



# Automotive Signal Common Mode Chokes

ACMS-4523E

Request Samples



Check Inventory



4.5 x 3.2 x 2.3 mm

RoHS/RoHS II Compliant

MSL Level = 1

## Features

- AEC-Q200 compliant, Grade 1
- PPAP ready and supported
- Manufactured in TS/IATF 16949 production lines
- Excellent impedance characteristics

## Applications

- Differential signal line common mode noise suppression.
- Multimedia devices
- Automotive applications such as ADAS, Infotainment, Sensing, TCU
- Automotive Ethernet

## Electrical Specifications

| Part Number     | Inductance ( $\mu\text{H}$ )<br>(+50%/-25%) | DCR<br>( $\text{m}\Omega$ ) | Rated Current<br>(A) | Rated Voltage<br>(Vdc) | Insulation<br>Resistance<br>( $\text{M}\Omega$ ) |
|-----------------|---|-----------------------------|----------------------|------------------------|--|
|                 |   | Max                         | Max                  | Max                    | Min  |
| ACMS-Q4523E-201 | 200   | 4500                        | 0.11                 | 50                     | 10   |

**Rated Current is based on an Irms temperature rise of 20°C**

**Inductance Test Conditions: 0.1MHz/0.1V**

**ACMS-Q4523E is AEC-Q200 Automotive certified**

**Operating Temperature: -40°C to +125°C (Including self-heating)**

**Storage Temperature (on PCB): -40°C to +125°C**

**Storage (in original packaging): <40°C, <70% RH**



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**REVISION Initial Release**  
**Revised: 3/30/2022**

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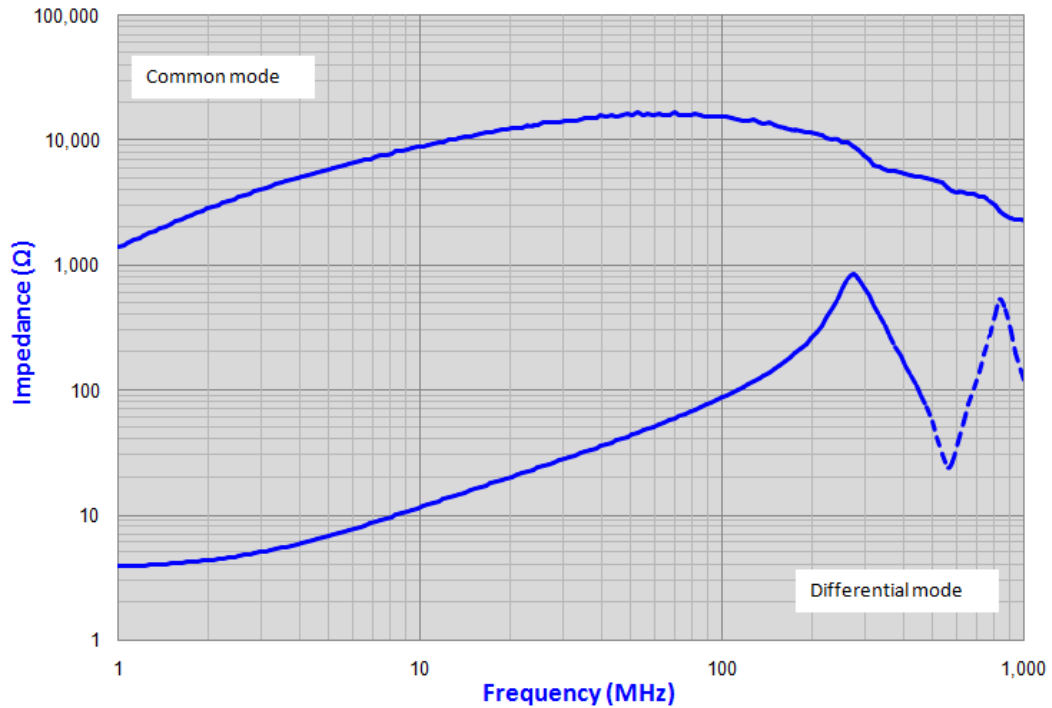


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## Electrical Specifications





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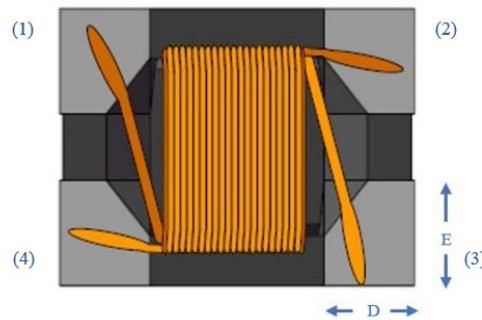
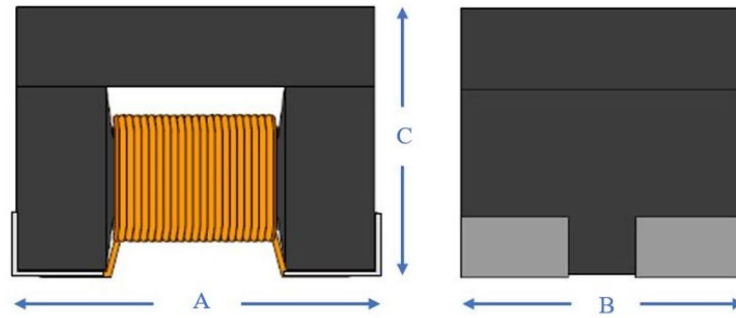


