

# MULTILAYER FERRITE CHIP BEAD

ACML-0603



RoHS/RoHS II Compliant



1.00 x 0.80 x 0.80mm

## FEATURES:

- Magnetic shielded structure designed to minimize crosstalk
- Multilayer monolithic structure yields high reliability
- Substantial EMI suppression from dozens of MHz to hundreds of MHz
- Wide range of impedance values available

## APPLICATIONS:

- Noise suppression in digital equipment such as computer and its peripheral devices, DVD player, digital camera, TV and communication equipments.

## STANDARD SPECIFICATIONS:

### PARAMETERS

|                        |                 |
|------------------------|-----------------|
| ABRACON P/N:           | ACML-0603       |
| Operating temperature: | -55°C to +125°C |
| Storage temperature:   | -55°C to +125°C |

| Part Number<br>ACML-0603-<br>Impedance Code | Impedance         | Frequency | DC<br>resistance | Rated<br>Current |
|---------------------------------------------|-------------------|-----------|------------------|------------------|
| Units                                       | $\Omega \pm 25\%$ | MHz       | $\Omega$ max     | mA max           |
| Symbol                                      | Z                 | F         | R <sub>DC</sub>  | I <sub>R</sub>   |
| ACML-0603-060                               | 6                 | 100       | 0.05             | 1000             |
| ACML-0603-110                               | 11                | 100       | 0.05             | 1000             |
| ACML-0603-190                               | 19                | 100       | 0.05             | 1000             |
| ACML-0603-220                               | 22                | 100       | 0.20             | 800              |
| ACML-0603-310                               | 31                | 100       | 0.05             | 500              |
| ACML-0603-500                               | 50                | 100       | 0.08             | 500              |
| ACML-0603-600                               | 60                | 100       | 0.30             | 600              |
| ACML-0603-800                               | 80                | 100       | 0.16             | 200              |
| ACML-0603-101                               | 100               | 100       | 0.20             | 200              |
| ACML-0603-121                               | 120               | 100       | 0.40             | 600              |
| ACML-0603-181                               | 180               | 100       | 0.30             | 200              |
| ACML-0603-221                               | 220               | 100       | 0.45             | 500              |
| ACML-0603-301                               | 300               | 100       | 0.35             | 200              |
| ACML-0603-331                               | 330               | 100       | 0.50             | 500              |
| ACML-0603-471                               | 470               | 100       | 0.55             | 400              |
| ACML-0603-501                               | 500               | 100       | 0.45             | 200              |
| ACML-0603-601                               | 600               | 100       | 0.45             | 200              |
| ACML-0603-102                               | 1000              | 100       | 0.80             | 200              |
| ACML-0603-152                               | 1500              | 100       | 0.80             | 200              |
| ACML-0603-202                               | 2000              | 100       | 1.00             | 200              |

## Test Conditions and Equipments

**I<sub>R</sub>:** Rated current applied when the chip surface temperature rise just 20°C against chip surface temperature.

