

Power Inductor APSA Series

**Automotive
AEC-Q200**

RoHS Compliant
Halogen Free
REACH Compliant



Part Numbering

| A | PSA | 00 | 131358 | 100 | M | 00 |
|-------|-------------|--------------|----------------------|-----------------|-----------|---------------|
| Grade | Series Name | Control Code | Dimensions Code (mm) | Inductance (uH) | Tolerance | Internal Code |
| | | | 060630 6.3x6.3x3.0 | 6R0 6.0 | M ±20% | |
| | | | 070748 7.3x7.3x4.8 | 100 10 | T ±30% | |
| | | | 070758 7.3x7.3x5.8 | 101 100 | | |
| | | | 131358 12.5x12.5x5.8 | | | |

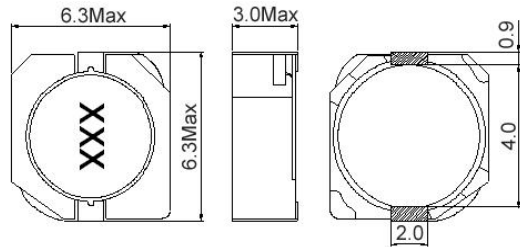
This specification applies to Power Inductors for Automotive Electronics based on AEC-Q200 except for Power train and Safety.

Power Inductor APSA Series

**Automotive
AEC-Q200**

APSA00060630 Type

■ Dimensions



unit:mm

■ Recommended Land Pattern



unit:mm

■ Electrical Characteristics

| Part No. | Inductance (uH) | Test Freq. | SRF (MHz)Min | RDC (mΩ)Max. | Isat (A) | Irms (A) | Tolerance (±%) | Marking |
|--------------------|-----------------|--------------|--------------|--------------|----------|----------|----------------|---------|
| APSA000606306R8□00 | 6.8 | 100 kHz, 1 V | 35 | 42 | 1.50 | 2.20 | 20 | 6R8 |
| APSA00060630100□00 | 10 | 100 kHz, 1 V | 20 | 63.8 | 1.30 | 1.80 | 20 | 100 |
| APSA00060630150□00 | 15 | 100 kHz, 1 V | 15 | 89.4 | 1.00 | 1.40 | 20 | 150 |
| APSA00060630220□00 | 22 | 100 kHz, 1 V | 10 | 124 | 0.77 | 1.30 | 20 | 220 |
| APSA00060630330□00 | 33 | 100 kHz, 1 V | 7 | 177 | 0.69 | 1.10 | 20 | 330 |
| APSA00060630470□00 | 47 | 100 kHz, 1 V | 5 | 252 | 0.59 | 0.92 | 20 | 470 |
| APSA00060630680□00 | 68 | 100 kHz, 1 V | 4 | 348 | 0.50 | 0.78 | 20 | 680 |
| APSA00060630101□00 | 100 | 100 kHz, 1 V | 4 | 516 | 0.42 | 0.64 | 20 | 101 |
| APSA00060630151□00 | 150 | 100 kHz, 1 V | 4 | 780 | 0.34 | 0.50 | 20 | 151 |
| APSA00060630221□00 | 220 | 100 kHz, 1 V | 3.2 | 1170 | 0.26 | 0.38 | 20 | 221 |

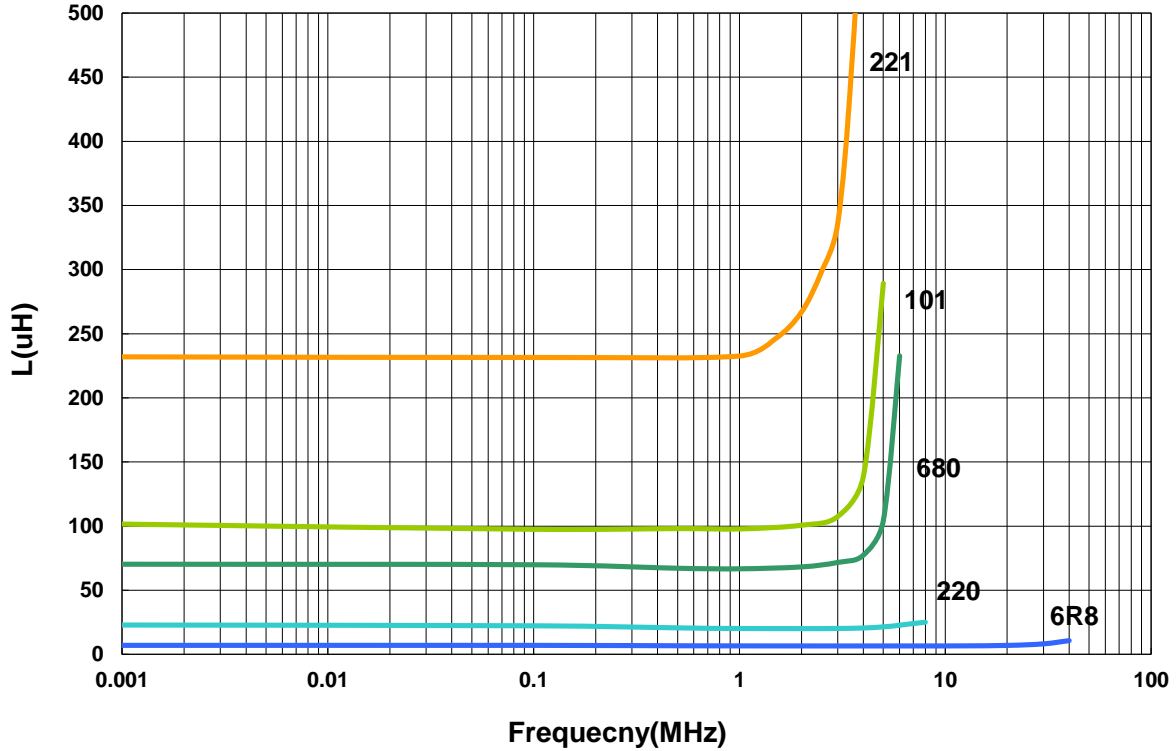
Note: When ordering, please specify tolerance code. Tolerance: M=±20% / T=±30%

1. Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
2. Isat for Inductance drop 30% from its value without current.
3. I rms for a 25°C temprature rise from 25°C ambient.
4. Measure Equipment:
L: WK6500B+WK6565
RDC: Chroma 16502
Isat: WK3260B+WK3265B

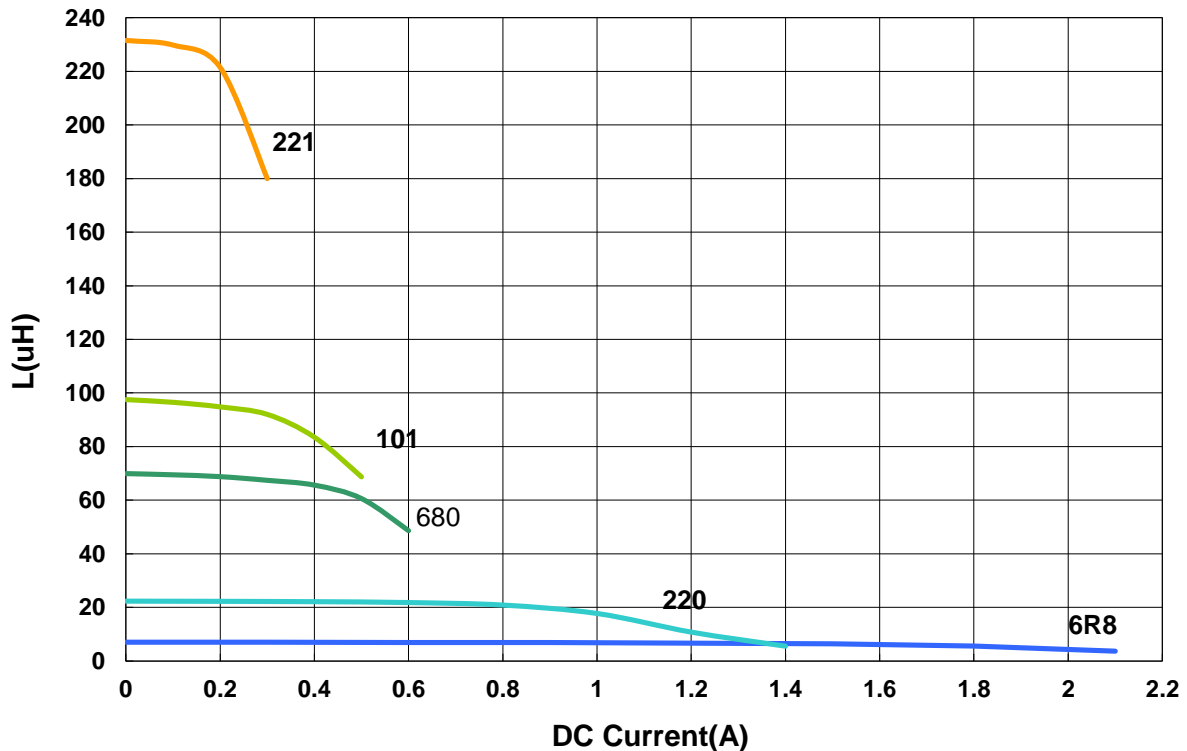
APSA00060630 Type

■ Characteristics Graph

Inductance vs. Frequency Charateristics



Inductance vs. DC Current

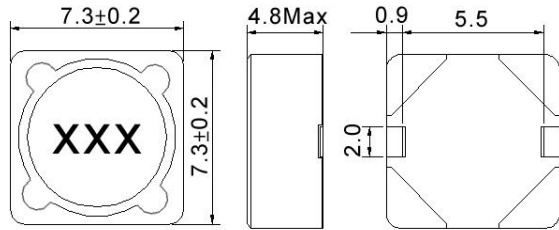


Power Inductor APSA Series

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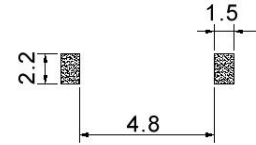
APSA00070748 Type

