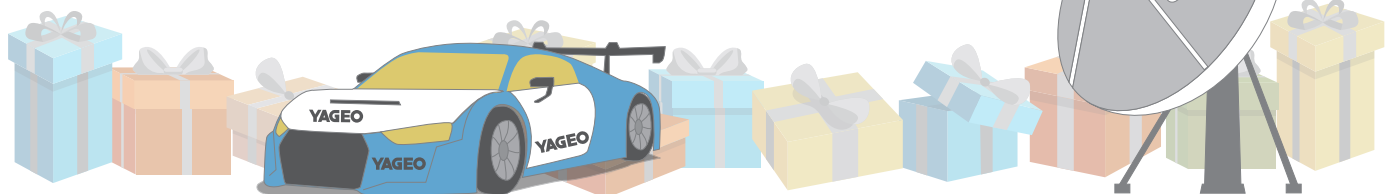
## Specifications

- Case size: 0402 ~ 1206
- Resistance range: 10 ~ 1M $\Omega$
- Tolerance :  $\pm 0.1\%$ ,  $\pm 0.25\%$ ,  $\pm 0.5$ ,  $\pm 1\%$
- TCR :  $\pm 25$ ,  $\pm 50\text{ppm}/^\circ\text{C}$



## Applications

- Automotive electronics
- Industrial control
- Test and measuring equipment
- Telecommunication
- Power system

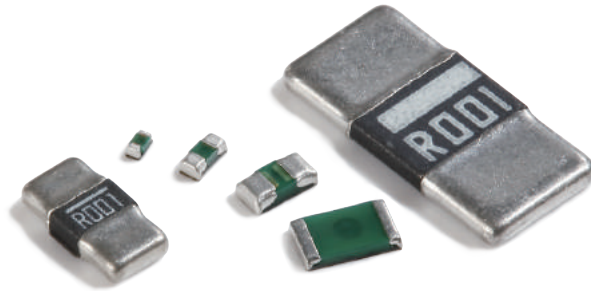


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## PA Series

### Automotive Grade Metal Alloy Current Sensor Low TCR Chip Resistor



## Features

- AEC-Q200 qualified
- Excellent current sensing performance
- Low power consumption
- Operating temperature from -55°C to 170°C
- 100% sulfur resistant



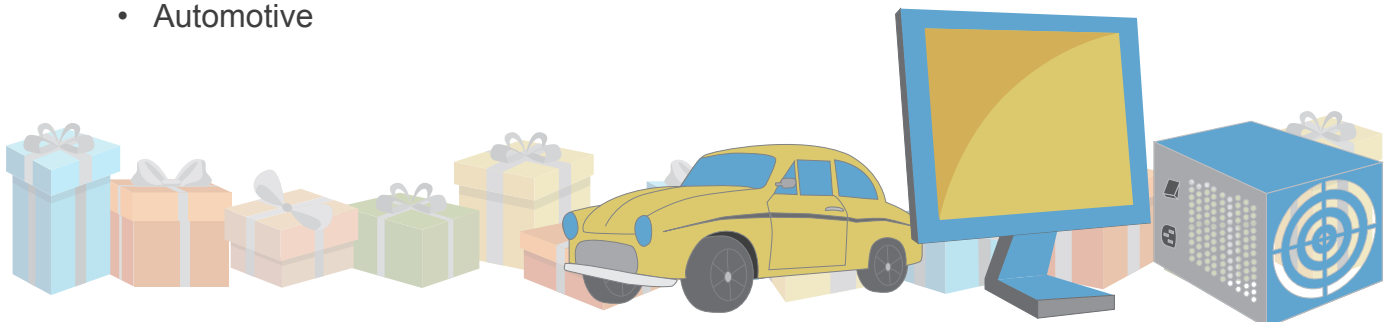
## Specifications

- Case size: 0201 ~ 2512
- High power rating: 1/20 W ~ 3W
- Low TCR down to  $\pm 50\text{ppm}/^\circ\text{C}$
- Resistance: 0.5m $\Omega$  ~ 100m $\Omega$
- Jumper available in size 0201 ~ 1206 ; 0201 < 5m $\Omega$ , 0402 < 1m $\Omega$ , 0603 ~ 1206 < 0.2m $\Omega$



