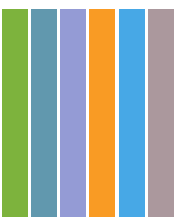


Computers & Peripherals

Application Selection Guide



About Yageo

Founded in 1977, the Yageo Corporation has become a world-class provider of passive component services with capabilities on a global scale, including production and sales facilities in Asia, Europe and the Americas.

Yageo currently ranks as the world No.1 in chip-resistors, No. 3 in MLCCs and No. 4 in ferrite products, with a strong global presence: 23 sales offices in 15 countries, 9 production sites, 8 JIT logistic hubs, and 2 R&D centers worldwide. Ferroxcube and Vitrohm, who produce ferrites and leaded resistors, are also a part of the Yageo group.

We support our customers with extensive literature including datasheets, brochures and application notes, which are also available electronically on our website at: www.yageo.com



Content

Computers & Peripherals



Computers & Peripherals Introduction	3
Computing Systems	4
Laptops & Tablets	5
Servers Systems	6
UPS	7
Peripherals	8
Chargers & Adapters	9
Storage & SSD	10
Printers	11
Motherboards	12
Chip Resistors Ordering Information	13
MLCC Ordering Information	15
Wireless Ordering Information	16
Through Hole Ordering Information	17



Computers & Peripherals



Introduction

Computers and peripherals have constituted a well-established and mature area in modern electronics for many years.

For a long time, desktops and laptops with large displays dominated the field as stand-alone equipment, but this has quickly changed. Users are requesting smaller and lighter portable devices, such as tablets, ultra-books and netbooks, with long battery life capable of seamless, wireless communication with peripherals including printers, flat screen TVs, and mobile phones using high speed home or public networks.

The amount of data collected, processed, distributed, and stored today is tremendous and still growing at an incredible speed. To keep pace with this development, large storage systems, like high capacity hard disks and solid state drives for personal use, as well as huge server centers for cloud computing and data storage, are needed.

Yageo has been a major supplier of passive components to the computer industry for many years.

The growing complexity and decreasing size and weight of devices requires ever more and smaller components. The tiny 01005 Rchips and MLCCs and the 2 and 4-element resistor and capacitor arrays are designed to help reduce board space on the PCB.

Rchips with double or triple power rating open the possibility of decreasing size without sacrificing power dissipation, thus accomplishing the miniaturization of the electronics.

MLCC high-cap with increasing capacitance values help

replace the more bulky electrolytic or tantalum capacitors, further improving long term reliability.

Metal foil and metal plate low ohmic resistors with values as low as 0.5 milliohms as well as high voltage MLCCs make their way into ever smaller and more efficient power supplies and disk drives with a long life and high capacity.

Sulfur-resistant thick film Rchips offer a rugged solution to prevent device failure in challenging environmental conditions where the air is polluted by sulfur dioxide. Varistors protect sensitive semiconductor components against damage by excessive transient voltages.

Application of Yageo's wireless device portfolio—ceramic, metal, and PCB antennas as well as integrated high frequency passives—in electronic circuits enables users to seamlessly connect and communicate with the global community via private, local, or public networks.

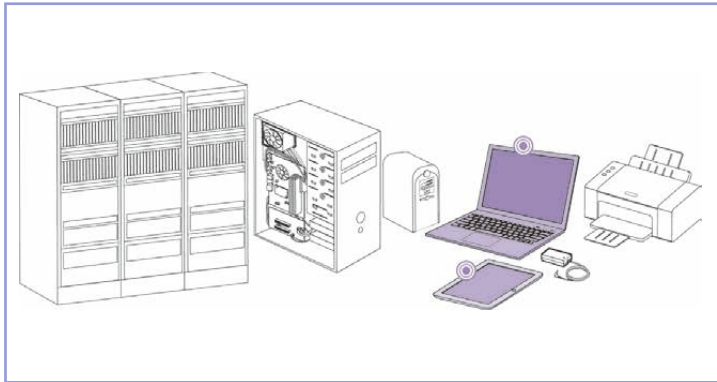
Although SMD components play the major role in electronics in this segment, leaded resistors are still indispensable where high performance, safety and reliability are the keys. In chargers for tablets and phones, safety (FAE Series) and fusible (FKN) wirewound resistors are vital.

Adapters for laptops contain high voltage (HHV Series), power wirewound (KNP/PNP Series) and metal oxide (RSF Series) leaded parts. Reliability of UPS devices is supported by the application of power wirewound (KNP/PNP series) and precision metal film (MFP series) leaded resistors.

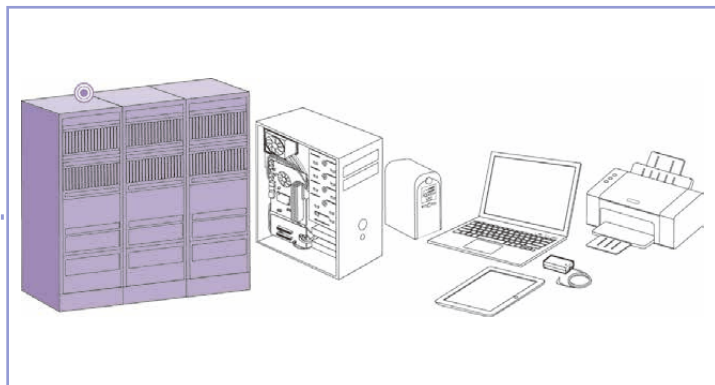
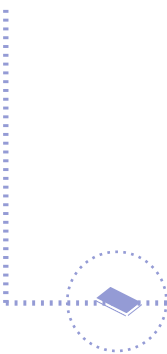
All Yageo passive components comply with RoHS and REACH regulations.