Dimensions



unit:mm

Recommended Land Pattern



unit:mm

Electrical Characteristics

| Part No. | Inductance (uH) | Test Freq. | SRF (MHz)Min | RDC (mΩ)Max. | Isat (A) | Irms (A) | Tolerance (±%) | Marking |
|--------------------|-----------------|--------------|--------------|--------------|----------|----------|----------------|---------|
| APSA000707483R3□00 | 3.3 | 100 kHz, 1 V | 90 | 24 | 2.50 | 2.30 | 20 | 3R3 |
| APSA000707484R7□00 | 4.7 | 100 kHz, 1 V | 65 | 36 | 2.00 | 2.10 | 20 | 4R7 |
| APSA000707486R8□00 | 6.8 | 100 kHz, 1 V | 24 | 40 | 1.70 | 1.74 | 20 | 6R8 |
| APSA00070748100□00 | 10 | 100 kHz, 1 V | 17 | 43.2 | 1.30 | 1.78 | 20 | 100 |
| APSA00070748150□00 | 15 | 100 kHz, 1 V | 14 | 62.4 | 1.10 | 1.53 | 20 | 150 |
| APSA00070748220□00 | 22 | 100 kHz, 1 V | 11 | 73.2 | 0.90 | 1.34 | 20 | 220 |
| APSA00070748330□00 | 33 | 100 kHz, 1 V | 10 | 115 | 0.82 | 1.09 | 20 | 330 |
| APSA00070748470□00 | 47 | 100 kHz, 1 V | 8.0 | 150 | 0.75 | 0.92 | 20 | 470 |
| APSA00070748680□00 | 68 | 100 kHz, 1 V | 7.0 | 210 | 0.60 | 0.77 | 20 | 680 |
| APSA00070748101□00 | 100 | 100 kHz, 1 V | 6.0 | 300 | 0.50 | 0.65 | 20 | 101 |
| APSA00070748151□00 | 150 | 100 kHz, 1 V | 4.0 | 408 | 0.40 | 0.55 | 20 | 151 |
| APSA00070748221□00 | 220 | 100 kHz, 1 V | 3.5 | 624 | 0.33 | 0.45 | 20 | 221 |
| APSA00070748331□00 | 330 | 100 kHz, 1 V | 3.0 | 880 | 0.25 | 0.37 | 20 | 331 |
| APSA00070748471□00 | 470 | 100 kHz, 1 V | 2.5 | 1260 | 0.22 | 0.31 | 20 | 471 |
| APSA00070748681□00 | 680 | 100 kHz, 1 V | 2.1 | 1770 | 0.20 | 0.27 | 20 | 681 |
| APSA00070748102□00 | 1000 | 100 kHz, 1 V | 1.1 | 2730 | 0.14 | 0.25 | 20 | 102 |

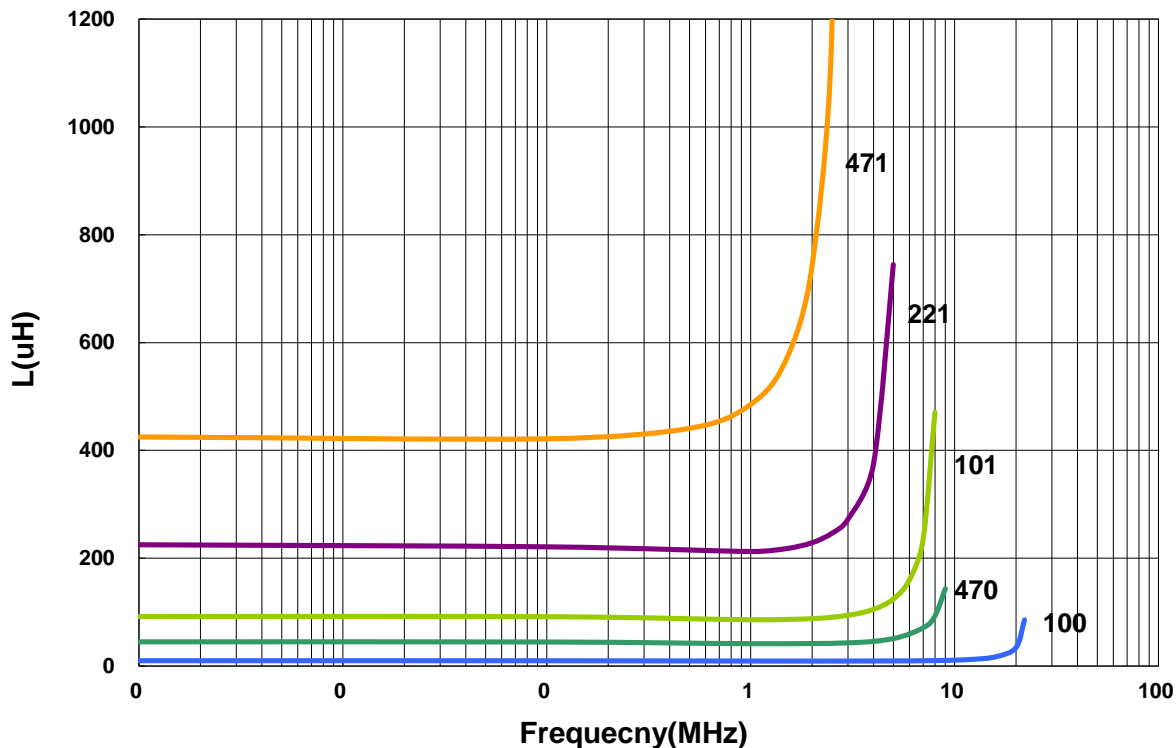
Note: When ordering, please specify tolerance code. Tolerance: M=±20% / T=±30%

- Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
- Isat for Inductance drop 10% from its value without current.
- Irms for a 20°C temprature rise from 25°C ambient.
- Measure Equipment:
L: WK6500B+WK6565
RDC: Chroma 16502
Isat: WK3260B+WK3265B

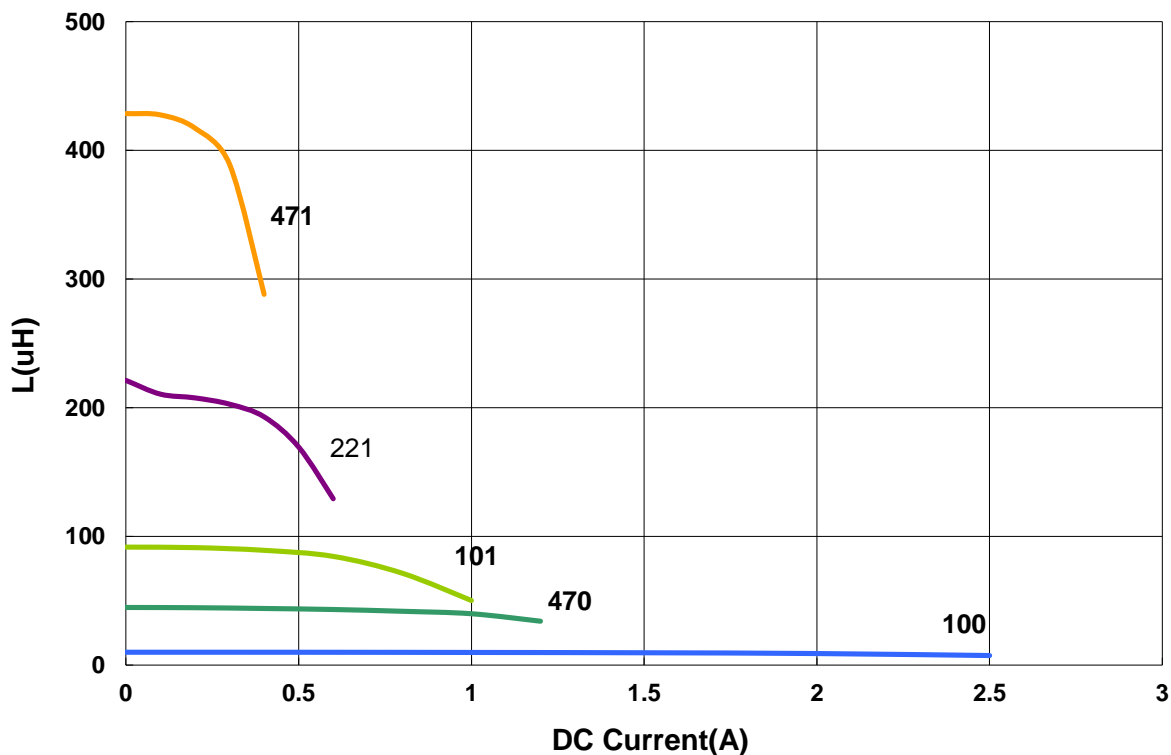
APSA00070748 Type

■ Characteristics Graph

Inductance vs. Frequency Characteristics



Inductance vs. DC Current

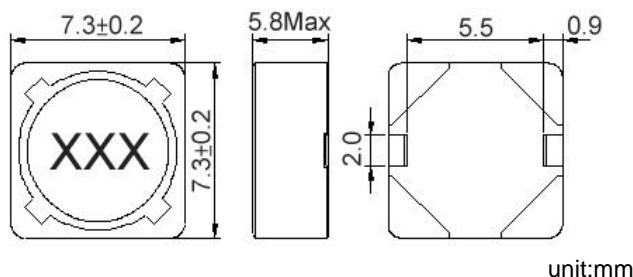


Power Inductor APSA Series

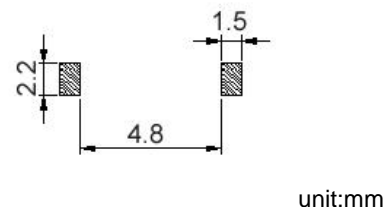
**Automotive
AEC-Q200**

APSA00070758 Type

Dimensions



Recommended Land Pattern



Electrical Characteristics

| Part No. | Inductance (uH) | Test Freq. | SRF (MHz)Min | RDC (mΩ)Max. | Isat (A) | Irms (A) | Tolerance (±%) | Marking |
|--------------------|-----------------|--------------|--------------|--------------|----------|----------|----------------|---------|
| APSA000707581R5□00 | 1.5 | 100 kHz, 1 V | 75 | 20 | 6.2 | 4.0 | 30 | 1R5 |