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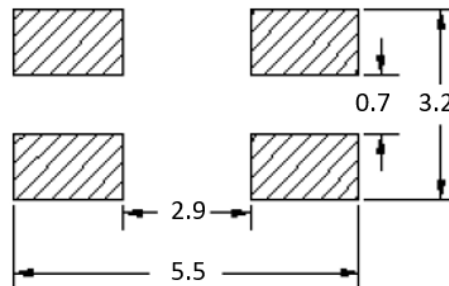


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## Mechanical Specifications



| A        | B        | C        | D        | E         |
|----------|----------|----------|----------|-----------|
| 4.5 ±0.2 | 3.2 ±0.2 | 2.3 ±0.2 | 1.0 ±0.1 | 1.25 ±0.1 |



## Recommended Layout

Dimensions: mm



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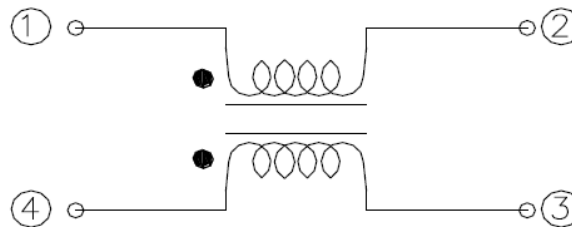


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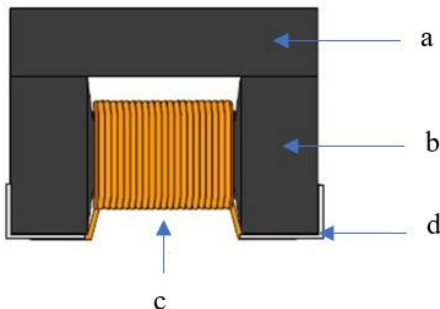


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**RoHS/RoHS II Compliant**  
 MSL Level = 1

## Schematic

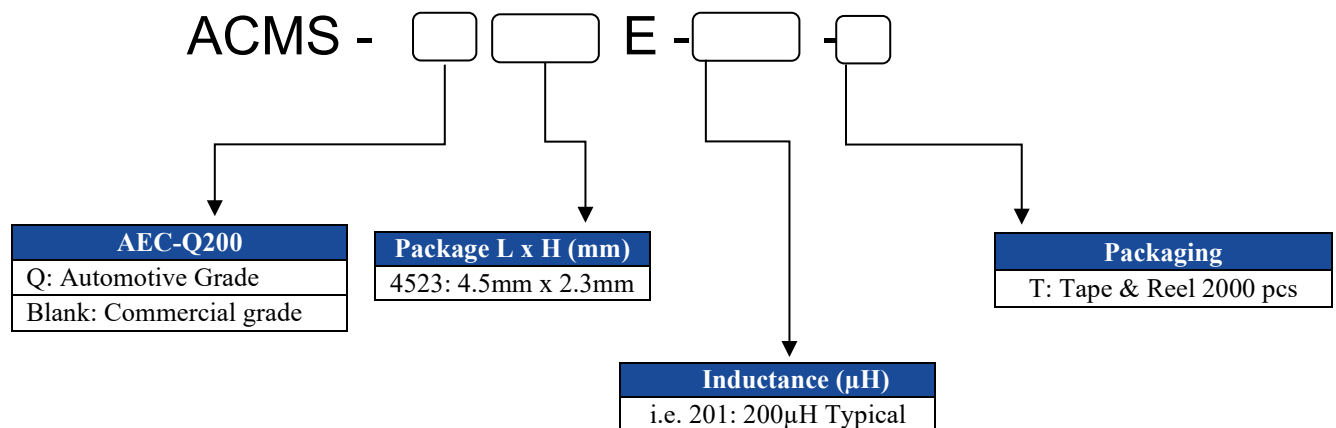


## Materials



|   | Description | Specification        |
|---|-------------|----------------------|
| a | Upper Plate | Ni-Zn Ferrite        |
| b | Core        | Ni-Zn Ferrite        |
| c | Wire        | Enameled copper wire |
| d | Electrode   | Ag/Ni/Sn             |

