

Chip Inductor ASCH Series

**Automotive
AEC-Q200**

RoHS Compliant
Halogen Free
REACH Compliant



- Noise
Suppression
- Shield
- Multilayer
- Ceramic
- High
Frequency

Part Numbering

A	SCH	00	100505	1N0	S	CP
Grade	Series Name	Control Code	Dimensions Code (mm)	Inductance (nH)	Tolerance	Internal Code
			100505 1.0x0.5x0.5	1N0 1.0	S ±0.3nH	00 General
			160808 1.6x0.8x0.8	10N 10	J ±5%	CP Low RDC
				R10 100		

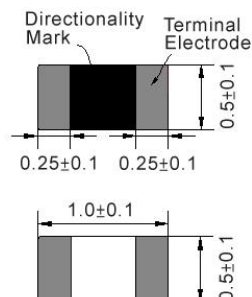
This specification applies to Multilayer Chip Inductors for Automotive Electronics based on AEC-Q200 except for Power train and Safety.

Chip Inductor ASCH Series

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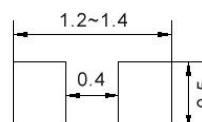
ASCH00100505_CP Type

■ Dimensions



unit:mm

■ Recommended Land Pattern



unit:mm

■ Electrical Characteristics

Part No.	Inductance	L,Q	Q	SRF	RDC	Rated Current	Tolerance
	(nH)	Test Freq.	Min.	(MHz)Min.	(Ω)Max.	(mA)Max.	(±%)
ASCH001005051N0□CP	1.0	100 MHz,200 mV	8	10000	0.07	400	±0.3nH
ASCH001005051N1□CP	1.1	100 MHz,200 mV	8	10000	0.10	400	±0.3nH
ASCH001005051N2□CP	1.2	100 MHz,200 mV	8	10000	0.09	400	±0.3nH
ASCH001005051N3□CP	1.3	100 MHz,200 mV	8	9000	0.10	400	±0.3nH
ASCH001005051N5□CP	1.5	100 MHz,200 mV	8	9000	0.10	400	±0.3nH
ASCH001005051N6□CP	1.6	100 MHz,200 mV	8	8700	0.10	400	±0.3nH
ASCH001005051N8□CP	1.8	100 MHz,200 mV	8	8700	0.10	400	±0.3nH
ASCH001005052N0□CP	2.0	100 MHz,200 mV	8	8100	0.10	400	±0.3nH
ASCH001005052N2□CP	2.2	100 MHz,200 mV	8	8100	0.12	400	±0.3nH
ASCH001005052N4□CP	2.4	100 MHz,200 mV	8	7700	0.15	400	±0.3nH
ASCH001005052N7□CP	2.7	100 MHz,200 mV	8	7700	0.15	400	±0.3nH
ASCH001005053N0□CP	3.0	100 MHz,200 mV	8	6300	0.15	400	±0.3nH
ASCH001005053N3□CP	3.3	100 MHz,200 mV	8	6300	0.15	400	±0.3nH
ASCH001005053N6□CP	3.6	100 MHz,200 mV	8	6100	0.15	400	±0.3nH
ASCH001005053N9□CP	3.9	100 MHz,200 mV	8	6100	0.18	400	±0.3nH
ASCH001005054N3□CP	4.3	100 MHz,200 mV	8	6000	0.18	400	±0.3nH
ASCH001005054N7□CP	4.7	100 MHz,200 mV	8	6000	0.18	400	±0.3nH
ASCH001005055N1□CP	5.1	100 MHz,200 mV	8	5300	0.20	400	±0.3nH
ASCH001005055N6□CP	5.6	100 MHz,200 mV	8	5100	0.20	400	±0.3nH
ASCH001005056N2□CP	6.2	100 MHz,200 mV	8	4500	0.22	400	±0.3nH
ASCH001005056N8□CP	6.8	100 MHz,200 mV	8	4550	0.24	400	5
ASCH001005057N5□CP	7.5	100 MHz,200 mV	8	4200	0.24	300	5
ASCH001005058N2□CP	8.2	100 MHz,200 mV	8	4100	0.24	300	5
ASCH001005059N1□CP	9.1	100 MHz,200 mV	8	3900	0.26	300	5
ASCH0010050510N□CP	10	100 MHz,200 mV	8	3900	0.26	300	5
ASCH0010050512N□CP	12	100 MHz,200 mV	8	3000	0.28	300	5
ASCH0010050515N□CP	15	100 MHz,200 mV	8	2500	0.32	300	5
ASCH0010050518N□CP	18	100 MHz,200 mV	8	2200	0.36	300	5
ASCH0010050522N□CP	22	100 MHz,200 mV	8	1900	0.42	300	5
ASCH0010050527N□CP	27	100 MHz,200 mV	8	1700	0.46	300	5