## Applications

- Consumer goods
- Computer
- Telecom / Datacom
- Industrial / Power supply
- Automotive

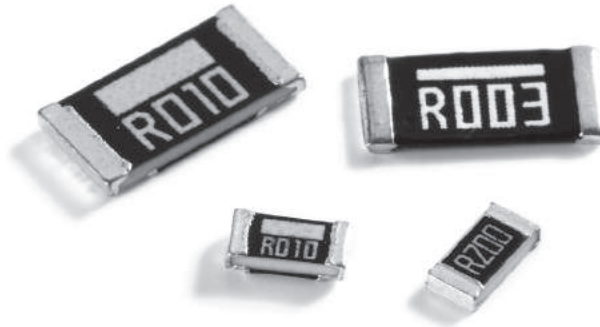


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## PE Series

### Automotive Grade Metal Foil Current Sensor Low TCR Chip Resistor



AEC  
Q200



## Features

- AEC-Q200 qualified
- Excellent current sensing performance
- Low power consumption
- Operating temperature from -55°C to 170°C
- 100% sulfur resistant



## Specifications

- Case size: 0201~2512, 0508, 0612, 0815 (wide-termination)
- Tight tolerance :  $\pm 0.5\%$ ,  $\pm 1\%$ ,  $\pm 5\%$
- Low TCR down to  $\pm 50\text{ppm}/^\circ\text{C}$
- Resistance :  $0.5\text{m}\Omega \sim 910\text{m}\Omega$



## Applications

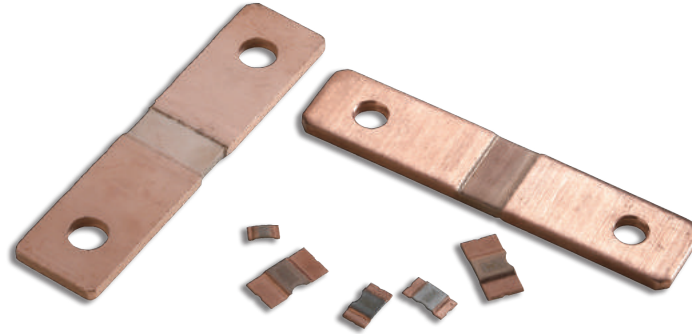
- Consumer goods
- Computer
- Telecom / Datacom
- Industrial / Power supply
- Automotive
- Alternative energy



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## PU Series Shunt Chip Resistor



### Features

- AEC-Q200 qualified
- Withstand high temperature and high humidity
- Excellent heat dissipation
- Low thermal EMF
- Operating temperature from  $-65^{\circ}\text{C}$  to  $275^{\circ}\text{C}$
- 100% sulfur resistant



### Specifications

- Case size: 2512, 3921, 5931, 4014, 4614, 6820, 8420, 8518 & 9520
- High rated power 3 ~ 36W
- Low TCR down to 50 ppm/ $^{\circ}\text{C}$
- Resistance:  $0.05\text{m}\Omega$  ~  $5\text{m}\Omega$



### Applications

- Battery management system (BMS)
- Power system
- Automotive
- Telecom base station
- Industrial equipment
- Alternative energy





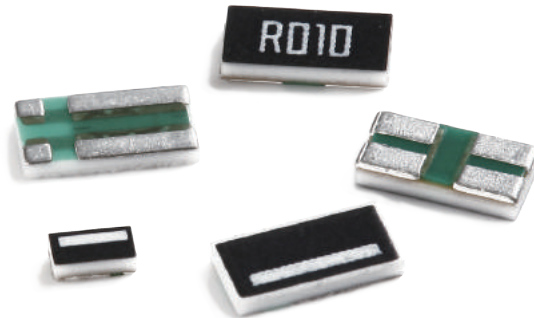
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## PS Series