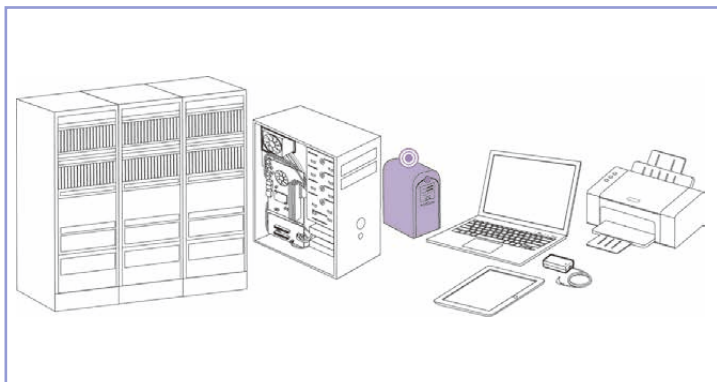
Computing Systems



Laptops & Tablets

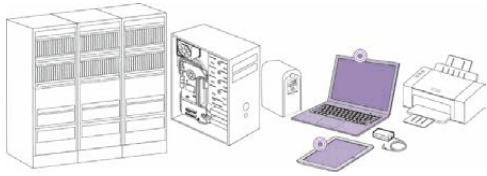


Servers Systems



UPS





Laptops & Tablets

- Chip Resistors

RC(RC0100) Series

Ultra small 01005 thick film general purpose chip resistor



Feature

- Extremely light and thin
- Highly reliable electrode construction
- Compatible for all soldering processes
- Highly stable in auto-placement surface mounting applications
- Barrier layer end termination

- Chip Resistors

RT(RT0201) Series

Ultra small 0201 thin film high precision high stability chip resistor



Feature

- High precision & stability
- Low TCR
- Low electrical noise
- Advanced sputtering technology
- Extremely thin and light

- Chip Resistors

PE Series

Automotive grade metal current sensor, low TCR chip resistor



Feature

- Excellent current sensing performance
- High power rating for large current detection
- Accurate power control
- Reduce power consumption
- Low thermal EMF
- AEC-Q200 compliant
- Low TCR

- Chip Resistors

UE Series

ESD Suppressor



Feature

- Extremely low capacitance
- Very low leakage current
- ESD protection for high speed data lines to IEC61000-4-2

- MLCC

CC-HC Series

High Capacitance



Feature

- High capacitance
- Very Low ESR and ESL
- Low self heating
- High reliability with no polarity
- RoHS-compliant & halogen-free

- MLCC

CC-HCV Series

High CV



Feature

- High capacitance and high voltage
- Higher energy density
- High reliability with no polarity
- RoHS-compliant & halogen-free

- MLCC

CC-HV Series

High Voltage



Feature

- Operates at high voltage
- Wide case size available
- High reliability with no polarity
- RoHS-compliant & halogen-free

- MLCC

CC(01005) Series

Miniaturization (01005)



Feature

- Extremely small and space saving
- Accurate dimension control
- Effective pick & place implementation
- High reliability with no polarity
- RoHS-compliant & halogen-free

- Wireless

WLAN/BT/ISM Antenna

Chip Antenna



Feature

- Compact size, small clearance
- SMD type antenna
- Operating temperature: -40°C-105°C
- RoHS-compliant & halogen-free

- Wireless

WWAN Antenna

PCB Antenna



Feature

- Easy installation
- Flexible cable length and connector type
- Operating temperature: -40°C-85°C
- RoHS-compliant & halogen-free

- Wireless

WLAN/BT/ISM Antenna

PCB Antenna



Feature

- Easy installation
- Flexible cable length and connector type
- Operating temperature: -40°C-85°C
- RoHS-compliant & halogen-free

- Wireless

GNSS Antenna

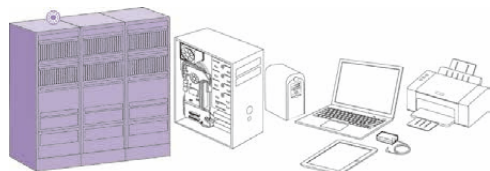
PCB Antenna



Feature

- Easy installation
- Flexible cable length and connector type
- Operating temperature: -40°C-85°C
- RoHS-compliant & halogen-free

Servers Systems



• Chip Resistors

AF Series

Sulfur resistance chip resistor

**Feature**

- Superior resistance against sulfur-containing environments
- Highly reliable electrode construction
- FOS test method: ASTM B809-95 105°C, 750 hours

• Chip Resistors

RT Series

Thin film high precision high stability chip resistor

**Feature**

- High precision & stability
- Low TCR
- Low electrical noise
- Advanced sputtering technology

• Chip Resistors

PE wide termination Series

Metal current sensor, low TCR chip resistor, wide termination

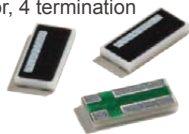
**Feature**

- Excellent current sensing performance
- High power rating for large current detection
- Accurate power control
- Reduce power consumption
- Low thermal EMF
- Low TCR
- Excellent heat dissipation

• Chip Resistors

PS(4 termination) Series

Metal current sensor, low TCR chip resistor, 4 termination

**Feature**

- Excellent current sensing performance
- High power rating for large current detection
- Accurate power control
- Reduce power consumption
- Extremely low resistance

• Chip Resistors

AF Array Series

Sulfur resistance chip resistor, Array

**Feature**

- Integrated discrete chip resistors from 2 and 4 pcs
- Superior resistance against sulfur containing atmosphere
- Highly reliable electrode construction
- FOS test method: ASTM B809-95 105°C, 750 hours

• Chip Resistors

RC_P Series

Lead free (Pb<1000ppm) thick film general purpose chip resistor

**Feature**

- Highly reliable electrode construction
- Compatible with all soldering processes
- Highly stable in auto-placement surface mounting applications
- Barrier layer end termination
- Lead free (Pb<1000ppm) without RoHS exemptions (7C-1)

• MLCC

CC-HC Series

High Capacitance

**Feature**

- High capacitance
- Very Low ESR and ESL
- Low self heating
- High reliability with no polarity
- RoHS-compliant & halogen-free