Note: When ordering, please specify tolerance code. Tolerance: C=±0.2nH / S=±0.3nH / J=±5% / K=±10%

1. Operating temperature range - 40°C ~ 125°C
2. Applied the current to coils, the inductance shall be less than 10% initial value
3. Residual impedance of short chip : 0nH
4. Measure Equipment:

L & Q: Agilent E4991A+Agilent 16197A

SRF: Agilent E4991A or HP19196C

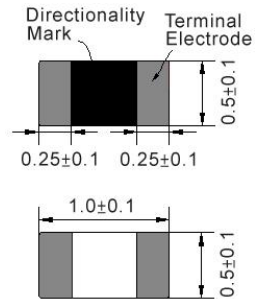
RDC: HP4338B or CHEN HWA 502

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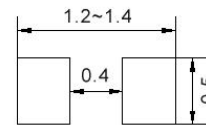
ASCH00100505_CP Type

■ Dimensions



unit:mm

■ Recommended Land Pattern



unit:mm

■ Electrical Characteristics

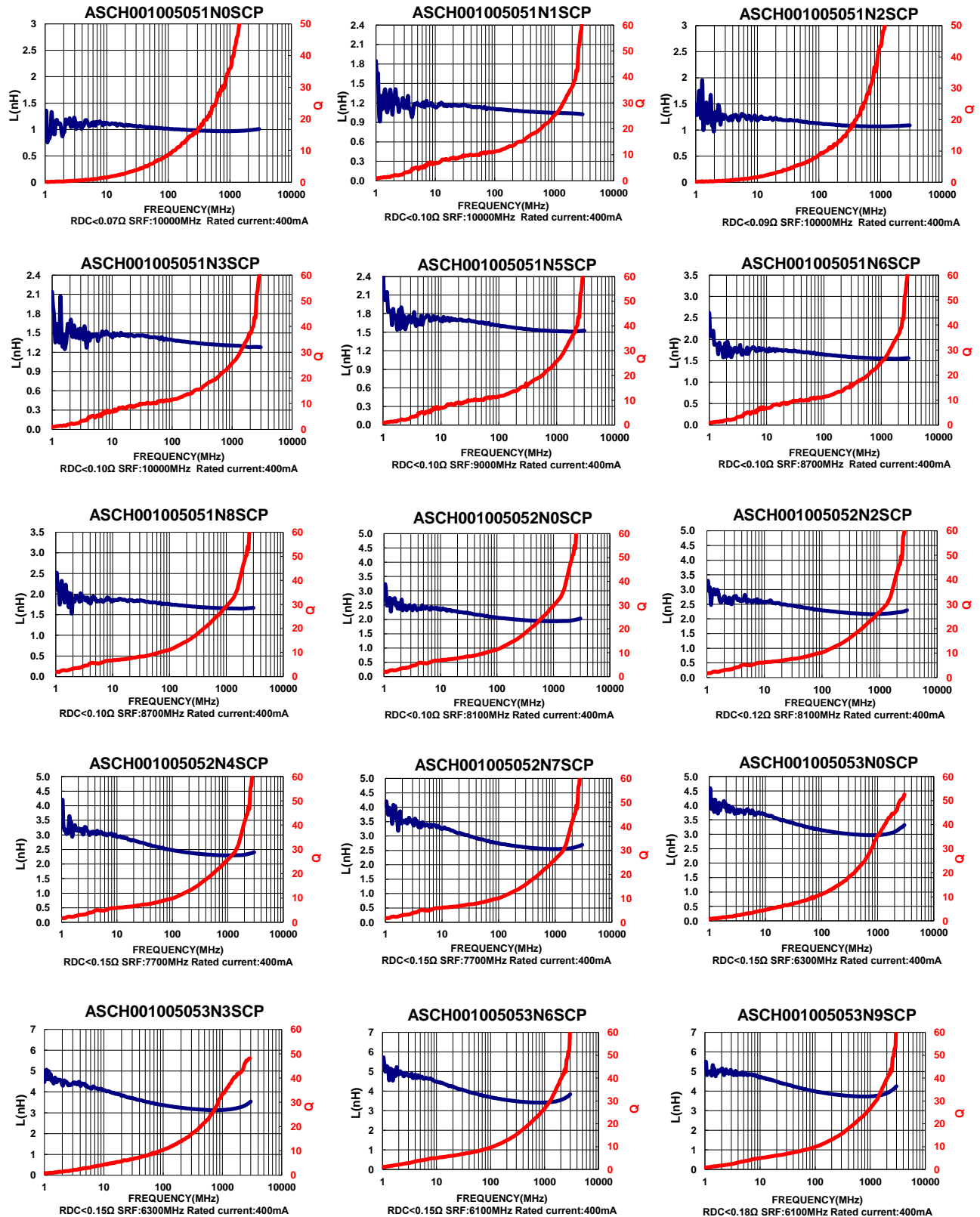
Part No.	Inductance	L,Q	Q	SRF	RDC	Rated Current	Tolerance
	(nH)	Test Freq.	Min.	(MHz)Min.	(Ω)Max.	(mA)Max.	(±%)