| APSA000707582R2□00 | 2.2 | 100 kHz, 1 V | 55 | 23 | 5.3 | 3.5 | 30 | 2R2 |
| APSA000707583R3□00 | 3.3 | 100 kHz, 1 V | 48 | 31 | 4.3 | 3.3 | 30 | 3R3 |
| APSA000707584R7□00 | 4.7 | 100 kHz, 1 V | 38 | 36 | 3.6 | 3.1 | 30 | 4R7 |
| APSA000707586R8□00 | 6.8 | 100 kHz, 1 V | 35 | 44 | 3.0 | 2.8 | 30 | 6R8 |
| APSA00070758100□00 | 10 | 100 kHz, 1 V | 22 | 46 | 2.6 | 2.5 | 20 | 100 |
| APSA00070758150□00 | 15 | 100 kHz, 1 V | 14 | 60.9 | 2.1 | 2.2 | 20 | 150 |
| APSA00070758220□00 | 22 | 100 kHz, 1 V | 8 | 77 | 1.7 | 2.0 | 20 | 220 |

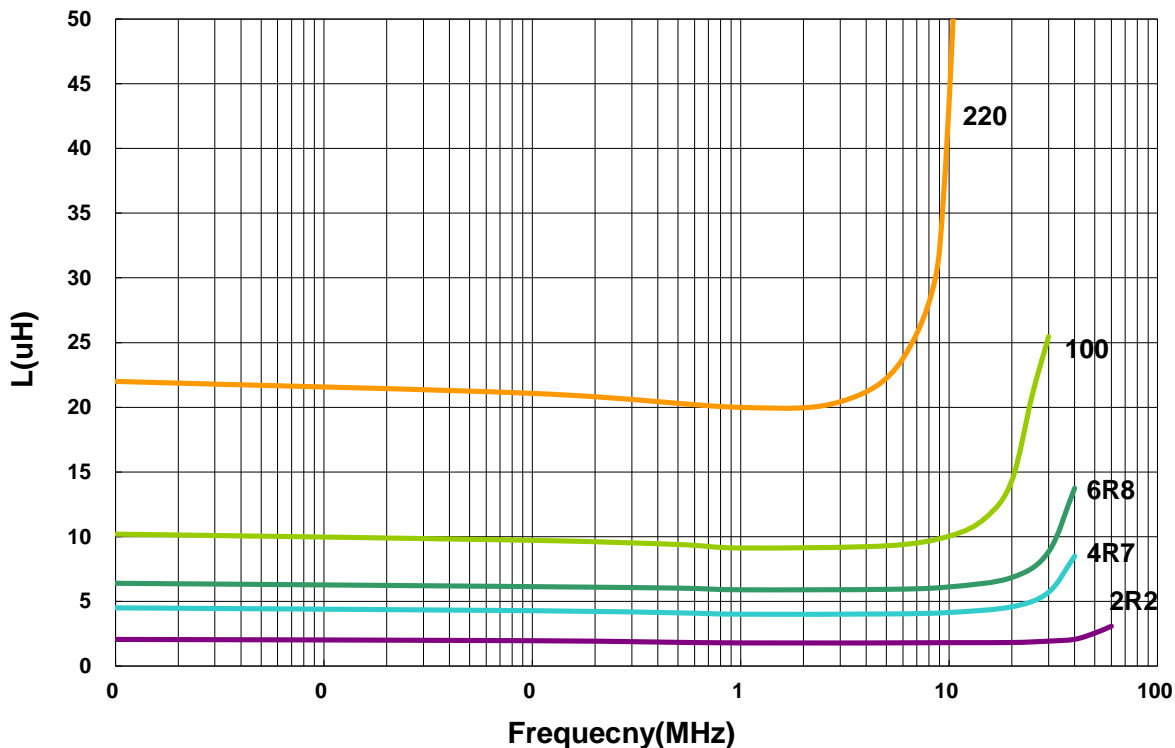
Note: When ordering, please specify tolerance code. Tolerance: M=±20% / T=±30%

1. Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
2. Isat for Inductance drop 10% from its value without current.
3. I rms for a 30°C temprature rise from 25°C ambient.
4. Measure Equipment:
 L: WK6500B+WK6565
 RDC: Chroma 16502
 Isat: WK3260B+WK3265B