• MLCC

CC-HCV Series

High CV

**Feature**

- High capacitance and high voltage
- Higher energy density
- High reliability with no polarity
- RoHS-compliant & halogen-free

• MLCC

CC-HV Series

High Voltage

**Feature**

- Operates at high voltage
- Wide case size available
- High reliability with no polarity
- RoHS-compliant & halogen-free

• MLCC

CC-Class II (≥0201) Series

General purpose class II

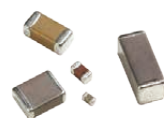
**Feature**

- Class II temperature characteristics
- Suitable for all general purpose
- High reliability with no polarity
- RoHS-compliant & halogen-free

• MLCC

CC-Class I (≥0201) Series

General purpose class I

**Feature**

- Class I temperature characteristics
- High stability and no capacitance aging
- Operates in temperature up to 125°C
- High reliability with no polarity
- RoHS-compliant & halogen-free

• Wireless

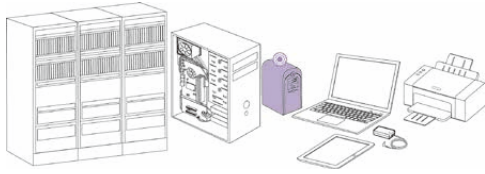
X2Y Series

X2Y

**Feature**

- Excellent performance on EMI suppression or decoupling
- Ultra-low equivalent series inductance (ESL)
- Provides differential & common mode filtering with a single device





UPS

- Chip Resistors

RT Series

Thin film high precision high stability chip resistor

**Feature**

- High precision & stability
- Low TCR
- Low electrical noise
- Advanced sputtering technology

- Chip Resistors

PE Series

Automotive grade metal current sensor, low TCR chip resistor

**Feature**

- Excellent current sensing performance
- High power rating for large current detection
- Accurate power control
- Reduce power consumption
- Low thermal EMF
- AEC-Q200 compliant
- Low TCR

- Chip Resistors

RV Series

High voltage chip resistor

**Feature**

- High working voltage
- Reliable electrode construction
- High stability & reliability
- Highly stable in auto-placement surface mounting

- Chip Resistors

RE Series

Thick film precision grade chip resistor

**Feature**

- Tight tolerance
- Low TCR
- Highly reliable electrode construction
- Compatible with all soldering processes

- MLCC

CC-HC Series

High Capacitance

**Feature**

- High capacitance
- Very Low ESR and ESL
- Low self heating
- High reliability with no polarity
- RoHS-compliant & halogen-free

- MLCC

CC-HCV Series

High CV

**Feature**

- High capacitance and high voltage
- Higher energy density
- High reliability with no polarity
- RoHS-compliant & halogen-free

- MLCC

CC-HV Series

High Voltage

**Feature**

- Operates at high voltage
- Wide case size available
- High reliability with no polarity
- RoHS-compliant & halogen-free

- MLCC

CC-Class II (≥0201) Series

General purpose class II

**Feature**

- Class II temperature characteristics
- Suitable for all general purpose
- High reliability with no polarity
- RoHS-compliant & halogen-free

- Through Hole

CTP Series

Wirewound resistors, high power, silicone coated, ceramic tube

**Feature**

- High power rating (up to 10KW)
- Wirewound (max. resistance up to 150Kohm)
- Flameproof silicone coated
- Excellent surge performance
- Reliable in severe environments
- Fully lead-free compliance with no RoHS exemptions (7C-1)

- Through Hole

ETP Series

Wirewound resistors, high power, enamelled coated, ceramic tube

**Feature**

- High power rating (up to 500W)
- Wirewound (max. resistance up to 91Kohm)
- Enamelled coating
- Excellent surge performance
- Reliable in severe environments
- Fully lead-free compliance with no RoHS exemptions (7C-1)

- Through Hole

HHV Series

Metal glazed film resistors, high-voltage & high ohmic

**Feature**

- UL1676 and VDE 0860 certified
- High working voltage up to 7KV
- Max. over load voltage up to 14KV
- Max. resistance up to 68Mohm
- Flameproof silicone-coated
- RoHS exemptions(7C-1)

- Through Hole

KNP Series

Wirewound resistors, flameproof

**Feature**

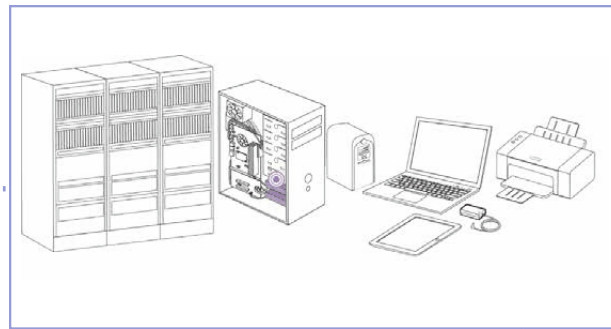
- High reliability
- Flameproof silicone coated
- Excellent surge performance
- Fully lead-free compliance with no RoHS exemptions (7C-1)



