

Power Inductor APAL Series

**Automotive
AEC-Q200**

RoHS Compliant
Halogen Free
REACH Compliant



Power
Circuit

Shield

Wire
Wound

Ferrite

Part Numbering

A	PAL	00	080845	1R0	M	70
Grade	Series Name	Control Code	Dimensions Code (mm)	Inductance (uH)	Tolerance	Internal Code
			060645 6.2x6x4.5	1R0 1	M ±20%	70
			080845 7.5x7.5x4.5	100 10	T ±30%	80
				101 100		

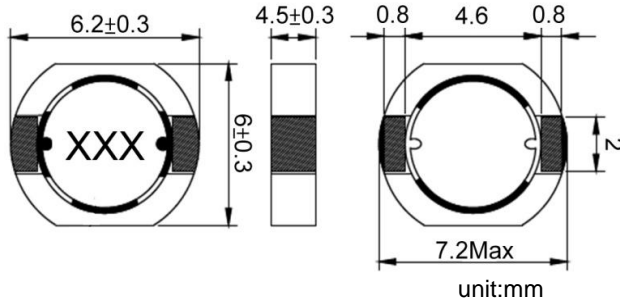
This specification applies to Power Inductors for Automotive Electronics based on AEC-Q200 except for Power train and Safety.

Power Inductor APAL Series

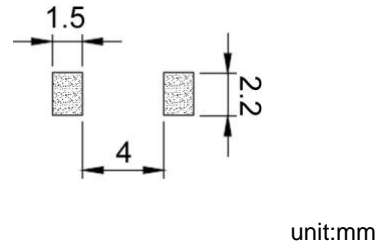
**Automotive
AEC-Q200**

APAL00060645 - 70 Type

■ Dimensions



■ Recommended Land Pattern



■ Electrical Characteristics

Part No.	Inductance (uH)	Test Freq.	RDC (mΩ)Max.	Isat (A)	Irms (A)	Tolerance (±%)	Marking
APAL000606451R0□70	1.0	100kHz,0.1V	11±30%	6.7	4.8	30	1R0
APAL000606451R5□70	1.5	100kHz,0.1V	13±30%	5.5	4.5	30	1R5
APAL000606452R2□70	2.2	100kHz,0.1V	15±30%	4.2	4.1	30	2R2
APAL000606453R3□70	3.3	100kHz,0.1V	19±30%	3.5	3.7	30	3R3
APAL000606454R7□70	4.7	100kHz,0.1V	23±30%	3.1	3.3	30	4R7
APAL000606456R8□70	6.8	100kHz,0.1V	27±30%	2.5	3.1	30	6R8
APAL00060645100□70	10	100kHz,0.1V	35±20%	2.1	2.6	20,30	100
APAL00060645150□70	15	100kHz,0.1V	60±20%	1.7	2.0	20,30	150
APAL00060645220□70	22	100kHz,0.1V	75±20%	1.4	1.8	20,30	220
APAL00060645330□70	33	100kHz,0.1V	100±20%	1.1	1.6	20,30	330
APAL00060645470□70	47	100kHz,0.1V	130±20%	0.97	1.4	20,30	470
APAL00060645680□70	68	100kHz,0.1V	200±20%	0.81	1.1	20,30	680
APAL00060645101□70	100	100kHz,0.1V	320±20%	0.61	0.86	20,30	101

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

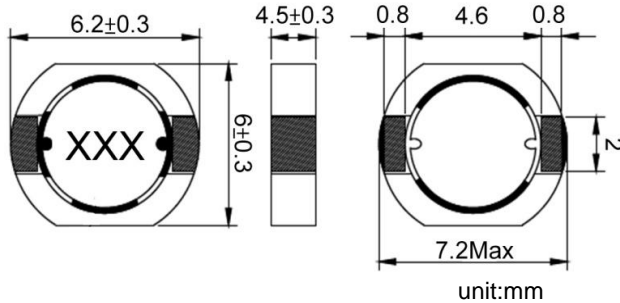
- Operating temperature range - 50°C ~ 150°C(Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40°C temprature rise from 25°C ambient with current
- Rated DC Current: The less value which is Isat or Irms
- Measure Equipment:
 L: HP4284A PRECISION LCR METER (or equivalent)
 RDC: CHROMA MODEL 16502 MILLIOHMETER (or equivalent)
 Isat:WK3255BQ+ WK3265B (or equivalent)
 Irms: WK3255BQ+ WK3265B (or equivalent)