### Metal Current Sensor

### Low TCR Chip Resistor, 4 Termination



## Features

- Low measurement error due to special configuration in the Kelvin terminal (4-terminal) design
- Excellent heat dissipation
- 100% sulfur resistant
- Excellent heat dissipation
- Ultra low resistance
- Low TCR, low electrical noise



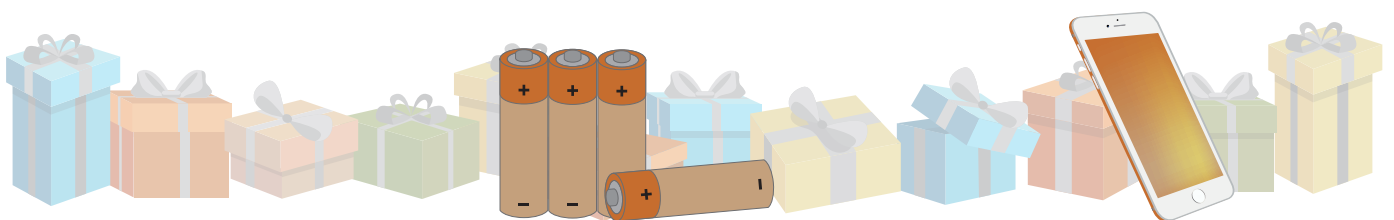
## Specifications

- Case Size: 0306, 0612, 1206
- Low TCR down to  $\pm 50$  ppm/ $^{\circ}\text{C}$
- Tight tolerance ( $\pm 0.5\%$ ,  $\pm 1\%$ ,  $\pm 5\%$ )
- Ultra low resistance down to  $0.5\text{ m}\Omega$



## Applications

- Smart phone / Pad
- Industrial equipments
- Power / Server



## AC Series Automotive Grade MLCC



### Features

- AEC-Q200 qualified and PPAP ready
- IATF 16949 certified
- Board flex  $\geq 2\text{mm}$
- 100% AOI
- High reliability



### Specifications

- TC: X7R, NPO (-55°C~125°C)
- Capacitance range: 0.47pF ~ 2.2 $\mu\text{F}$
- Tolerances:  $\pm 0.1$  pF,  $\pm 0.25$  pF,  $\pm 0.5$  pF,  $\pm 1\%$ ,  $\pm 2\%$ ,  $\pm 5\%$ ,  $\pm 10\%$ ,  $\pm 20\%$
- Case size: 0402 ~ 1812
- Voltage range: 6.3V ~ 630V



### Applications

- All general purpose applications
- Automotive - Entertainment
- Automotive - Comfort and security
- Automotive - Information

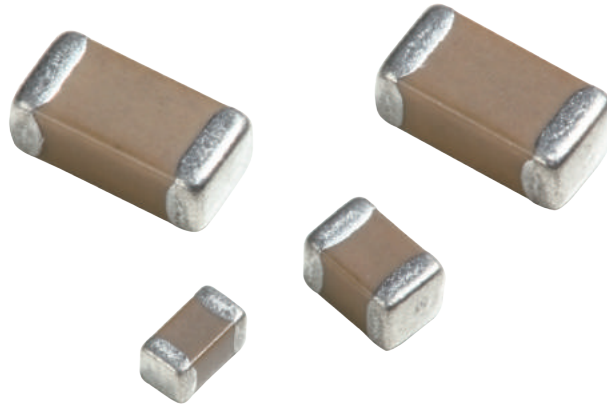


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## AS Series

### Automotive Grade Soft Termination MLCC



AEC  
Q200



## Features

- AEC-Q200 qualified and PPAP ready
- IATF 16949 certified
- Board flex  $\geq 5$  mm
- 100% AOI & SPC monitor
- Enhanced thermal and mechanical robustness