ASCH0010050533N□CP	33	100 MHz,200 mV	8	1600	0.58	200	5
ASCH0010050539N□CP	39	100 MHz,200 mV	8	1200	0.65	200	5
ASCH0010050547N□CP	47	100 MHz,200 mV	8	1000	0.72	200	5
ASCH0010050556N□CP	56	100 MHz,200 mV	8	800	0.82	200	5
ASCH0010050568N□CP	68	100 MHz,200 mV	8	800	0.92	180	5
ASCH0010050582N□CP	82	100 MHz,200 mV	8	700	1.20	150	5
ASCH00100505R10□CP	100	100 MHz,200 mV	8	900	2.00	100	5
ASCH00100505R12□CP	120	100 MHz,200 mV	8	800	2.20	100	5
ASCH00100505R15□CP	150	100 MHz,200 mV	8	700	3.50	100	5
ASCH00100505R18□CP	180	100 MHz,200 mV	8	600	3.80	100	5
ASCH00100505R22□CP	220	100 MHz,200 mV	8	500	4.20	100	5
ASCH00100505R27□CP	270	100 MHz,200 mV	8	500	4.80	100	5

Note: When ordering, please specify tolerance code. Tolerance: C=±0.2nH / S=±0.3nH / J=±5% / K=±10%