Power Inductor APAL Series

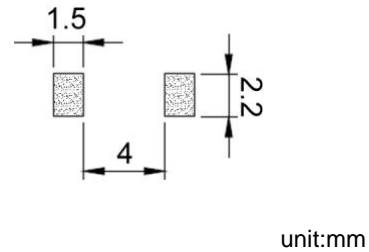
**Automotive
AEC-Q200**

APAL00060645 - 80 Type

■ Dimensions



■ Recommended Land Pattern



■ Electrical Characteristics

Part No.	Inductance (uH)	Test Freq.	RDC (mΩ)Max.	Isat (A)	Irms (A)	Tolerance (±%)	Marking
APAL000606451R0□80	1.0	100kHz,0.1V	11±30%	6.7	4.8	30	1R0
APAL000606451R5□80	1.5	100kHz,0.1V	13±30%	5.5	4.5	30	1R5
APAL000606452R2□80	2.2	100kHz,0.1V	15±30%	4.2	4.1	30	2R2
APAL000606453R3□80	3.3	100kHz,0.1V	19±30%	3.5	3.7	30	3R3
APAL000606454R7□80	4.7	100kHz,0.1V	23±30%	3.1	3.3	30	4R7
APAL000606456R8□80	6.8	100kHz,0.1V	27±30%	2.5	3.1	30	6R8
APAL00060645100□80	10	100kHz,0.1V	35±20%	2.1	2.6	20,30	100
APAL00060645150□80	15	100kHz,0.1V	60±20%	1.7	2.0	20,30	150
APAL00060645220□80	22	100kHz,0.1V	75±20%	1.4	1.8	20,30	220
APAL00060645330□80	33	100kHz,0.1V	100±20%	1.1	1.6	20,30	330
APAL00060645470□80	47	100kHz,0.1V	130±20%	0.97	1.4	20,30	470
APAL00060645680□80	68	100kHz,0.1V	200±20%	0.81	1.1	20,30	680
APAL00060645101□80	100	100kHz,0.1V	320±20%	0.61	0.86	20,30	101

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

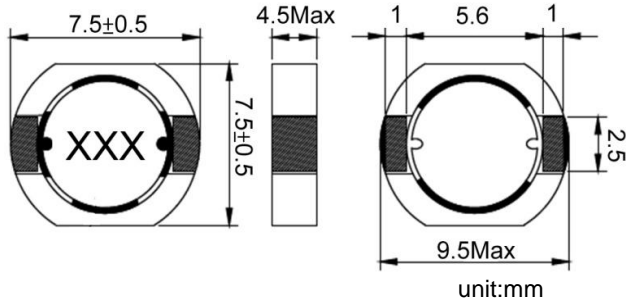
- Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
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 L: HP4284A PRECISION LCR METER (or equivalent)
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 Isat:WK3255BQ+ WK3265B (or equivalent)
 Irms: WK3255BQ+ WK3265B (or equivalent)

Power Inductor APAL Series

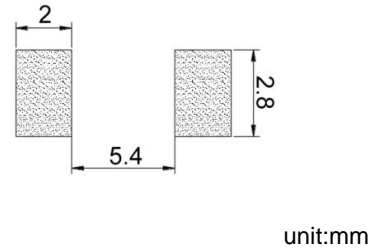
**Automotive
AEC-Q200**

APAL00080845 - 70 Type

■ Dimensions



■ Recommended Land Pattern



■ Electrical Characteristics

Part No.	Inductance (uH)	Test Freq.	RDC (mΩ)Max.	Isat (A)	Irms (A)	Tolerance (±%)	Marking
APAL000808451R0□70	1.0	100kHz,0.1V	9±30%	8.5	11	30	1R0
APAL000808451R5□70	1.5	100kHz,0.1V	10±30%	6.3	8.6	30	1R5
APAL000808452R2□70	2.2	100kHz,0.1V	13±30%	6.2	6.3	30	2R2
APAL000808453R3□70	3.3	100kHz,0.1V	16±30%	4.7	6	30	3R3
APAL000808454R7□70	4.7	100kHz,0.1V	18±30%	4.1	4.8	30	4R7
APAL000808456R8□70	6.8	100kHz,0.1V	22±30%	3.1	4.1	30	6R8
APAL00080845100□70	10	100kHz,0.1V	33±20%	3	3.4	20,30	100
APAL00080845150□70	15	100kHz,0.1V	55±20%	2.3	2.8	20,30	150
APAL00080845220□70	22	100kHz,0.1V	69±20%	1.7	2.4	20,30	220
APAL00080845270□70	27	100kHz,0.1V	83±20%	1.65	2.1	20,30	270
APAL00080845330□70	33	100kHz,0.1V	97±20%	1.6	1.9	20,30	330
APAL00080845470□70	47	100kHz,0.1V	130±20%	1.26	1.6	20,30	470
APAL00080845680□70	68	100kHz,0.1V	170±20%	1.08	1.3	20,30	680
APAL00080845101□70	100	100kHz,0.1V	260±20%	0.81	1.1	20,30	101