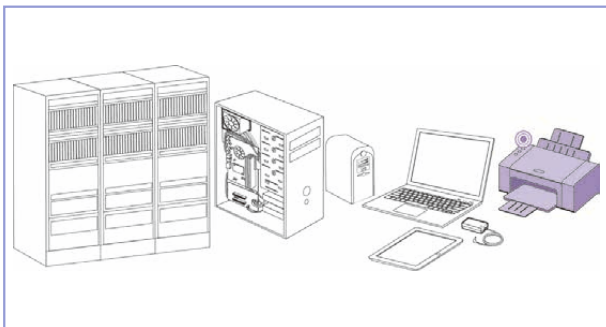
Peripherals



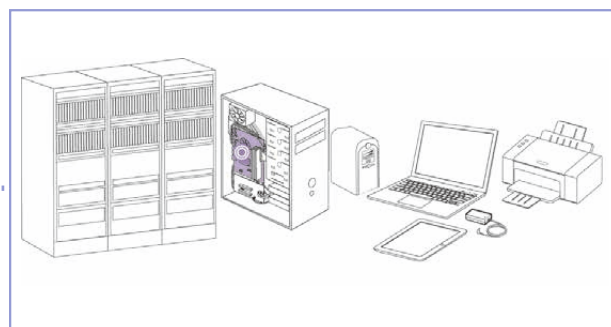
Chargers & Adapters



Storage & SSD

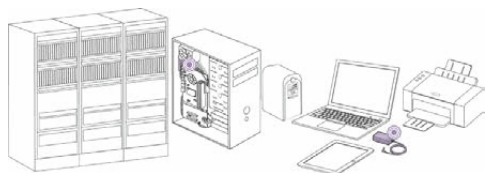


Printers



Motherboards





Chargers & Adapters

- Chip Resistors

RT Series

Thin film high precision high stability chip resistor



Feature

- High precision & stability
- Low TCR
- Low electrical noise
- Advanced sputtering technology

- Chip Resistors

PE Series

Automotive grade metal current sensor, low TCR chip resistor



Feature

- Excellent current sensing performance
- High power rating for large current detection
- Accurate power control
- Reduce power consumption
- Low thermal EMF
- AEC-Q200 compliant
- Low TCR

- Chip Resistors

SR Series

Surge Chip resistor



Feature

- Excellent pulse loading performance
- High stability & reliability
- Narrow tolerance to 0.5%
- Excellent ESD withstand performance
- AEC-Q200 compliant

- Chip Resistors

RV Series

High voltage chip resistor



Feature

- High working voltage
- Reliable electrode construction
- High stability & reliability
- Highly stable in auto-placement surface mounting

- MLCC

CC-HC Series

High Capacitance



Feature

- High capacitance
- Very Low ESR and ESL
- Low self heating
- High reliability with no polarity
- RoHS-compliant & halogen-free

- MLCC

CC-HCV Series

High CV



Feature

- High capacitance and high voltage
- Higher energy density
- High reliability with no polarity
- RoHS-compliant & halogen-free

- MLCC

CC-HV Series

High Voltage



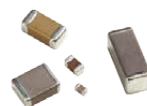
Feature

- Operates at high voltage
- Wide case size available
- High reliability with no polarity
- RoHS-compliant & halogen-free

- MLCC

CC-Class II (≥ 0201) Series

General purpose class II



Feature

- Class II temperature characteristics
- Suitable for all general purpose
- High reliability with no polarity
- RoHS-compliant & halogen-free

- Through Hole

FAE Series

Wirewound resistors, fusible & safty, anti-explosion



Feature

- UL1412 certified
- Fusing time <60S for 25 times rated power
- Fusible function
- Safty, anti-explosion
- Excellent surge performance, customized surge requirment
- Flameproof silicone-coated
- Fully lead-free compliance with no RoHS exemptions(7C-1)

- Through Hole

FKN Series

Wirewound resistors, fusilbe, flameproof



Feature

- UL1412 certified
- Fusing time <60S for 25 or 36 times rated power
- Fusible function
- Excellent surge performance customized surge requirements
- Flameproof silicone-coated
- Fully lead-free compliance with no RoHS exemptions(7C-1)

- Through Hole

PNP Series

Wirewound resistors, high power, flameproof, ultra miniature



Feature

- High power rating
- Low resistance (to 10mR)
- Double power available
- Flameproof cement case
- Excellent surge performance
- Vertical terminal
- Fully lead-free compliance with no RoHS exemptions (7C-1)

- Through Hole

HHV Series

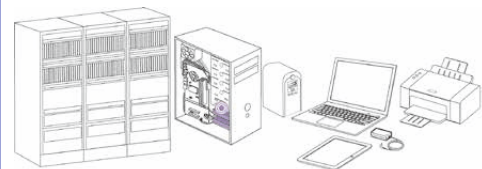
Metal glazed film resistors, high-voltage & high ohmic



Feature

- UL1676 and VDE 0860 certified
- High working voltage up to 7KV
- Max. over load voltage up to 14KV
- Max. resistance up to 68Mohm
- Flameproof silicone-coated
- RoHS exemptions(7C-1)

Storage & SSD



• Chip Resistors

AF Series

Sulfur resistance chip resistors

**Feature**

- Superior resistance against sulfur-containing environments
- Highly reliable electrode construction
- FOS test method: ASTM B809-95 105°C, 750 hours

• Chip Resistors

RL Series

Thick film low ohmic chip resistor

**Feature**

- Good current sensing performance
- High power rating for large current detection
- Accurate power control
- Highly reliable electrode construction
- AEC-Q200 compliant

• Chip Resistors

PE Series

Automotive grade metal current sensor, low TCR chip resistor

**Feature**

- Excellent current sensing performance
- High power rating for large current detection
- Accurate power control
- Reduce power consumption
- Low thermal EMF
- AEC-Q200 compliant
- Low TCR

• Chip Resistors

PT Series

Thick film low ohmic, low TCR chip resistor

**Feature**

- Good current sensing performance
- High power rating for large current detection
- Accurate power control
- Highly reliable electrode construction
- AEC-Q200 compliant
- Low TCR

• Chip Resistors

AF Array Series

Sulfur resistance chip resistor, Array

**Feature**

- Integrated discrete chip resistors from 2 and 4 pcs
- Superior resistance against sulfur containing atmosphere
- Highly reliable electrode construction
- FOS test method: ASTM B809-95 105°C, 750 hours

• Chip Resistors

RE Series

Thick film precision grade chip resistor

**Feature**

- Tight tolerance
- Low TCR
- Highly reliable electrode construction
- Compatible with all soldering processes

• MLCC

CC-HC Series

High Capacitance

**Feature**

- High capacitance
- Very Low ESR and ESL
- Low self heating
- High reliability with no polarity
- RoHS-compliant & halogen-free

• MLCC

CC-Class II (≥ 0201) Series

General purpose class II

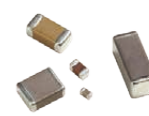
**Feature**

- Class II temperature characteristics
- Suitable for all general purpose
- High reliability with no polarity
- RoHS-compliant & halogen-free

