



## Application Note

Alternative Energy  
Medical / Industrial / Power  
Computing / Mobile



## Alternative Energy

## Key Components for Solar Panels & Inverters

Yageo is devoted to developing environmentally-friendly technologies for alternative energy. Our highly reliable components are suitable for outdoor and harsh applications, in such diverse fields as wind power, solar energy, and other renewable energy applications.

### KEY ADVANTAGES

- High reliability & stability
- Compact size
- Safety certified
- High power density



### Surge Resistors



### Wirewound Resistors

- Highly stable performance and highly reliable
- Flameproof multilayer coating ( UL94V-0)
- Non-inductive types available



### High Voltage MLCC



### Melf Resistors

- Miniature & ultra miniature size
- Higher power rating
- Wide resistance range
- Narrow tolerance and low TCR



### Resistor Array




### High Capacity MLCC

**Medical**

**Key Components for Point-of-Care Panel Computers**

Medical, clinical and healthcare settings have unique requirements for electronic products in terms of longevity, certification, and adherence to strict rules and regulations. With specific know-how and technology expertise, Yageo offers high performance, safety certified products for medical applications.



**Low Ohmic Resistors**

- Resistance values as low as 0.0005Ω
- Highly reliable multilayer electrode construction
- Low inductance
- High speed logic circuit

**KEY ADVANTAGES**

- High reliability
- Excellent performance
- Safety certified
- SMD technology



**Low Ohmic, Low TCR Resistors**



**High Capacity MLCC**



**High Voltage MLCC**



**Current Sensor Resistors**



**General Purpose MLCC**

- Excellent TCR compared to thick film low ohmic counterparts
- Precision current sensing control
- Ultra low ohmic as low as 0.001Ω





## Computing

# Key Components for Notebooks

Yageo helps in increasing the performance of personal computers by downsizing their electronic components while permitting them to accommodate higher-frequency signals. Our low-loss, battery-friendly electronic components, wireless communication modules that offer low power consumption connectivity.



**High Capacity MLCC**



**High Frequency MLCC**

- High frequency value
- For high frequency applications
- NiSn terminations



**High Voltage MLCC**



**Resistor Array**



**Current Sensor Resistors**



**LTCC (Chip Antenna, Filter, Balun)**

- Low temperature co-fired ceramic (LTCC) technology
- High frequency material/process/design and customized
- Surface mount, compact and low-profile

### KEY ADVANTAGES

- High reliability
- Current sensing & protection
- Integrated and more efficient
- Compact size

## Key Components for Mobile Phones

Mobile phones are now used in every part of the world. The launch of new higher-speed, higher-capacity communication services is accelerating the trend for ever smarter and more multifunctional products. Yageo contributes to the further development and spread of mobile phones by downsizing, modularizing, and multibanding its RF components.



**LTCC (Chip Antenna,  
Filter, Balun)**

### KEY ADVANTAGES

- ESD protection
- Current sensing & protection
- Integrated and more efficient
- Miniaturization, small and light



**Current Sensor  
Resistors**



**Resistor Array**



**General  
Purpose MLCC**



**Multilayer Chip  
Varistors**

- Excellent energy dissipation capability
- Symmetrical voltage-current characteristics
- High transient current capability
- Quick response time (<1n sec.)



**High Capacity  
MLCC**

- Materials: X5R, X7R and Y5V
- Size: 0402 - 1812
- Capacitance from 1 $\mu$ F - 100 $\mu$ F
- Rated working voltage from 6.3V - 50V

## Key Components for Power Supplies

Yageo provides high capacitance and low ESR components to enable low impedance at high frequency to support excellent noise suppression and ripple absorption in a wide array of power applications in which space is critical and cost per placement and maximum throughput are priorities.

### KEY ADVANTAGES

- Surge protection
- Higher maximum working voltage
- Current sensing & protection
- Low thermo EMF



### Anti-Sulfurated Resistors

- Excellent anti-FOS characteristic thanks to conducting high sulfuration-proof inner electrode alloy
- High stability and reliability with robust overlapping structure on top of inner electrode
- RoHS compliant and Halogen free



### High Capacity MLCC



### High Voltage MLCC



### Current Sensor Resistors



### High Voltage Resistors



### Soft Termination MLCC

- Material: X7R
- Size: 0402 - 1206
- Capacitance from 100pF - 1000nF
- Rated working voltage from 6.3V - 630V

# Industrial

## Key Components for Touch Panel Computers

The Industrial market consists of factory & machine automation, packaging equipment, industrial control, and process control. Yageo offers a complete portfolio of products with high reliability and stability to fulfill versatile requirements.



### Resistor Array

- Integrated discrete chip resistors from 2 to 8 pcs
- Low assembly costs
- Reduced size of final equipment

### KEY ADVANTAGES

- Higher component and equipment reliability
- Complete portfolio
- Integrated and more efficient
- Low ohmic and high power



### Low Ohmic Resistors



### Mid Voltage MLCC



### Current Sensor Resistors



### High Voltage MLCC



### High Capacity MLCC

- Materials: NP0 and X7R
- Size: 1206 - 1812
- Voltage from 1kV - 3kV
- High DC withstanding voltage ( $\geq 1.2V$  Rated)
- Safety Certification Series: TUV, UL certification for 1808/ 1812

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