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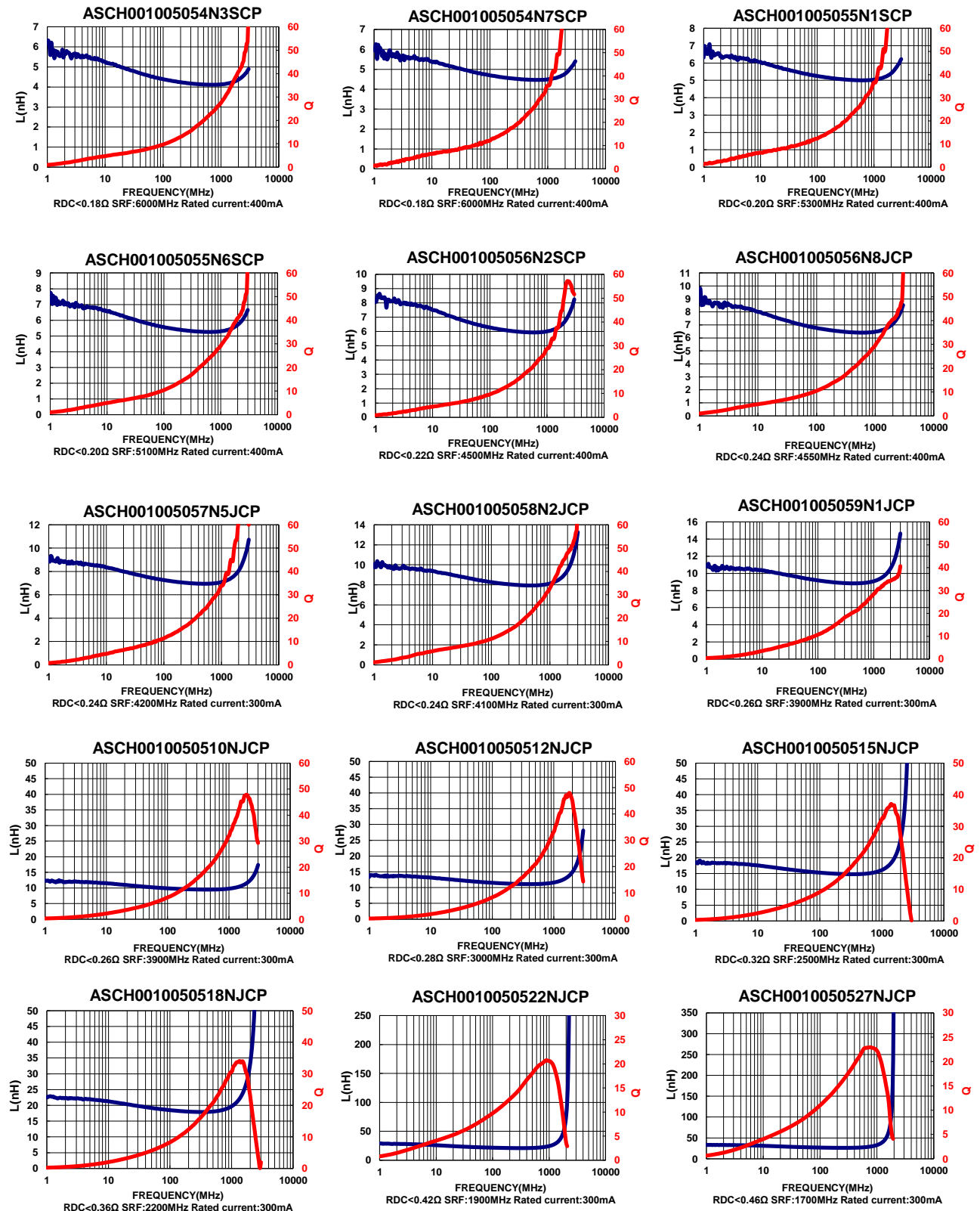
ASCH00100505_CP Type