• MLCC

CC-Class I (≥ 0201) Series

General purpose class I

**Feature**

- Class I temperature characteristics
- High stability and no capacitance aging
- Operates in temperature up to 125°C
- High reliability with no polarity
- RoHS-compliant & halogen-free

• MLCC

CN Series

Low Acoustic Noise

**Feature**

- Dielectric improvement for excellent DC bias characteristics
- Effectively restrains acoustic noise
- High reliability with no polarity
- RoHS-compliant & halogen-free

• Wireless

X2Y Series

X2Y

**Feature**

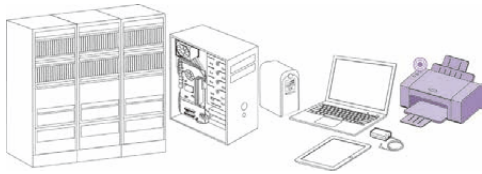
- Excellent performance on EMI suppression or decoupling
- Ultra-low equivalent series inductance (ESL)
- Provides differential & common mode filtering with a single device



Check Products Datasheets
On Our Website

www.yageo.com





Printers



- Chip Resistors

RT Series

Thin film high precision high stability chip resistor



Feature

- High precision & stability
- Low TCR
- Low electrical noise
- Advanced sputtering technology

- Chip Resistors

PE Series

Automotive grade metal current sensor, low TCR chip resistor



Feature

- Excellent current sensing performance
- High power rating for large current detection
- Accurate power control
- Reduce power consumption
- Low thermal EMF
- AEC-Q200 compliant
- Low TCR

- Chip Resistors

SR Series

Surge Chip resistor



Feature

- Excellent pulse loading performance
- High stability & reliability
- Narrow tolerance to 0.5%
- Excellent ESD withstand performance
- AEC-Q200 compliant

- Chip Resistors

YC Series

Thick film array/network chip resistor



Feature

- Integrated discrete chip resistors from 2 to 8pcs
- Greater efficiency in pick & place application
- Low assembly cost
- Reduce PCB space
- Higher component and equipment reliability

- MLCC

CC-HC Series

High Capacitance



Feature

- High capacitance
- Very Low ESR and ESL
- Low self heating
- High reliability with no polarity
- RoHS-compliant & halogen-free

- MLCC

CC-HCV Series

High CV



Feature

- High capacitance and high voltage
- Higher energy density
- High reliability with no polarity
- RoHS-compliant & halogen-free

- MLCC

CC-HV Series

High Voltage



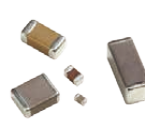
Feature

- Operates at high voltage
- Wide case size available
- High reliability with no polarity
- RoHS-compliant & halogen-free

- MLCC

CC-Class II (≥0201) Series

General purpose class II



Feature

- Class II temperature characteristics
- Suitable for all general purpose
- High reliability with no polarity
- RoHS-compliant & halogen-free

- Wireless

WLAN/BT/ISM Antenna

PCB Antenna



Feature

- Easy installation on wireless card
- Flexible cable length and connector type

- Through Hole

HHV Series

Metal glazed film resistors, high-voltage & high ohmic



Feature

- UL1676 and VDE 0860 certified
- High working voltage up to 7KV
- Max. over load voltage up to 14KV
- Max. resistance up to 68Mohm
- Flameproof silicone-coated
- RoHS exemptions(7C-1)

- Through Hole

FMP Series

Metal film resistors, high power & flameproof, ultra miniature



Feature

- Wide resistance range
- High reliability
- High quality
- Ultra-miniature
- Flameproof silicone-coated
- Fully lead-free compliance with no RoHS exemptions (7C-1)

- Through Hole

MFR Series

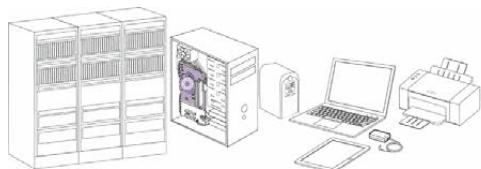
Metal film resistors



Feature

- Wide resistance range
- High reliability
- High quality
- AEC-Q200 compliant
- Fully lead-free compliance with no RoHS exemptions (7C-1)

Motherboards



• Chip Resistors

RT Series

Thin film high precision high stability chip resistor

**Feature**

- High precision & stability
- Low TCR
- Low electrical noise
- Advanced sputtering technology

• Chip Resistors

RL Series

Thick film low ohmic chip resistor

**Feature**

- Good current sensing performance
- High power rating for large current detection
- Accurate power control
- Highly reliable electrode construction
- AEC-Q200 compliant

• Chip Resistors

PT Series

Thick film low ohmic, low TCR chip resistor

**Feature**

- Good current sensing performance
- High power rating for large current detection
- Accurate power control
- Highly reliable electrode construction
- AEC-Q200 compliant
- Low TCR

• Chip Resistors

UE Series

ESD Suppressor

**Feature**

- Extremely low capacitance
- Very low leakage current
- ESD protection for high speed data lines to IEC61000-4-2

• Chip Resistors

RC high power Series

Thick film general purpose chip resistor, double power

**Feature**

- Highly reliable electrode construction
- Compatible for all soldering processes
- Highly stable in auto-placement surface mounting applications
- Barrier layer end termination

• Chip Resistors

RE Series

Thick film precision grade chip resistor

**Feature**

- Tight tolerance
- Low TCR
- Highly reliable electrode construction
- Compatible with all soldering processes

• MLCC

CC-HC Series

High Capacitance

**Feature**

- High capacitance
- Very Low ESR and ESL
- Low self heating
- High reliability with no polarity
- RoHS-compliant & halogen-free

• MLCC

CC-Class II (≥0201) Series

General purpose class II

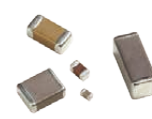
**Feature**

- Class II temperature characteristics
- Suitable for all general purpose
- High reliability with no polarity
- RoHS-compliant & halogen-free