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

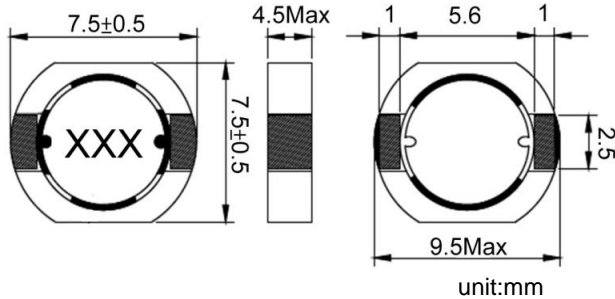
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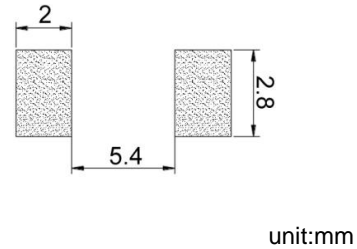
**Automotive
AEC-Q200**

APAL00080845 - 80 Type

■ Dimensions



■ Recommended Land Pattern



■ Electrical Characteristics

Part No.	Inductance (uH)	Test Freq.	RDC (mΩ)Max.	Isat (A)	Irms (A)	Tolerance (±%)	Marking
APAL000808451R0□80	1.0	100kHz,0.1V	9±30%	8.5	11	30	1R0
APAL000808451R5□80	1.5	100kHz,0.1V	10±30%	6.3	8.6	30	1R5
APAL000808452R2□80	2.2	100kHz,0.1V	13±30%	6.2	6.3	30	2R2
APAL000808453R3□80	3.3	100kHz,0.1V	16±30%	4.7	6	30	3R3
APAL000808454R7□80	4.7	100kHz,0.1V	18±30%	4.1	4.8	30	4R7
APAL000808456R8□80	6.8	100kHz,0.1V	22±30%	3.1	4.1	30	6R8
APAL00080845100□80	10	100kHz,0.1V	33±20%	3	3.4	20,30	100
APAL00080845150□80	15	100kHz,0.1V	55±20%	2.3	2.8	20,30	150
APAL00080845220□80	22	100kHz,0.1V	69±20%	1.7	2.4	20,30	220
APAL00080845270□80	27	100kHz,0.1V	83±20%	1.65	2.1	20,30	270
APAL00080845330□80	33	100kHz,0.1V	97±20%	1.6	1.9	20,30	330
APAL00080845470□80	47	100kHz,0.1V	130±20%	1.26	1.6	20,30	470
APAL00080845680□80	68	100kHz,0.1V	170±20%	1.08	1.3	20,30	680
APAL00080845101□80	100	100kHz,0.1V	260±20%	0.81	1.1	20,30	101

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

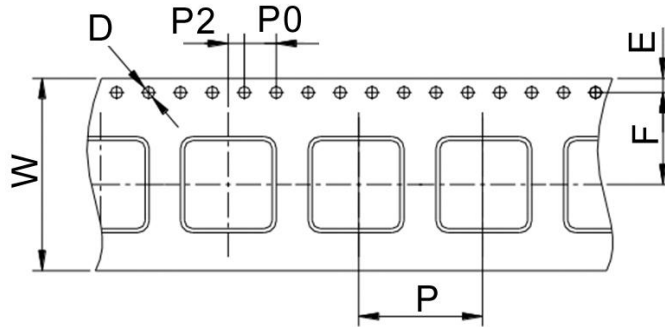
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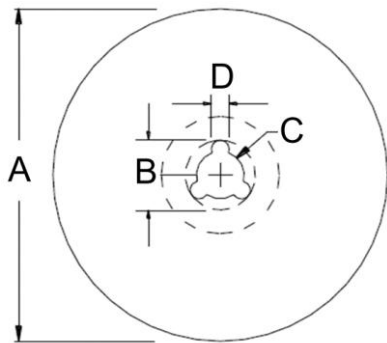
**Automotive
AEC-Q200**

■ Packaging

Tape Dimensions



Reel Dimensions



Dimensions in mm

TYPE	Tape Dimensions							Reel Dimensions				Quantity PCS / REEL
	W	D	E	F	P	P0	P2	A	B	C	D	
APAL00060645	16	1.5	1.75	7.5	12	4	2	330	20	13	2	1000
APAL00080845	16	1.5	1.75	7.5	12	4	2	330	20	13	2	1000