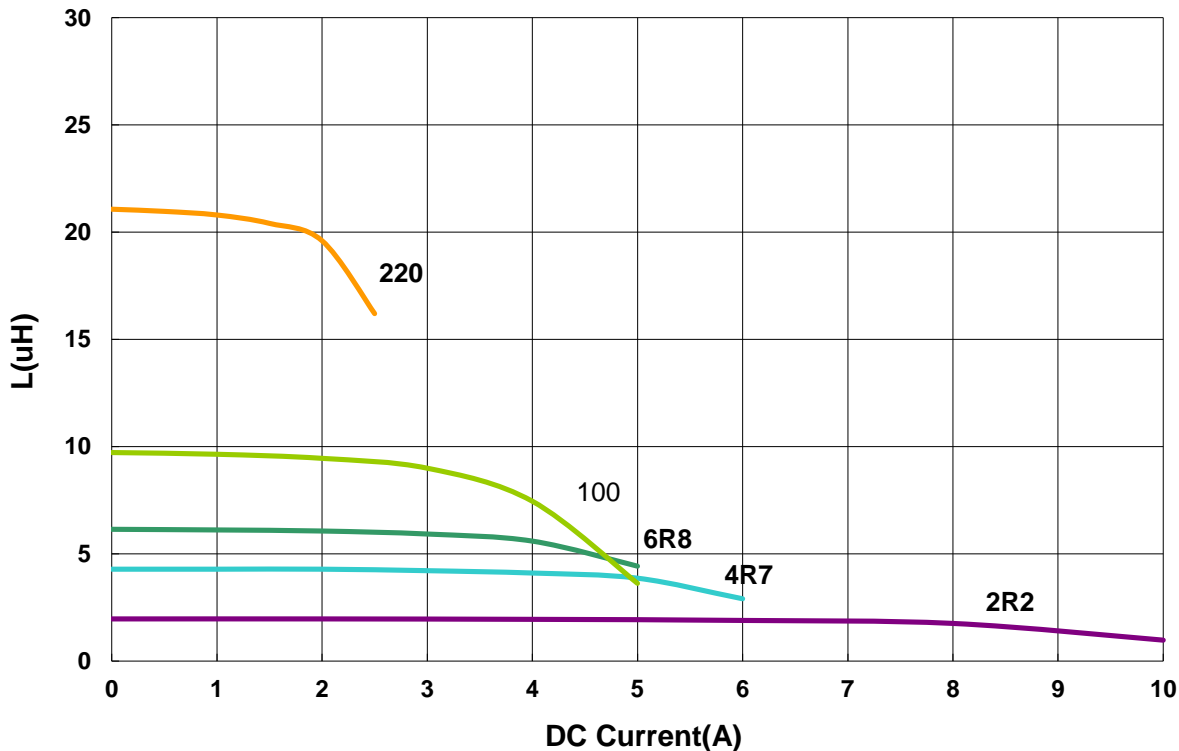
APSA00070758 Type

■ Characteristics Graph

Inductance vs. Frequency Characteristics



Inductance vs. DC Current

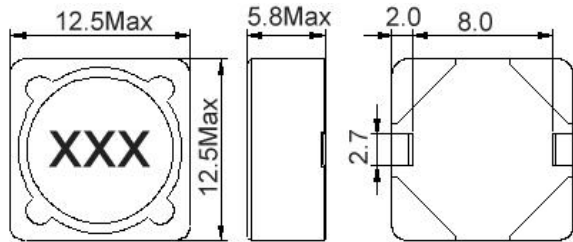


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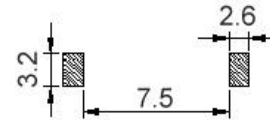
APSA00131358 Type

■ Dimensions



unit:mm

■ Recommended Land Pattern



unit:mm

■ Electrical Characteristics

| Part No. | Inductance (uH) | Test Freq. | SRF (MHz)Min | RDC (mΩ)Max. | Isat (A) | Irms (A) | Tolerance (±%) | Marking |
|--------------------|-----------------|------------|--------------|--------------|----------|----------|----------------|---------|
| APSA001313586R0□00 | 6.0 | 1 kHz,1 V | 26 | 19.7 | 3.6 | 4.9 | 30 | 6R0 |
| APSA00131358100□00 | 10 | 1 kHz,1 V | 17 | 25.8 | 3.4 | 4.3 | 20 | 100 |
| APSA00131358150□00 | 15 | 1 kHz,1 V | 15 | 31.0 | 2.8 | 3.9 | 20 | 150 |
| APSA00131358220□00 | 22 | 1 kHz,1 V | 11 | 40.6 | 2.3 | 3.4 | 20 | 220 |
| APSA00131358330□00 | 33 | 1 kHz,1 V | 10 | 49.8 | 1.9 | 3.1 | 20 | 330 |
| APSA00131358470□00 | 47 | 1 kHz,1 V | 8 | 74.2 | 1.6 | 2.5 | 20 | 470 |
| APSA00131358680□00 | 68 | 1 kHz,1 V | 7 | 99.8 | 1.3 | 2.2 | 20 | 680 |
| APSA00131358101□00 | 100 | 1 kHz,1 V | 5.5 | 140 | 1.1 | 1.8 | 20 | 101 |
| APSA00131358151□00 | 150 | 1 kHz,1 V | 4.5 | 228 | 0.88 | 1.4 | 20 | 151 |
| APSA00131358221□00 | 220 | 1 kHz,1 V | 3.0 | 324 | 0.72 | 1.2 | 20 | 221 |
| APSA00131358331□00 | 330 | 1 kHz,1 V | 3.0 | 492 | 0.59 | 1.0 | 20 | 331 |
| APSA00131358471□00 | 470 | 1 kHz,1 V | 2.5 | 624 | 0.49 | 0.88 | 20 | 471 |
| APSA00131358681□00 | 680 | 1 kHz,1 V | 2.0 | 912 | 0.43 | 0.73 | 20 | 681 |
| APSA00131358102□00 | 1000 | 1 kHz,1 V | 1.7 | 1344 | 0.34 | 0.60 | 20 | 102 |
| APSA00131358152□00 | 1500 | 1 kHz,1 V | 1.4 | 2076 | 0.29 | 0.48 | 20 | 152 |

