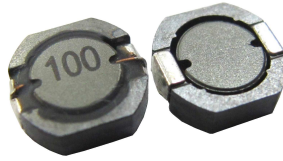


Power Inductor APSR Series

**Automotive
AEC-Q200**

RoHS Compliant
Halogen Free
REACH Compliant



Power
Circuit

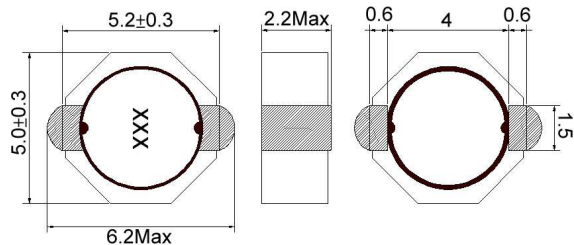
Shield

Wire
Wound

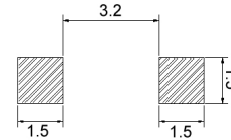
Ferrite

Part Numbering

| A | PSR | 00 | 080725 | 1R0 | M | 00 |
|-------|-------------|--------------|-------------------------|--------------------|-----------|---------------|
| Grade | Series Name | Control Code | Dimensions Code (mm) | Inductance (uH) | Tolerance | Internal Code |
| | | | 050522 5.2x5.0x2.2 | R47 0.47 | M ±20% | |
| | | | 080725 7.5x7.4x2.5 | 1R0 1.0 | T ±30% | |
| | | | 080740 7.5x7.4x4.0 | 101 100 | | |

APSR00050522 Type
■ Dimensions


unit:mm

■ Recommended Land Pattern


unit:mm

■ Electrical Characteristics

| Part No. | Inductance (μH) | Test Freq. | RDC ($\text{m}\Omega$)Max. | Isat (A) | Irms (A) | Tolerance ($\pm\%$) | Marking |
|--------------------|---------------------------------|------------|---------------------------------|-------------|-------------|--------------------------|---------|
| APSR000505221R2□00 | 1.2 | 100kHz,1V | 25 | 4.3 | 3.43 | 30 | 1R2 |
| APSR000505221R8□00 | 1.8 | 100kHz,1V | 32 | 3.6 | 3.12 | 30 | 1R8 |
| APSR000505223R3□00 | 3.3 | 100kHz,1V | 54 | 2.5 | 2.68 | 30 | 3R3 |
| APSR000505224R7□00 | 4.7 | 100kHz,1V | 81 | 2.0 | 2.18 | 30 | 4R7 |
| APSR00050522100□00 | 10 | 100kHz,1V | 160 | 1.4 | 1.51 | 20,30 | 100 |
| APSR00050522220□00 | 22 | 100kHz,1V | 320 | 0.9 | 1.02 | 20,30 | 220 |
| APSR00050522330□00 | 33 | 100kHz,1V | 490 | 0.77 | 0.80 | 20,30 | 330 |

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

1. Operating temperature range - 40°C ~ 125°C (Including self - temperature rise)
2. Isat for Inductance drop 35% from its value without current
3. I rms for a 40°C temperature rise from 25°C ambient with current
4. Measure Equipment:

L: Agilent E4980 or HP4284A

RDC: Chroma 16502

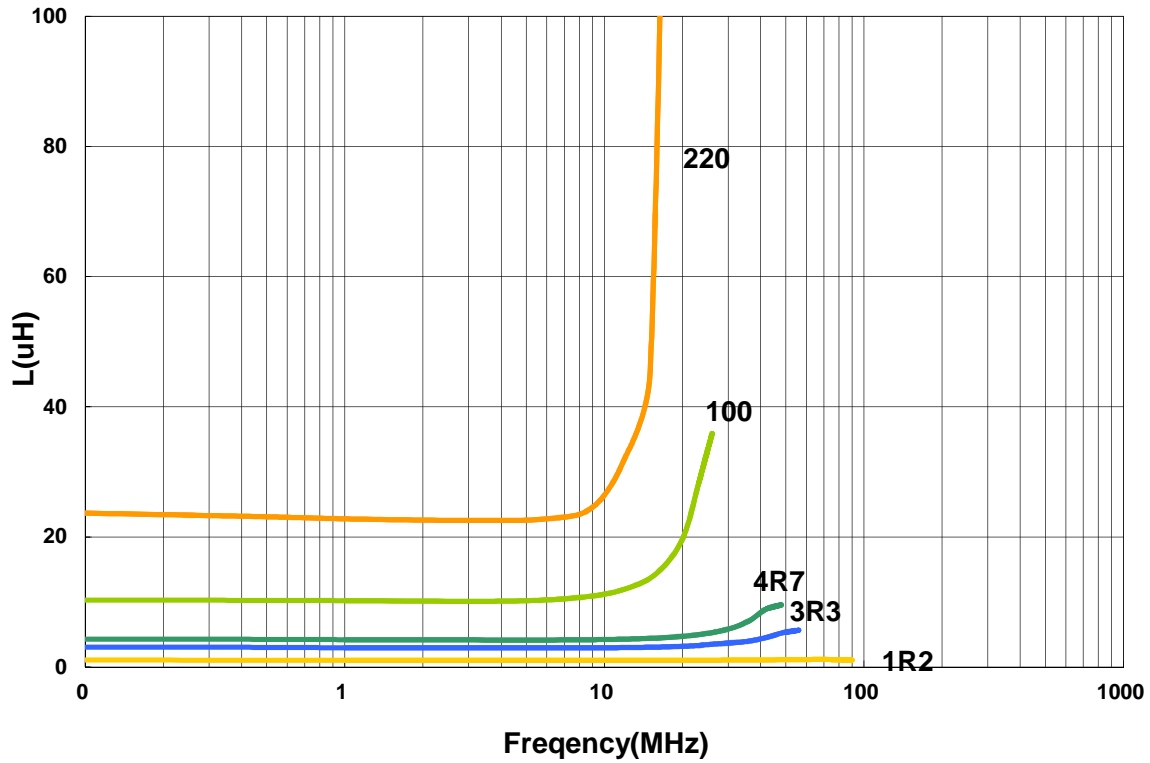
Isat: HP4284A+HP42841A or WK3260B+WK3265B