## Part Identification





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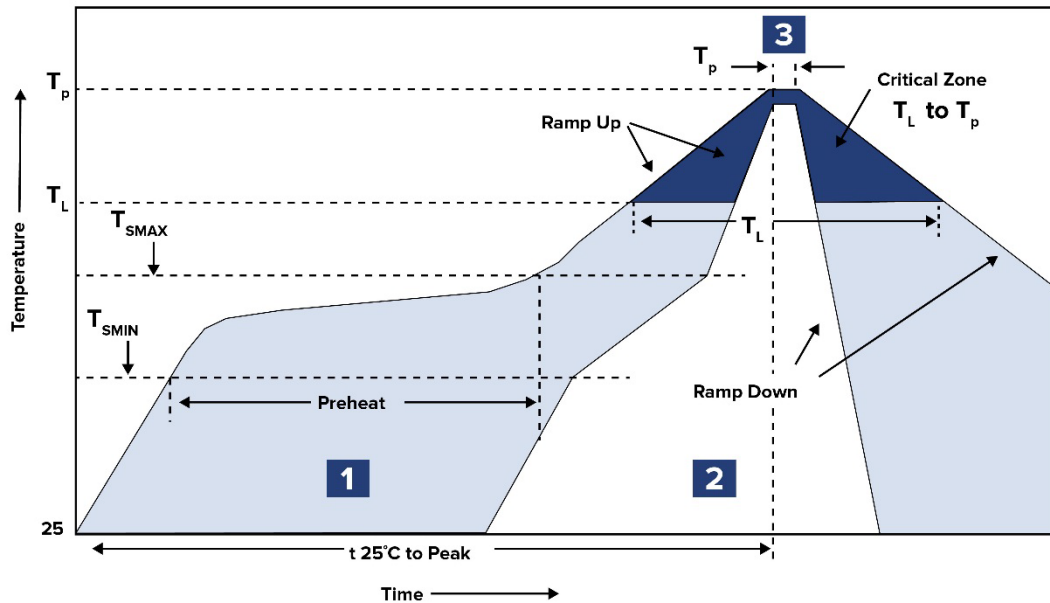


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## Reflow Profile



| Zone | Description | Temperature                               | Times         |
|------|-------------|---|---------------|
| 1    | Preheat     | $T_{SMIN} \sim T_{SMAX}$<br>150°C ~ 200°C | 60 ~ 120 sec. |
| 2    | Reflow      | $T_L$<br>220°C                            | 60 ~ 90 sec.  |
| 3    | Peak heat   | $T_P$<br>260°C Max                        | 10 sec. MAX   |



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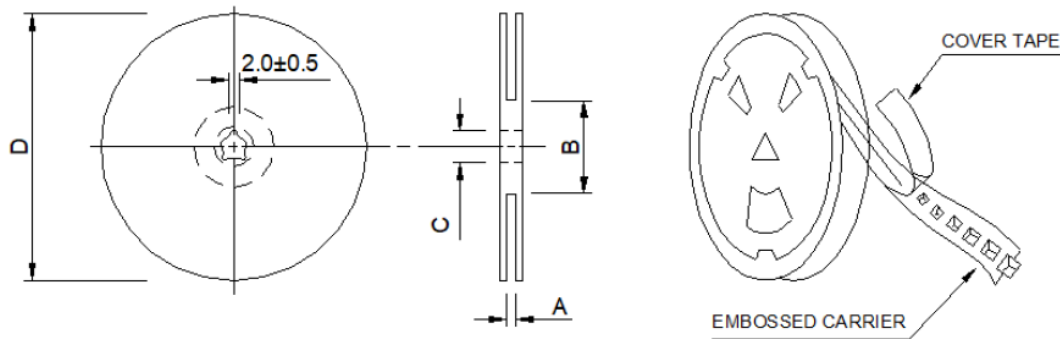
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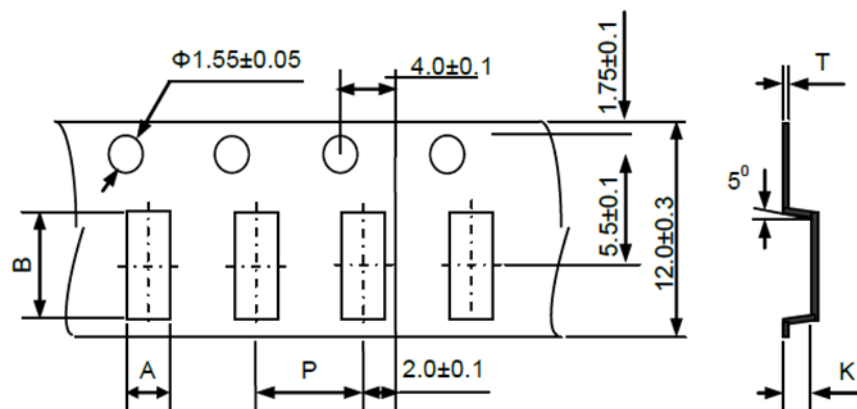
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## Packaging

**Tape & Reel: 2000pcs/reel**



| Series      | A         | B          | C         | D   |
|-------------|-----------|------------|-----------|-----|
| ACMS-Q4523E | 13.0 ±0.5 | 100.0 ±2.0 | 13.0 ±0.5 | 330 |



| A             | B             | P            | K             | T             |
|---------------|---------------|--------------|---------------|---------------|
| 3.51<br>±0.10 | 4.82<br>±0.10 | 8.0<br>±0.10 | 3.05<br>±0.10 | 0.35<br>±0.05 |

Dimensions: mm

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