Characteristics Graph



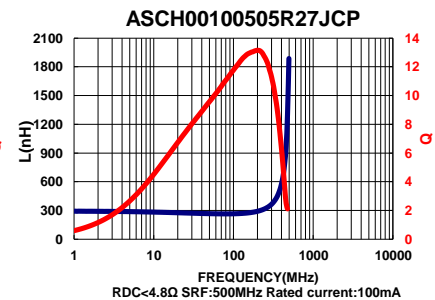
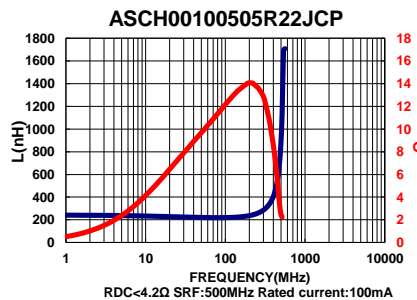
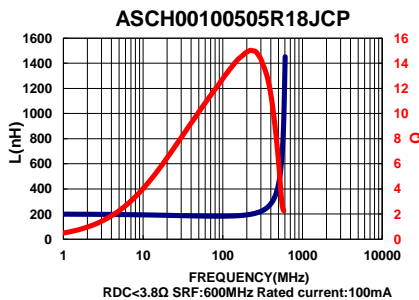
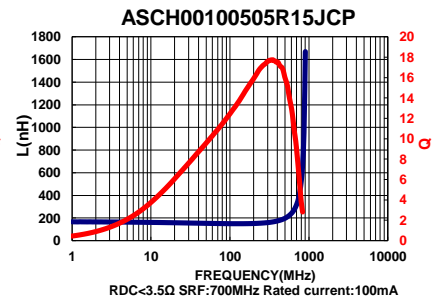
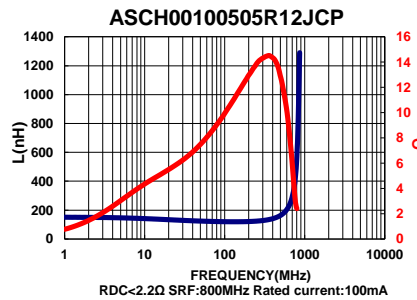
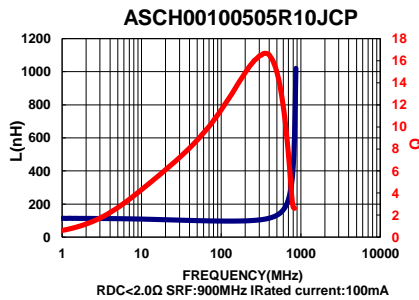
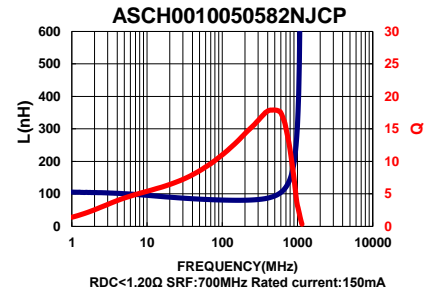
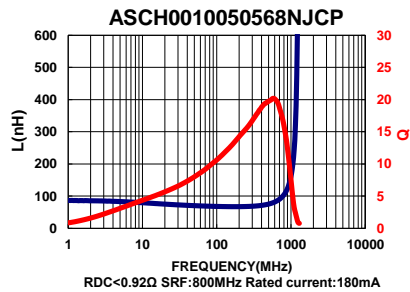
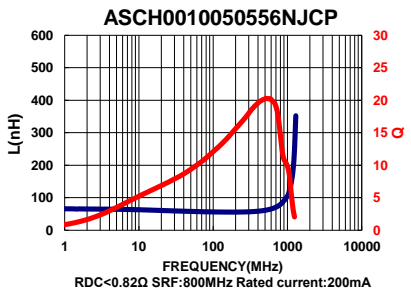
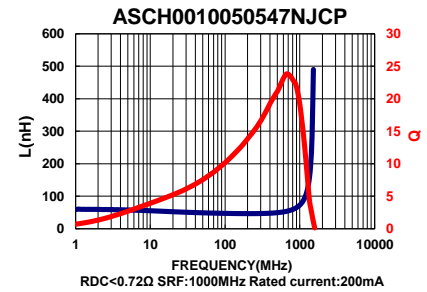
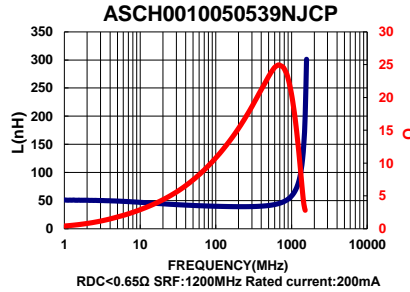
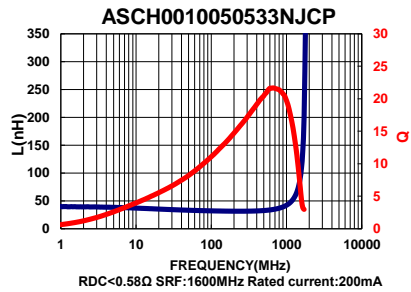
ASCH00100505_CP Type