**Electric power supplier, Electric current meter, Thermometer.**

**Z:** Impedance Analyzer HP4291 or equivalent, 50mV.

**DCR:** LCR Meter HP4263A or equivalent



# MULTILAYER FERRITE CHIP BEAD

ACML-0603

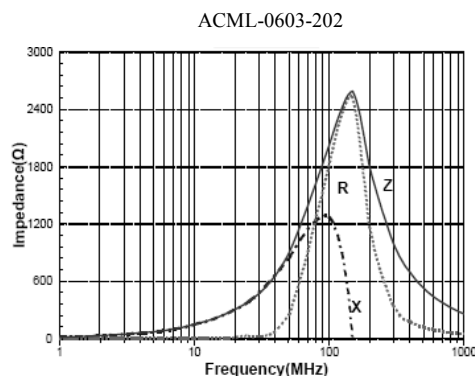
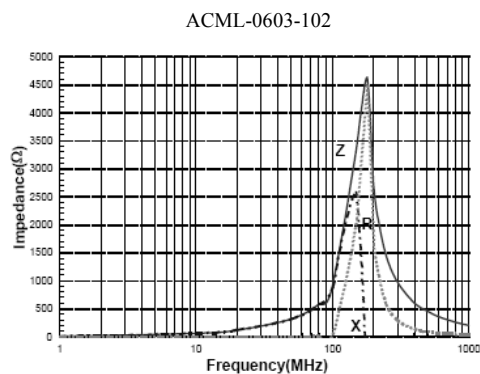
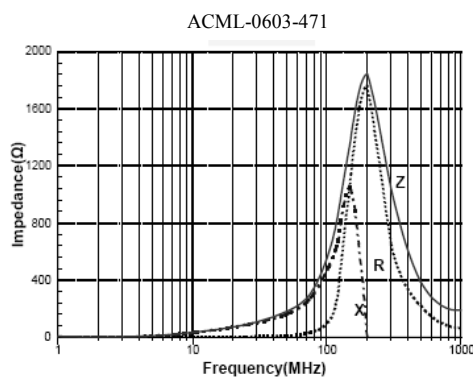
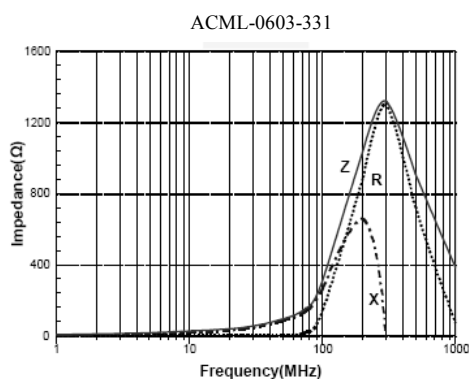
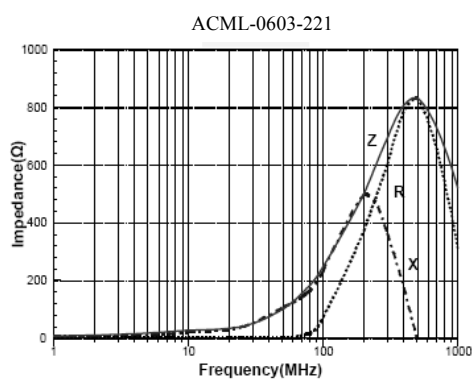
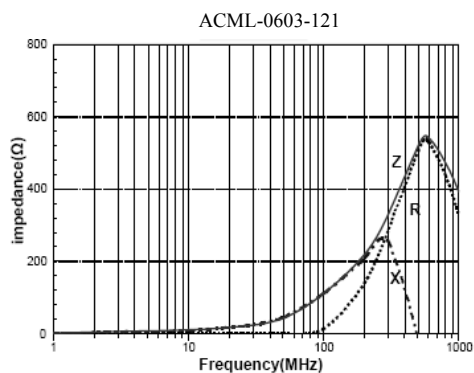
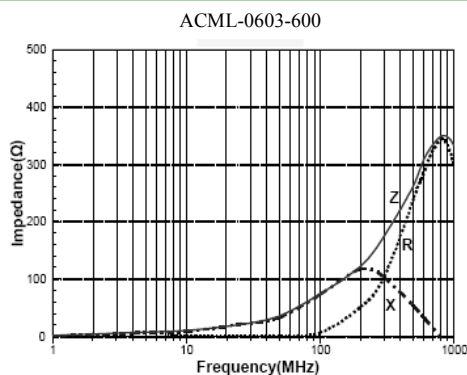
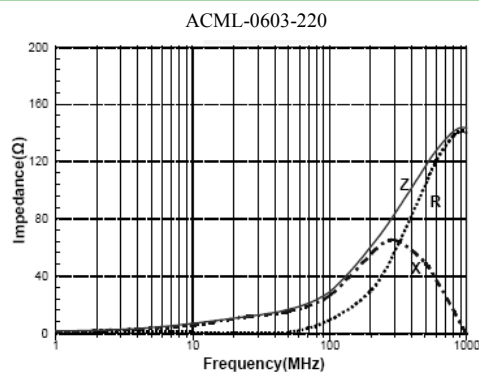


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1.00 x 0.80 x 0.80mm

## FREQUENCY CHARACTERISTICS



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## PART NUMBER IDENTIFICATION

ACML-0603-  -

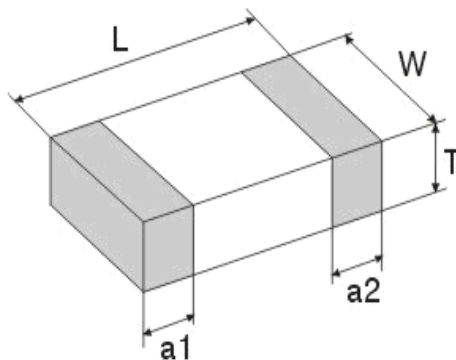
### Impedance Code

Please refer to the  
Electrical Specification  
table

### Packaging

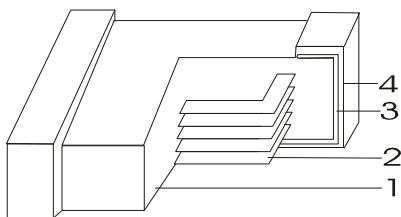
T: Tape and Reel  
(4kpcs / reel)

## OUTLINE DIMENSION:



| L         | W         | T         | a1, a2    |
|-----------|-----------|-----------|-----------|
| 1.60±0.15 | 0.80±0.15 | 0.80±0.15 | 0.30±0.20 |

## Materials



|   | Part Name          | Material |
|---|--------------------|----------|
| 1 | Base Material      | Ferrite  |
| 2 | Internal Conductor | Ag       |
| 3 | Terminal Electrode | Ag       |
| 4 | Terminal Electrode | Ni-Sn    |