• MLCC

CC-Class I (≥0201) Series

General purpose class I

**Feature**

- Class I temperature characteristics
- High stability and no capacitance aging
- Operates in temperature up to 125°C
- High reliability with no polarity
- RoHS-compliant & halogen-free

• MLCC

CA Series

Array

**Feature**

- Extremely compact
- Time saving mounting process
- Fewer solder joints required
- Simpler PCB design
- High reliability with no polarity
- RoHS-compliant & halogen-free



World's Leading
Passive Component
Service Provider

Check Products Datasheets On Our Website

www.yageo.com

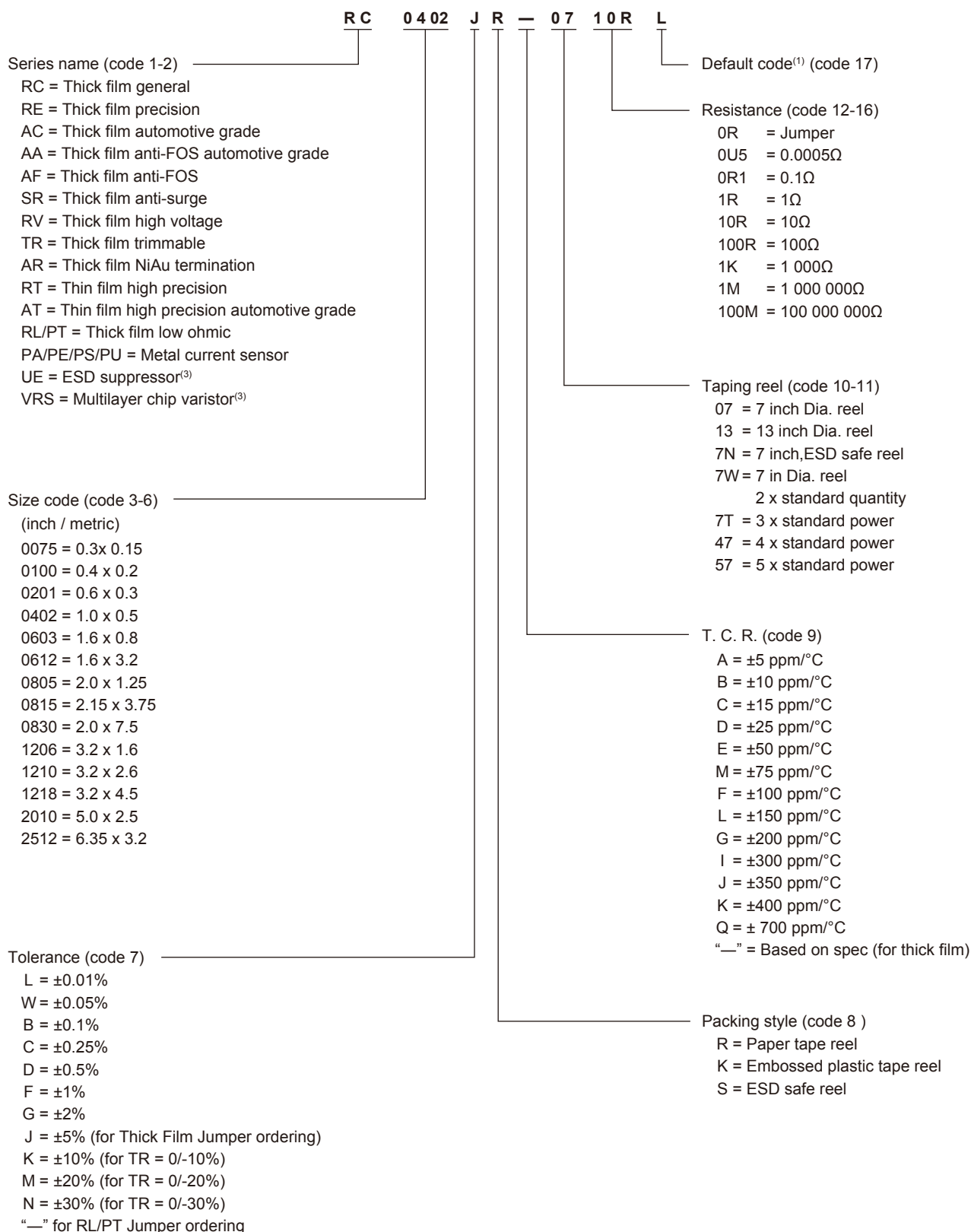


Chip Resistors

Ordering information - Global part number

Global part number - Single resistor ⁽²⁾

Ordering example: RC0402JR-0710RL



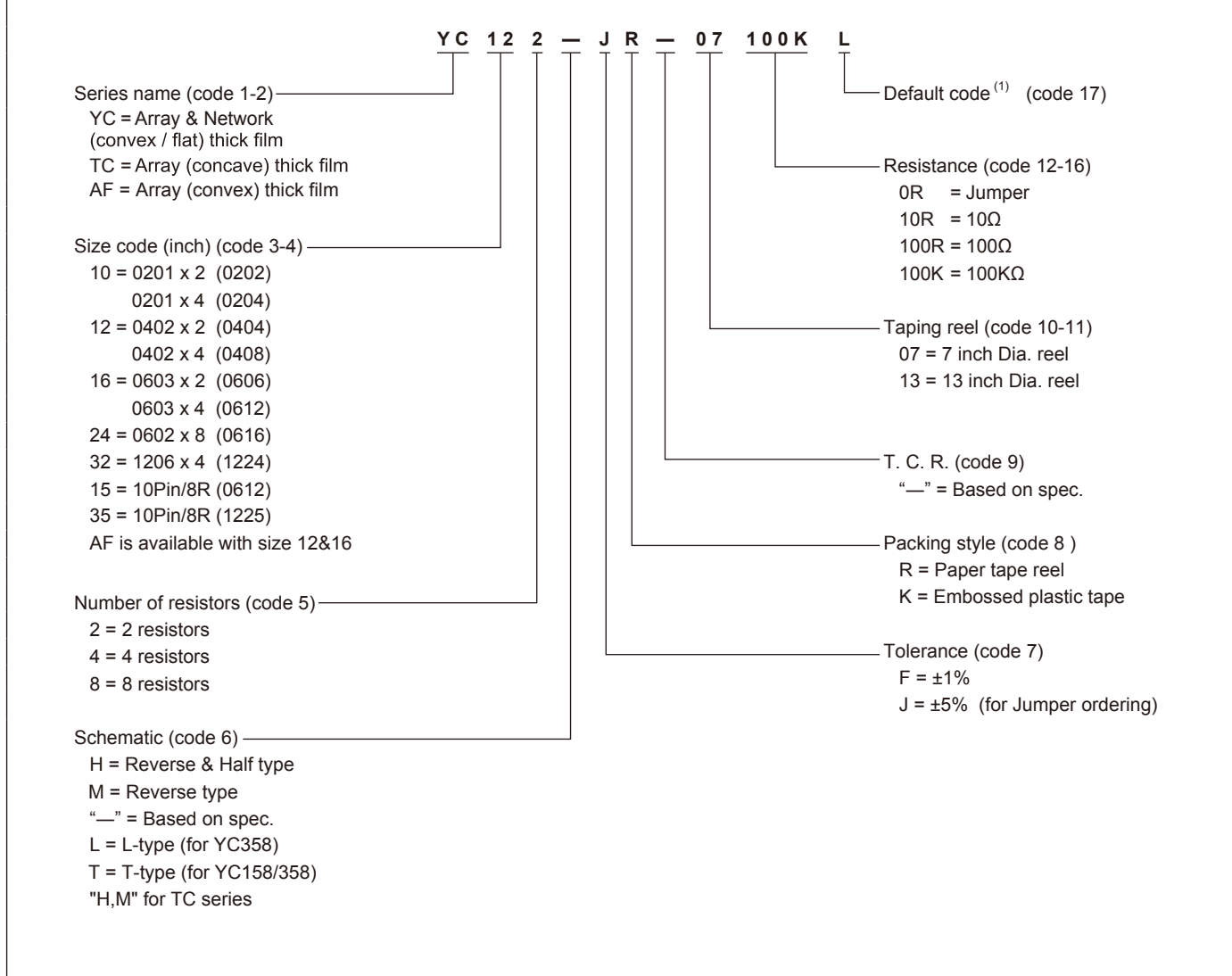
Note: 1. System default code for ordering only. Please refer to series datasheets for different default codes
 2. Global Part Number is the preferred clear text code for ordering Yageo and Phycomp branded products.
 3. Please refer to UE/VRS series datacheets for coding details.

Chip Resistors

Ordering information - Global part number - Arrays

Global part number - Arrays

Ordering example: YC122-JR-07100KL



Note: 1. System default code for ordering only. Please refer to series datasheets for different default codes

MLCC

Ordering information - Global part number

Global part number

Ordering example: CC0201KRX7R8BB102

CC	0201	K	R	X7R	8	B	B	102