I rms: Agilent 6641 SYSTEM DC POWER SUPPLY

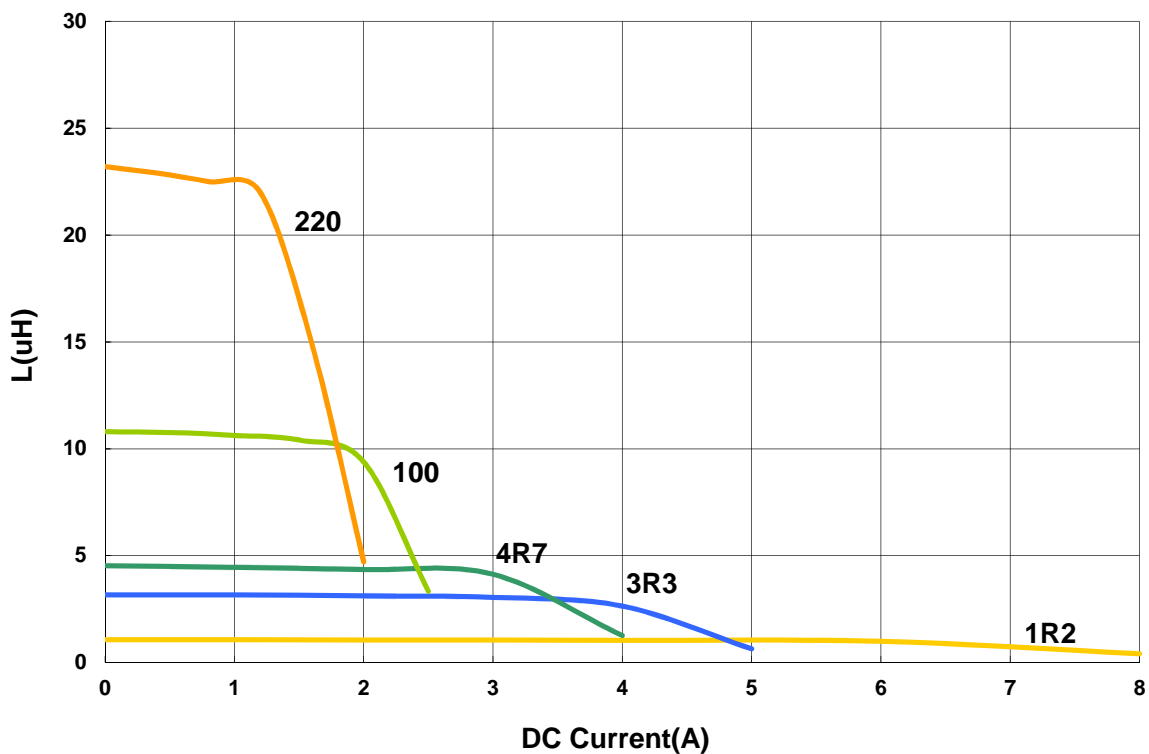
APSR00050522 Type

Characteristics Graph

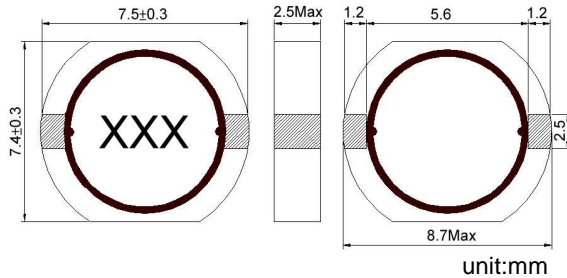
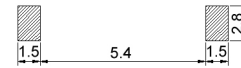
Inductance vs. Frequency Characteristics



Inductance vs. DC Current



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APSR00080725 Type
■ Dimensions

■ Recommended Land Pattern

■ Electrical Characteristics

| Part No. | Inductance (uH) | Test Freq. | RDC (mΩ)Max. | Isat (A) | Irms (A) | Tolerance (±%) | Marking |
|--------------------|-----------------|------------|--------------|----------|----------|----------------|---------|
| APSR000807251R0□00 | 1.0 | 100kHz,1V | 14.28 | 2.20 | 6.22 | 30 | 1R0 |
| APSR000807251R5□00 | 1.5 | 100kHz,1V | 19.70 | 2.08 | 5.00 | 30 | 1R5 |
| APSR000807252R2□00 | 2.2 | 100kHz,1V | 24.09 | 1.86 | 4.40 | 30 | 2R2 |
| APSR000807253R3□00 | 3.3 | 100kHz,1V | 41.2 | 1.80 | 3.70 | 30 | 3R3 |
| APSR000807254R7□00 | 4.7 | 100kHz,1V | 49.7 | 1.80 | 3.20 | 30 | 4R7 |
| APSR000807255R6□00 | 5.6 | 100kHz,1V | 58.9 | 1.39 | 2.90 | 20,30 | 5R6 |
| APSR000807256R8□00 | 6.8 | 100kHz,1V | 66.3 | 1.32 | 2.70 | 20,30 | 6R8 |
| APSR00080725100□00 | 10 | 100kHz,1V | 92.4 | 1.25 | 1.90 | 20,30 | 100 |
| APSR00080725150□00 | 15 | 100kHz,1V | 170 | 1.20 | 1.70 | 20,30 | 150 |
| APSR00080725220□00 | 22 | 100kHz,1V | 210 | 1.13 | 1.52 | 20,30 | 220 |
| APSR00080725330□00 | 33 | 100kHz,1V | 320 | 0.91 | 1.10 | 20,30 | 330 |
| APSR00080725470□00 | 47 | 100kHz,1V | 490 | 0.85 | 0.95 | 20,30 | 470 |