Dimension: mm

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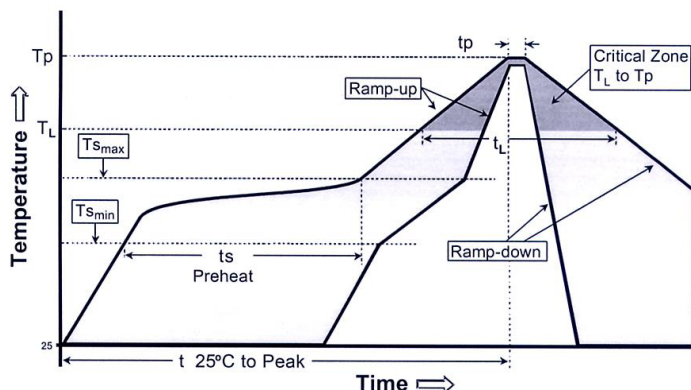


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## REFLOW PROFILE:

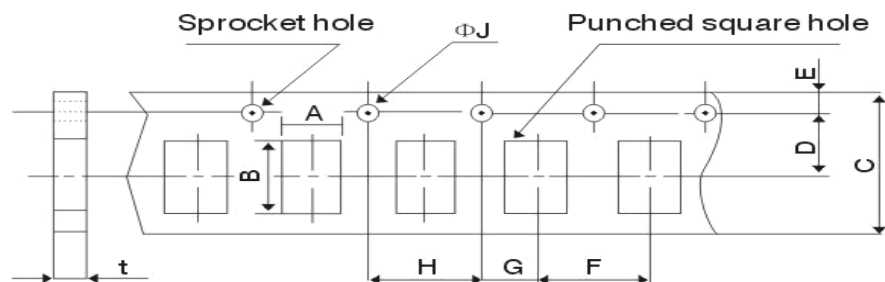


| Profile Feature                                                                          | Lead-Free Assembly                 |
|------------------------------------------------------------------------------------------|------------------------------------|
| Average Ramp-Up Rate (Tsm to Tp)                                                         | 3°C/second max.                    |
| Preheat<br>- Temperature Min (Tsm)<br>- Temperature Max (Tsm)<br>- Time (tsmin to tsmax) | 150 °C<br>200 °C<br>60-180 seconds |
| Time maintained above:<br>- Temperature (Tl)<br>- Time (tl)                              | 217 °C<br>60-150 seconds           |
| Peak/Classification Temperature (Tp)<br>Peak/Classification Time (tp)                    | 260 °C<br>3-4 seconds              |
| Time within 5 °C of actual Peak Temperature (tp)                                         | 20-40 seconds                      |
| Ramp-Down Rate                                                                           | 6°C/second max.                    |
| Time 25 °C to Peak Temperature                                                           | 8 minutes max.                     |

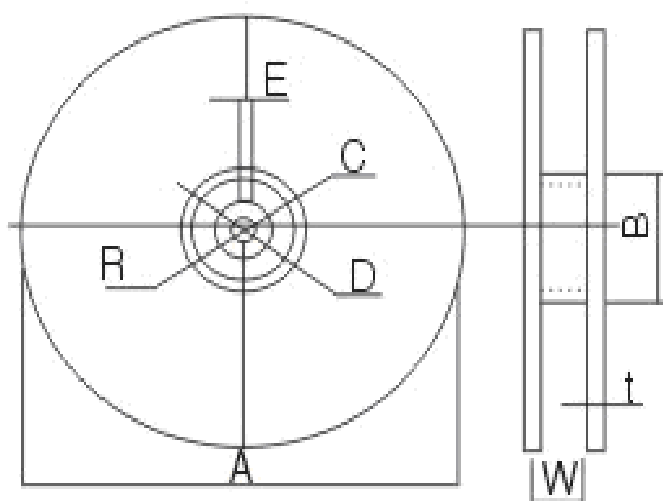
## TAPE & REEL:

### Packing

T= tape and reel (4,000 pcs/reel)



|        |            |
|--------|------------|
| A      | 1.05±0.15  |
| B      | 1.9±0.15   |
| C      | 8.0±0.3    |
| D      | 3.5±0.05   |
| E      | 1.75±0.1   |
| F      | 4.0±0.1    |
| G      | 2.0±0.05   |
| H      | 4.0±0.1    |
| ΦJ     | 1.5+0.1/-0 |
| t(max) | 1.0±0.05   |



|   |           |
|---|-----------|
| A | 178±2     |
| B | 60±2      |
| C | 13.0±0.5  |
| D | 21.0±0.8  |
| E | 2.0±0.5   |
| W | 10.0±1.15 |
| t | 1.2±0.2   |
| R | 1.0±0.25  |

Dimension: mm

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