<p>Series name (code 1-2)</p> <p>CA = 4 x Capacitors array CC = Multilayer chip capacitors CL = Low inductance capacitors CQ = High frequency capacitors SC = Safety certification capacitors AC = Automotive grade capacitors CS = Soft termination capacitors</p>	<p>Size code (code 3-6)</p> <p>0100 0201 0402 0603 0805 1206 1210 1808 1812 2220 0306 0508 0612</p>	<p>Capacitance tolerance (code 7)</p> <p>A = ±0.05 pF (CQ series only) B = ±0.1 pF C = ±0.25 pF D = ±0.5 pF F = ±1% G = ±2% J = ±5% K = ±10% M = ±20% Z = -20% to +80%</p>	<p>Packing style (code 8)</p> <p>R = Paper / PE tape reel Ø7 inch P = Paper / PE tape reel Ø13 inch K = Embossed plastic tape reel Ø7 inch F = Embossed plastic tape reel Ø13 inch C = Bulk case</p>	<p>TC material (code 9-11)</p> <p>NPO X5R X7R Y5V</p>	<p>Rated voltage (code 12)</p> <p>5 = 6.3 V 6 = 10 V 7 = 16 V 8 = 25 V G = 35 V 9 = 50 V 0 = 100 V A = 200 V Y = 250 V B = 500 V Z = 630 V C = 1 kV D = 2 kV E = 3 kV T = X2 / Y3 for TUV / UL W = X1 / Y2 for TUV / UL U = X1 for UL (X7R, 1812)</p>	<p>Termination (code 13)</p> <p>B = Ni-Barrier</p>	<p>Process code (code 14)</p> <p>N = NP0 B = Class 2 product</p>	<p>Capacitance value (code 15-17)</p> <p>102 = 1 000 pF (2 significant digits+number of zeros; the 3rd digit signifies the multiplying factor, and letter R is decimal point)</p> <p>0 = x 1 1 = x 10¹ 2 = x 10² 3 = x 10³ 4 = x 10⁴ 5 = x 10⁵ 6 = x 10⁶ 7 = x 10⁷ X X R = Special capacitance (X X: capacitance before decimal point)</p>