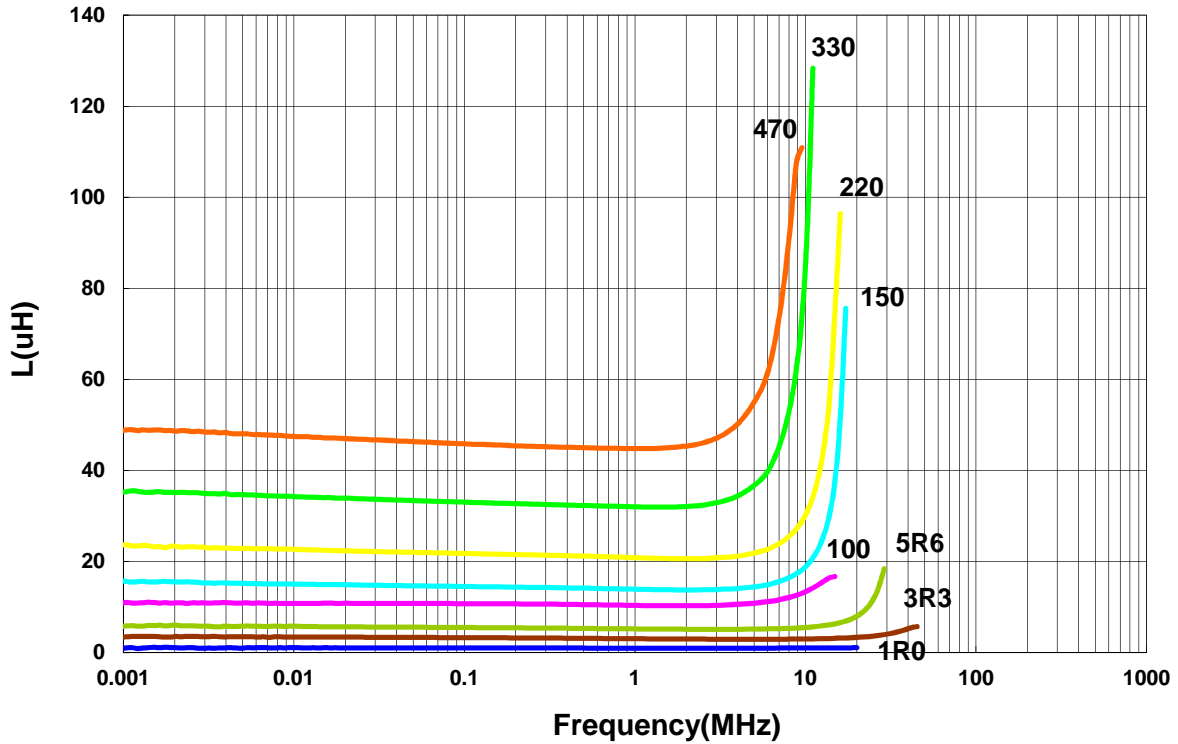
Note: When ordering, please specify tolerance code. Tolerance: M=±20% / T=±30%

- Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
- Isat for Inductance drop 35% from its value without current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment:
 - L: Agilent E4980 or HP4284A
 - RDC: Chroma 16502
 - Isat: HP4284A+HP42841A or WK3260B+WK3265B
 - Irms: Agilent 6641 SYSTEM DC POWER SUPPLY