## Specifications

- TC: X7R(-55°C~125°C)
- Capacitance range: 1 nF ~ 4.7 uF
- Tolerances:  $\pm 5\%$ ,  $\pm 10\%$ ,  $\pm 20\%$
- Case size: 0805, 1206, 1210
- Voltage range: 10 V ~ 250 V



## Applications

- Automotive - Audio and video systems
- Automotive - Remote vehicle control
- Automotive - Navigation
- Automotive - Comfort



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## CQ Series

### High Frequency MLCC



## Features

- BME process with copper inner electrodes
- High Q and low ESR in VHF, UHF and microwave
- Tight tolerance (min.  $\pm 0.05\text{pF}$ )
- High reliability with no polarity



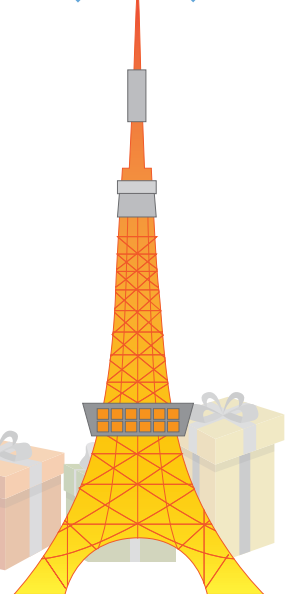
## Specifications

- TC: NPO ( $-55^{\circ}\text{C} \sim 125^{\circ}\text{C}$ )
- Case size: 0201 ~ 0805
- Capacitance range: 0.2 pF ~ 100 pF
- Maximum power: 1 W
- Voltage range: 16 V ~ 250 V



## Applications

- Mobile front end
- NB and tablet
- Wireless networking
- Power amplifier design
- M2M

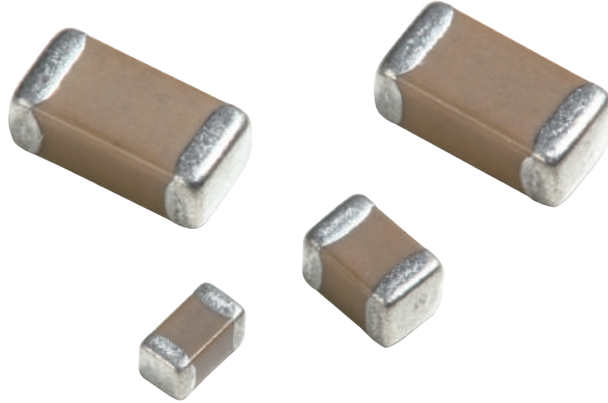


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**CS Series**

**Soft Termination MLCC**



## Features

- Flexible termination system
- Improved resistance to thermal stresses
- Increased mechanical performance
- Lead-free termination meet RoHS requirements



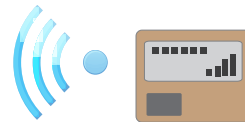
## Specifications

- TC: NPO/X7R (-55°C~125°C)
- Case size: 0402 ~ 1812
- Capacitance range: 0.47 pF ~ 2.2  $\mu$ F
- Voltage range: 16 V ~ 3 KV



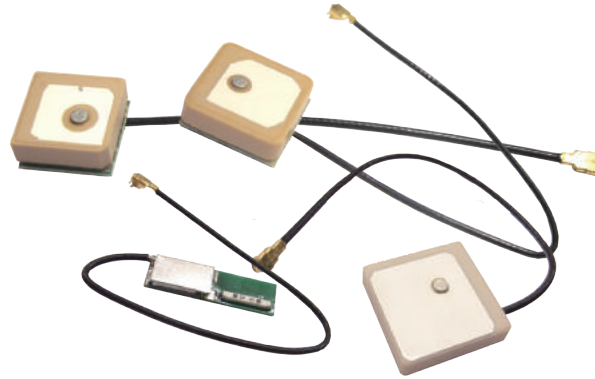
## Applications

- High flexure stress circuit boards
- Switch power supplies
- Telecom base station
- Smart meter
- Power equipment



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## Wireless Components Active GNSS Antenna