Note: When ordering, please specify tolerance code. Tolerance: M=±20% / T=±30%

1. Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
2. Isat for Inductance drop 10% from its value without current.
3. I rms for a 30°C temprature rise from 25°C ambient.

4. Measure Equipment:

L: WK6500B+WK6565

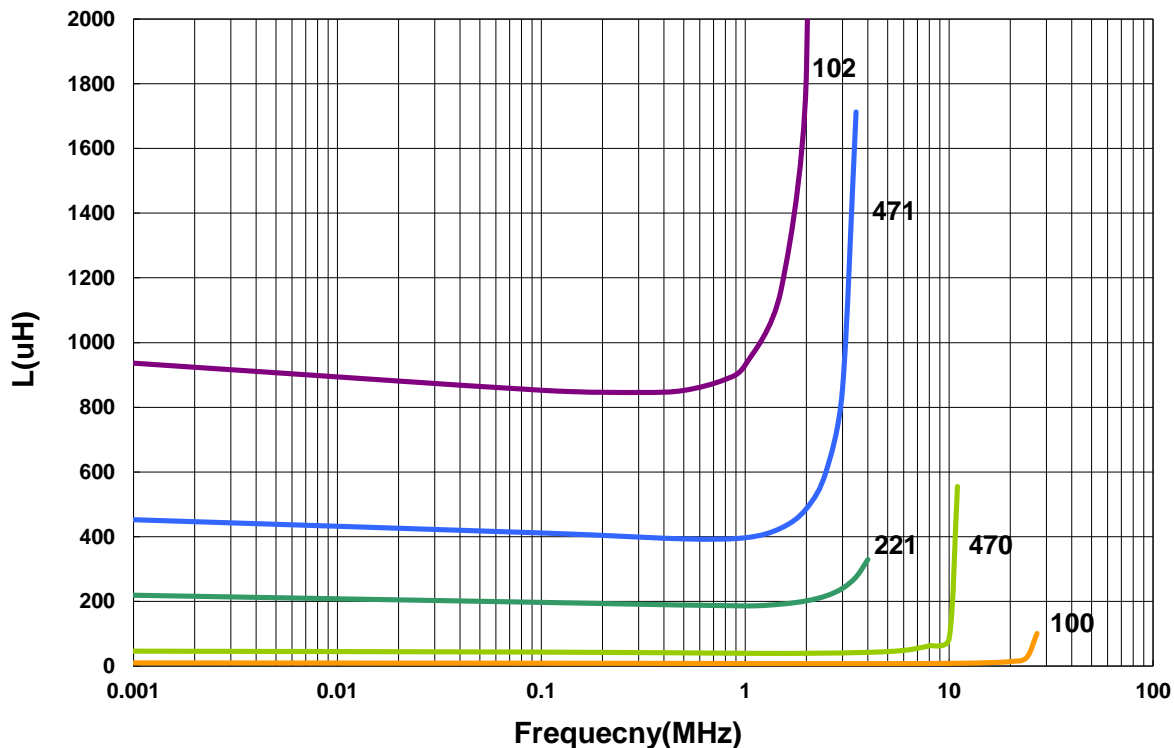
RDC: Chroma 16502

Isat: WK3260B+WK3265B

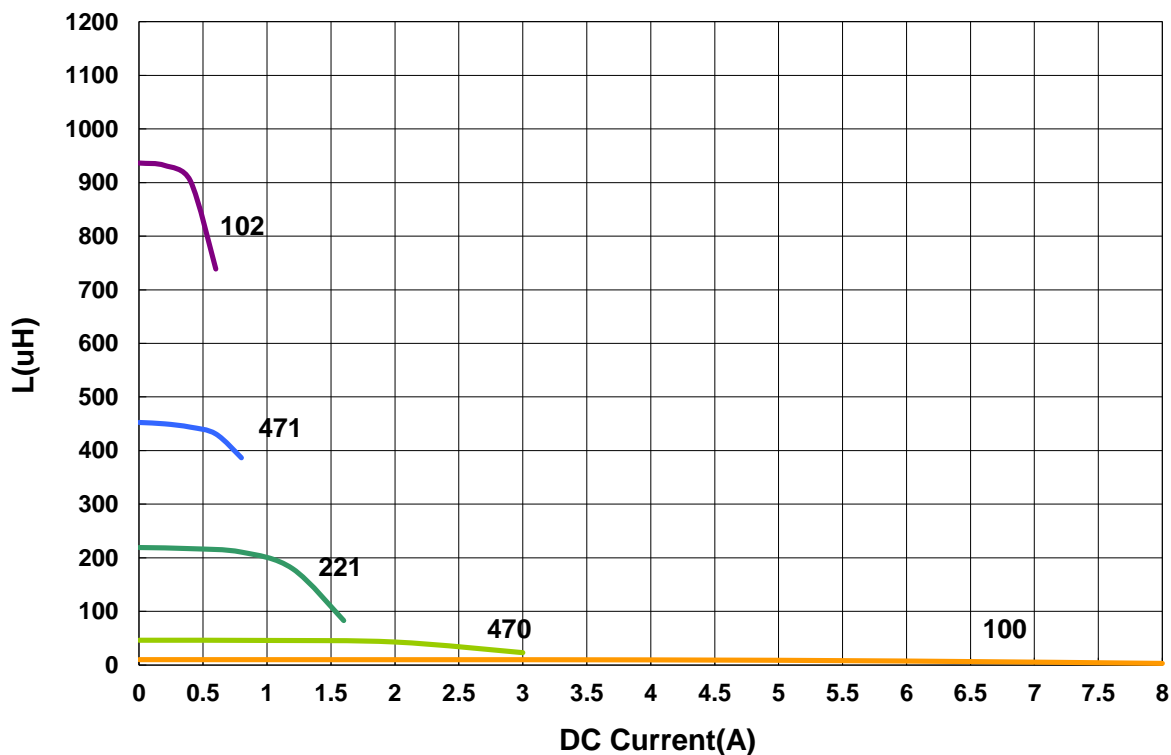
APSA00131358 Type

■ Characteristics Graph

Inductance vs. Frequency Characteristics



Inductance vs. DC Current

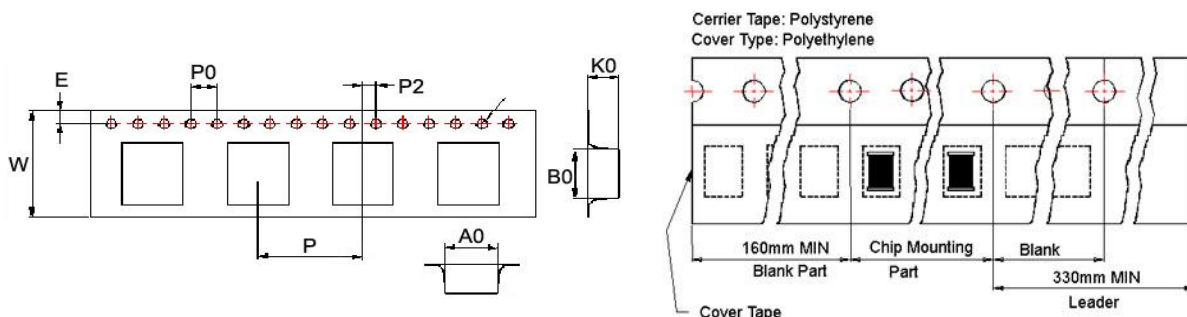


Power Inductor APSA Series

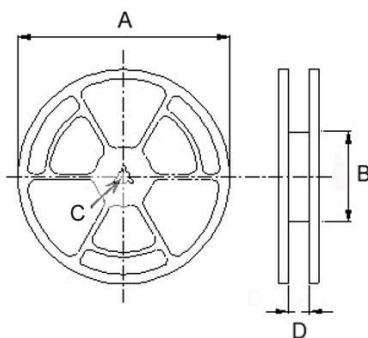
**Automotive
AEC-Q200**

■ Packaging

Tape Dimensions



Reel Dimensions



Dimensions in mm

| TYPE | Tape Dimensions | | | | | | | | | Reel Dimensions | | | | Quantity PCS / REEL |
|--------------|-----------------|------|-----|------|------|----|----|----|----|-----------------|-----|----|------|------------------------|
| | A0 | B0 | K0 | D | E | W | P | P0 | P2 | A | B | C | D | |
| APSA00060630 | 6.3 | 6.55 | 3.3 | 1.55 | 1.75 | 16 | 12 | 4 | 2 | 330 | 100 | 13 | 16.0 | 1000 |
| APSA00070748 | 7.6 | 7.6 | 5.2 | 1.55 | 1.75 | 16 | 12 | 4 | 2 | 330 | 100 | 13 | 16.0 | 1000 |
| APSA00070758 | 7.8 | 7.8 | 6.0 | 1.55 | 1.75 | 16 | 12 | 4 | 2 | 330 | 100 | 13 | 16.0 | 900 |
| APSA00131358 | 12.6 | 12.6 | 6.7 | 1.55 | 1.75 | 24 | 16 | 4 | 2 | 330 | 100 | 13 | 24.2 | 600 |