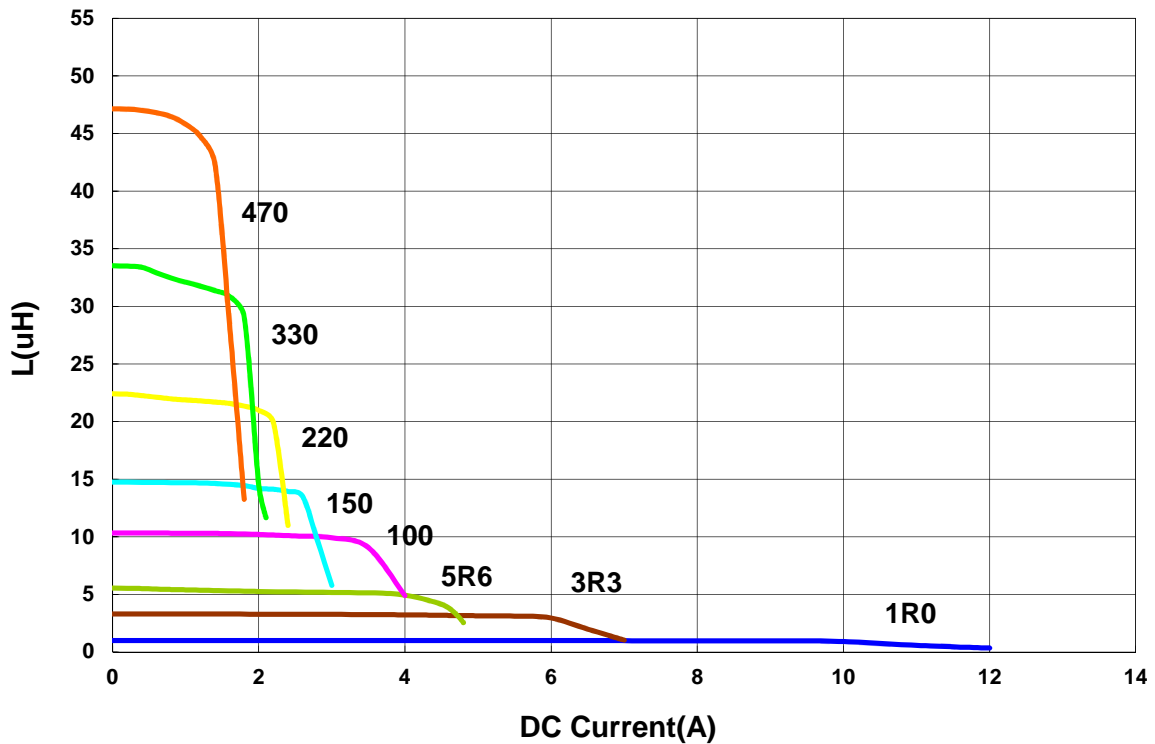
APSR00080725 Type

Characteristics Graph

Inductance vs. Frequency Characteristics



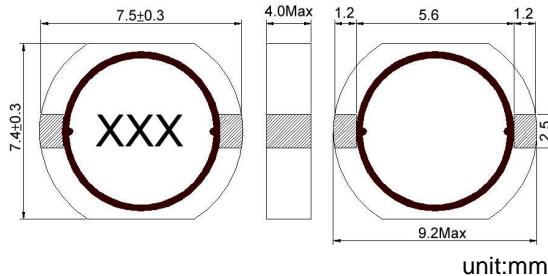
Inductance vs. DC Current



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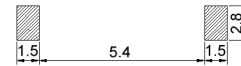
APSR00080740 Type

■ Dimensions



unit:mm

■ Recommended Land Pattern



unit:mm

■ Electrical Characteristics

| Part No. | Inductance (uH) | Test Freq. | RDC (mΩ)Max. | Isat(A) Max(Typ) | Irms (A) | Tolerance (±%) | Marking |
|--------------------|-----------------|------------|--------------|------------------|----------|----------------|---------|
| APSR000807401R0□00 | 1.0 | 100kHz,1V | 6.38 | 8.0(12) | 9.00 | 30 | 1R0 |
| APSR000807401R5□00 | 1.5 | 100kHz,1V | 8.64 | 7.0(10) | 8.00 | 30 | 1R5 |
| APSR000807401R8□00 | 1.8 | 100kHz,1V | 9.60 | 6.5(8.6) | 7.92 | 30 | 1R8 |
| APSR000807402R5□00 | 2.5 | 100kHz,1V | 13.6 | 4.8(7.2) | 7.40 | 30 | 2R5 |
| APSR000807403R3□00 | 3.3 | 100kHz,1V | 17.8 | 3.9(6.8) | 6.70 | 30 | 3R3 |
| APSR000807404R7□00 | 4.7 | 100kHz,1V | 26.6 | 3.5(4.6) | 4.90 | 20,30 | 4R7 |
| APSR000807405R6□00 | 5.6 | 100kHz,1V | 29.0 | 3.3(4.1) | 4.60 | 20,30 | 5R6 |
| APSR000807406R8□00 | 6.8 | 100kHz,1V | 34.0 | 3.2(3.9) | 3.90 | 20,30 | 6R8 |
| APSR00080740100□00 | 10 | 100kHz,1V | 55.6 | 2.5(3.4) | 3.25 | 20,30 | 100 |
| APSR00080740150□00 | 15 | 100kHz,1V | 71.4 | 2.1(3.0) | 2.70 | 20,30 | 150 |
| APSR00080740220□00 | 22 | 100kHz,1V | 98.1 | 1.7(2.4) | 2.40 | 20,30 | 220 |
| APSR00080740330□00 | 33 | 100kHz,1V | 140 | 1.4(2.0) | 1.90 | 20,30 | 330 |
| APSR00080740470□00 | 47 | 100kHz,1V | 217 | 1.2(1.7) | 1.48 | 20,30 | 470 |
| APSR00080740560□00 | 56 | 100kHz,1V | 260 | 1.0(1.5) | 1.33 | 20,30 | 560 |
| APSR00080740680□00 | 68 | 100kHz,1V | 310 | 0.95(1.36) | 1.20 | 20,30 | 680 |
| APSR00080740820□00 | 82 | 100kHz,1V | 360 | 0.9(1.20) | 1.12 | 20,30 | 820 |
| APSR00080740101□00 | 100 | 100kHz,1V | 480 | 0.85(1.12) | 0.95 | 20,30 | 101 |
| APSR00080740121□00 | 120 | 100kHz,1V | 560 | 0.75(1.00) | 0.89 | 20,30 | 121 |
| APSR00080740151□00 | 150 | 100kHz,1V | 710 | 0.65(0.92) | 0.82 | 20,30 | 151 |