Wireless

Ordering information - Global part number

Explanation of ordering code - New

Ordering example : **ANT3216A063R2400A**

	ANT	3216	A	063	R	2400	A	
Product Type (code 1) ANT: Antenna BPF: Band-Pass Filter LPF: Low-Pass Filter BLN: Balun BLF: Balun Filter DPX: Diplexer								Factory Control Code / Cable Type (code 7)
(1) Size (mm) - SMD (LTCC) (code 2) 3216: 3.2 x 1.6 mm 2012: 2.0 x 1.2 mm 2520: 2.5 x 2.0 mm								Frequency Band (MHz)(code 6) 2400: 2.4 – 2.5 GHz; 2455: 2.4&5 GHz 1575: GPS; 1516: GPS+Glonass 0433: 433 MHz 0870: 868 MHz 0918: 900/1800 MHz WQUD: 850/900/1800/1900 MHz WPEN: 850/900/1800/1900/2100 MHz
(2) Connector - Cable length (mm) Stand-alone (code 2) Ex: X100 – IPEX connector, 100 mm cable length X: IPEX, M: MMCX, S: SMA, Z: Stripped 100: 100 mm cable length								Packing Style (code 5) R: Tape & Reel T: Tray B: Bulk
Type (code 3) L, F, A: Chip antenna / Filter / Balun B: Bulk antenna P: PCB X: FPCB S: Metal E: External J: Integrated antenna								Serial No. (code 4)

Through Hole

Ordering information - Global part number

MFR	-12	F	T	F	52-	100R
Code 1 - 3 Series Name See Index	Code 4 - 6 Power Rating -05 = \varnothing d0.5mm -06 = \varnothing d0.6mm -07 = \varnothing d0.7mm -08 = \varnothing d0.8mm -10 = \varnothing d1.0mm -14 = \varnothing d1.4mm -12 = 1/6W -25 = 1/4W 25S = 1/4WS -50 = 1/2W 50S = 1/2WS 100 = 1W 1WS = 1WS 200 = 2W 2WS = 2WS 204 = 0.4W 207 = 0.6W 300 = 3W 3WS = 3WS 3WM = 3WM 400 = 4W 500 = 5W 5WS = 5WS 5SS = 5WSS 700 = 7W 7WS = 7WS 10A = 10W 20A = 20W 30A = 30W 40A = 40W 50A = 50W 10S = 10WS 15A = 15W 25A = 25W 10B = 100W 25B = 250W	Code 7 Tolerance P = $\pm 0.02\%$ A = $\pm 0.05\%$ B = $\pm 0.1\%$ C = $\pm 0.25\%$ D = $\pm 0.5\%$ F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$ - = Base on Spec.	Code 8 Packing Style T = Tape/Box R = Tape/Reel B = Bulk	Code 9 Temperature Coefficient of Resistance - = Base on Spec. A = $\pm 5\text{ ppm}/^{\circ}\text{C}$ B = $\pm 10\text{ ppm}/^{\circ}\text{C}$ C = $\pm 15\text{ ppm}/^{\circ}\text{C}$ S = $\pm 20\text{ ppm}/^{\circ}\text{C}$ D = $\pm 25\text{ ppm}/^{\circ}\text{C}$ E = $\pm 50\text{ ppm}/^{\circ}\text{C}$ F = $\pm 100\text{ ppm}/^{\circ}\text{C}$ G = $\pm 200\text{ ppm}/^{\circ}\text{C}$ H = $\pm 250\text{ ppm}/^{\circ}\text{C}$ I = $\pm 300\text{ ppm}/^{\circ}\text{C}$ J = $\pm 350\text{ ppm}/^{\circ}\text{C}$	Code 10 - 12 Forming Type 26- = 26mm 52- = 52.4mm 73- = 73mm 81- = 81mm 91- = 91mm F = F Type FK = FK Type FKK = FKK Type FFK = F-form Kink M = M-Type Forming M-form/flat MT = MT Type Forming MR = MR Type AV = AVIsert PN = PANAsert	Code 13 - 17 Resistance Value 0R1 = 0.1 100R = 100 10K = 10,000 10M = 10,000,000

EXCEPTION:

• Cement series:

<Code 8>: Special packing style code

B: Bulk with wirewound or metal oxide sub-assembly for resistance value

W: Bulk with ceramic based wirewound sub-assembly for resistance value

M: Bulk with metal oxide sub-assembly for resistance value

F: Bulk with Fiberglass based wirewound sub-assembly for resistance value

<Code 10-12>: Without forming code

Example: **SQP500JB-10R**

• JPW series:

<Code 13-17>: without resistance value code

Example: **JPW-06-T-52-**

YAGEO - A GLOBAL COMPANY

HQ

Taipei, Taiwan
Tel. +886 2 6629 9999
Fax. +886 2 6628 8886

China and ASIA

Suzhou, China
Tel. +86 512 6825 5568
Fax. +86 512 6825 5386

Shanghai, China
Tel. +86 21 64858697

Dongguan, China
Tel. +86 769 8772 0275
Fax. +86 769 8791 0053

Tokyo, Japan
Tel. +81 3 6809 3972
Fax. +81 3 6809 3982

Seongnam, Korea
Tel. +82 31 712 4797
Fax. +82 31 712 5866

Singapore
Tel. +65 6244 7800
Fax. +65 6244 4943

Kuala Lumpur, Malaysia
Tel. +60 3 8063 8864
Fax. +60 3 8063 7376

Penang, Malaysia
Tel. +60 4 3973049
Fax. +60 4 3973050

EUROPE

Munich, Germany
Tel. +49 8990 7784 380
Fax. +49 8990 7784 379

Milan, Italy
Tel. +39 02 6129 1017
Fax. +39 02 6601 7490

Roermond, Benelux
Tel. +31 475 385 555
Fax. +31 475 385 589

Szombathely, Hungary
Tel. +36 94 517 702
Fax. +36 94 517 701

Moscow, Russian Federation
Tel. +7 965 408 18 11
Fax. +7 498 610 07 07

NORTH AMERICA

San Jose, U.S.A.
Tel. +1 408 240 6200
Fax. +1 408 240 6201

Mexico
Tel. +52 33 31330631
Fax. +1 408 240 6201

For a complete listing of all Yageo sales offices, distributors, and representatives, please visit "contact us" at www.yageo.com

© YAGEO Corporation
All rights are reserved. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner.
The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.
No liability will be accepted by the publisher for any consequence of its use.
Publication thereof does not convey nor imply any license under patent or other industrial or intellectual property rights.