### Features

- Support GPS & Glonass & Beidou system
- Internal or external antenna
- Flexible cable length and connector type
- Omni-directional/high directional
- High gain, built-in LNA
- Low noise



### Specifications

- Frequency range: 1559 ~ 1610 MHz
- Circular or Linear polarization
- Impedance: 50  $\Omega$
- Operating temperature: -30°C ~ +80°C



### Applications

- Navigation device
- Telematics box
- Fleet management

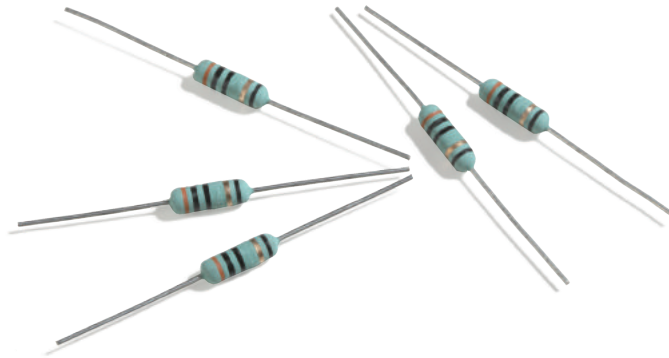


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## OTP Series

### Over Temperature Protection Fusible Resistor



### Features

- Over temperature protection under overcurrent conditions
- Semi- short circuit quick fusing
- Wide resistance range
- Excellent anti-surge and pulse witholding capability
- Customized fusing current & temperature
- UL certified



### Specifications

- Power rating: 1W, 2W
- R value: 1  $\Omega$  ~ 200  $\Omega$
- Tolerance:  $\pm 1\%$  ,  $\pm 5\%$
- Through hole wirewound
- Thermal fuse



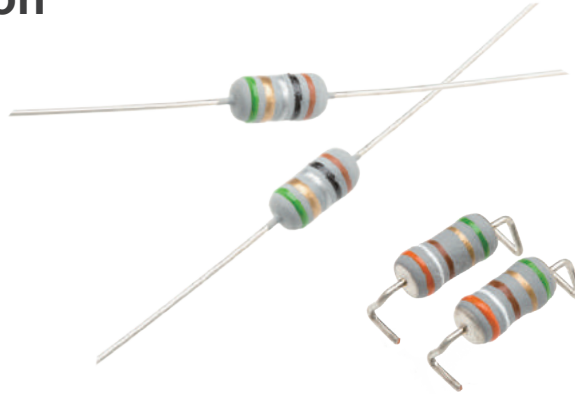
### Applications

- Industrial
- Alternative energy
- Home appliance
- Charger
- Power supply





## CRP Series Precision Wirewound Resistor, Pulse Version



### Features

- Flame retardant coating
- Narrow tolerance  $\pm 0.5\%$
- Z bending form for SMD
- Lead-free, RoHS compliant & halogen free



### Specifications

- Power rating: 1W ~ 5W
- High pulse load up to 6[KV]
- Tolerance:  $\pm 0.5\%$  ,  $\pm 1\%$  ,  $\pm 2\%$  ,  $\pm 5\%$
- Resistance range: 0R1 ~ 5K1



### Applications

- Power supplies
- Battery chargers
- Industrial
- Home appliances

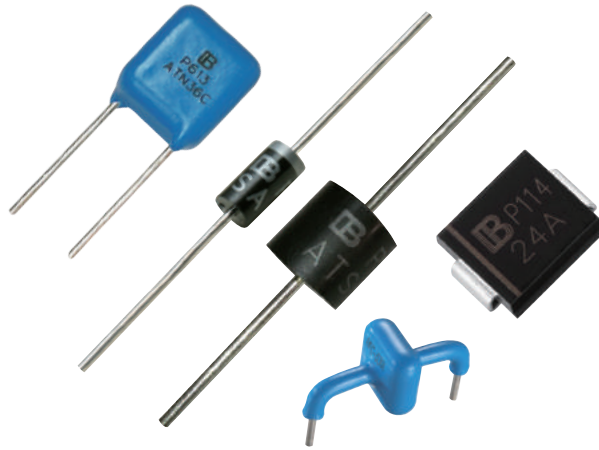




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## TVS Series Transient Voltage Suppressors