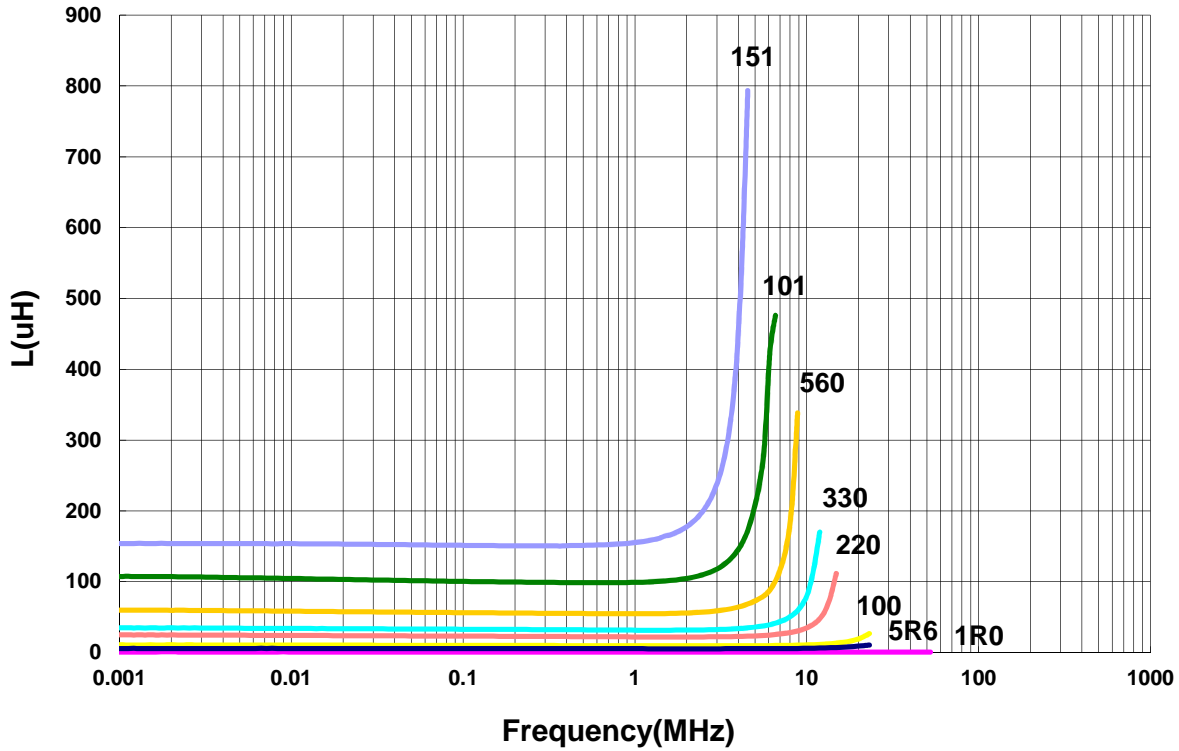
Note: When ordering, please specify tolerance code. Tolerance: M=±20% / T=±30%

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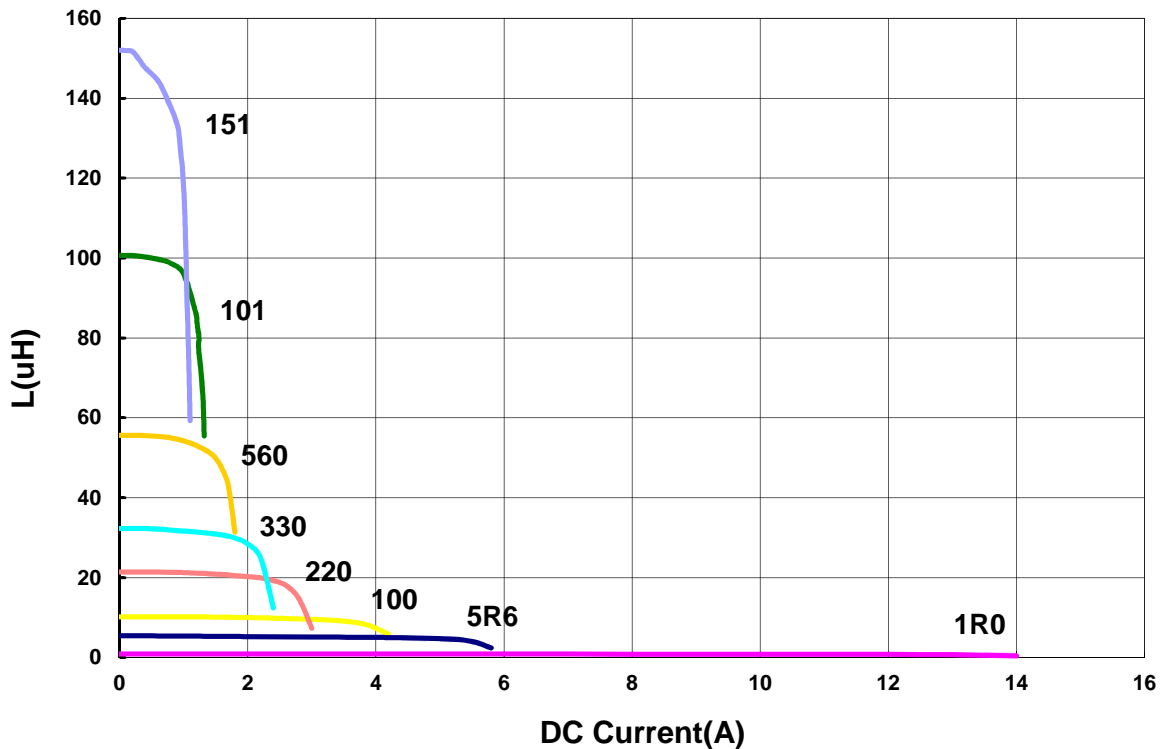
APSR00080740 Type

Characteristics Graph

Inductance vs. Frequency Characteristics



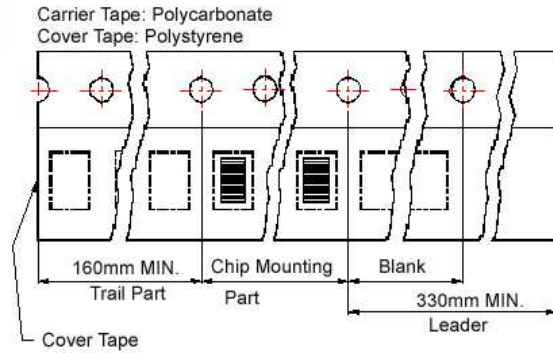
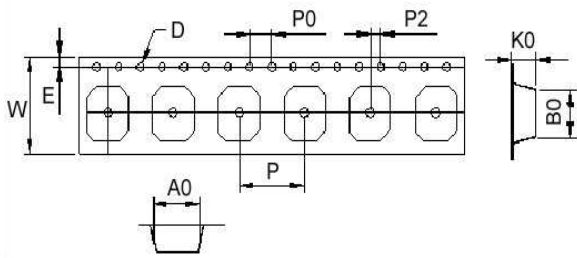
Inductance vs. DC Current



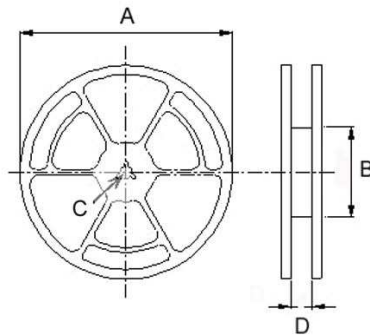
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■ Packaging

Tape Dimensions



Reel Dimensions



Dimensions in mm

| TYPE | | | | | | | | | | Reel Dimensions | | | | Quantity |
|--------------|------|------|-----|------|------|----|----|----|----|-----------------|-----|----|------|------------|
| | A0 | B0 | K0 | D | E | W | P | P0 | P2 | A | B | C | D | PCS / REEL |
| APSR00050522 | 5.25 | 6.25 | 2.4 | 1.55 | 1.75 | 12 | 8 | 4 | 2 | 330 | 100 | 13 | 13.4 | 2000 |
| APSR00080725 | 7.60 | 8.65 | 2.8 | 1.55 | 1.75 | 16 | 12 | 4 | 2 | 330 | 100 | 13 | 16 | 1500 |
| APSR00080740 | 7.60 | 9.00 | 4.3 | 1.55 | 1.75 | 16 | 12 | 4 | 2 | 330 | 100 | 13 | 16 | 1000 |