### Features

- Safety certification by UL
- Low dynamic internal resistance, low clamping voltage
- Fast response speed
- High voltage tolerance



### Specifications

- Working voltage= 5~1200 V
- P<sub>ppm</sub> = 400 ~ 30,000 W at 10/1000us pulse form
- I<sub>pp</sub>=3kA, 6kA, 10kA, 16kA, 20kA (or even higher) at 8/20us pulse form
- Package: SMAJ, SMBJ, SMCJ, DO-218AB, DO-15, DO-41, DO-201, P600...



### Applications

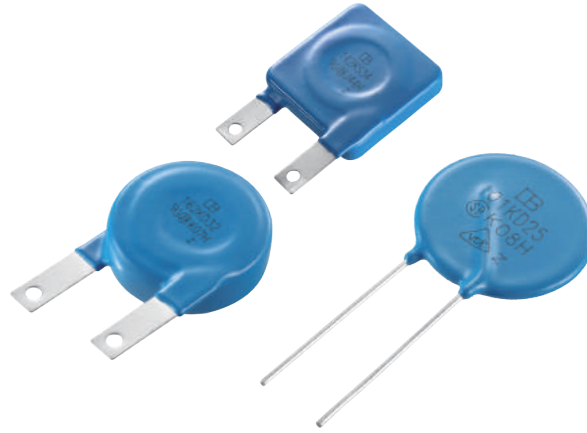
- DC Power supply
- Security surveillance
- Telecom
- Automotive



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## MOV Series Metal Oxide Varistors



### Features

- Safety certification by UL/ TUV/ VDE/ CSA/ CQC
- Good surge energy absorption capability
- VBR (Breakdown voltage) is by-directional and symmetric
- Fast response speed



### Specifications

- Varistor voltage= 18V~1800V, tolerance= $\pm 10\%$
- I<sub>pp</sub> (Peak pulse current) = few hundred A to few dozen KA at 8/20us pulse form
- Diameter: 5 to 53mm



### Applications

- AC power supply
- Telecom
- Circuit breaker
- Consumer
- SPD (Surge Protection Devices)
- LED driver
- Smart meter

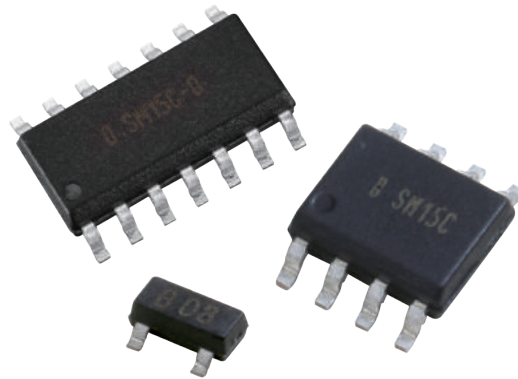


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## ESD Series

### Electrostatic Discharge Protection Devices



## Features

- Low capacitance (under 1pF)
- High design flexibility, provide customized design for different capacitance, configuration, pulse load capability...etc.
- Low clamping voltage



## Specifications

- Working voltage is followed the voltage of IC, such as 2.8V, 3.3V, 5V, 12V, 15V, 24V, 36V
- Package: QFN-0201, SOD-882, DFN1006-3L, SOT-523, SOD-523, QFN-10, SOD-323, SOD-123S, SOD-323, SOT-23, SOT-143, SOT-363, SOT23-6L, SOIC-8, SOIC-16
- Small size is available (0201)



## Applications

- High speed networking (e.g. HDMI, USB 3.0, RJ45, IEEE1394) in Telecom
- Smart phone
- Industrial
- Consumer





[www.yageo.com](http://www.yageo.com)

## YAGEO - A GLOBAL COMPANY

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