Characteristics Graph



ASCH00100505_CP Type

Characteristics Graph

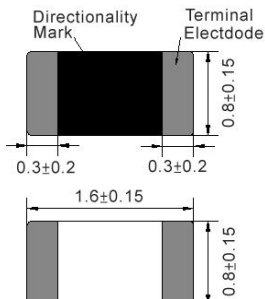


Chip Inductor ASCH Series

Automotive
AEC-Q200

ASCH00160808 Type

■ Dimensions



unit:mm

■ Recommended Land Pattern



unit:mm

■ Electrical Characteristics

Part No.	Inductance	L,Q	Q	SRF	RDC	IDC	Tolerance
	(nH)	Test Freq.	Min.	(MHz)Min.	(Ω)Max.	(mA)Max.	(\pm %)
ASCH001608081N0 \square 00	1.0	100 MHz,200 mV	8	10000	0.10	600	\pm 0.3nH
ASCH001608081N2 \square 00	1.2	100 MHz,200 mV	8	10000	0.10	600	\pm 0.3nH
ASCH001608081N5 \square 00	1.5	100 MHz,200 mV	8	8000	0.10	600	\pm 0.3nH
ASCH001608081N6 \square 00	1.6	100 MHz,200 mV	8	8000	0.10	600	\pm 0.3nH
ASCH001608081N8 \square 00	1.8	100 MHz,200 mV	8	8000	0.10	600	\pm 0.3nH
ASCH001608082N2 \square 00	2.2	100 MHz,200 mV	8	7200	0.10	600	\pm 0.3nH
ASCH001608082N7 \square 00	2.7	100 MHz,200 mV	10	6200	0.10	600	\pm 0.3nH
ASCH001608083N0 \square 00	3.0	100 MHz,200 mV	10	5200	0.12	600	\pm 0.3nH
ASCH001608083N3 \square 00	3.3	100 MHz,200 mV	10	5200	0.12	600	\pm 0.3nH
ASCH001608083N6 \square 00	3.6	100 MHz,200 mV	10	5000	0.14	600	\pm 0.3nH
ASCH001608083N9 \square 00	3.9	100 MHz,200 mV	10	5000	0.14	600	\pm 0.3nH
ASCH001608084N3 \square 00	4.3	100 MHz,200 mV	10	4750	0.16	600	\pm 0.3nH
ASCH001608084N7 \square 00	4.7	100 MHz,200 mV	10	4750	0.16	600	\pm 0.3nH
ASCH001608085N1 \square 00	5.1	100 MHz,200 mV	10	4100	0.18	600	\pm 0.3nH
ASCH001608085N6 \square 00	5.6	100 MHz,200 mV	10	4100	0.18	600	\pm 0.3nH
ASCH001608086N2 \square 00	6.2	100 MHz,200 mV	10	3750	0.22	600	\pm 0.3nH
ASCH001608086N8 \square 00	6.8	100 MHz,200 mV	10	3750	0.22	600	5
ASCH001608087N5 \square 00	7.5	100 MHz,200 mV	10	3300	0.24	600	5
ASCH001608088N2 \square 00	8.2	100 MHz,200 mV	10	3300	0.24	600	5
ASCH0016080810N \square 00	10	100 MHz,200 mV	12	3000	0.26	600	5
ASCH0016080812N \square 00	12	100 MHz,200 mV	12	2600	0.28	600	5
ASCH0016080815N \square 00	15	100 MHz,200 mV	12	2500	0.32	600	5
ASCH0016080816N \square 00	16	100 MHz,200 mV	12	2400	0.35	600	5
ASCH0016080818N \square 00	18	100 MHz,200 mV	12	2400	0.35	600	5
ASCH0016080822N \square 00	22	100 MHz,200 mV	12	2000	0.40	500	5
ASCH0016080827N \square 00	27	100 MHz,200 mV	12	1900	0.45	500	5
ASCH0016080833N \square 00	33	100 MHz,200 mV	12	1600	0.55	400	5
ASCH0016080839N \square 00	39	100 MHz,200 mV	12	1400	0.60	400	5
ASCH0016080847N \square 00	47	100 MHz,200 mV	12	1300	0.70	400	5
ASCH0016080856N \square 00	56	100 MHz,200 mV	12	1100	0.75	400	5
ASCH0016080862N \square 00	62	100 MHz,200 mV	12	1050	0.85	400	5
ASCH0016080868N \square 00	68	100 MHz,200 mV	12	1050	0.85	400	5
ASCH0016080875N \square 00	75	100 MHz,200 mV	12	900	1.00	300	5
ASCH0016080882N \square 00	82	100 MHz,200 mV	12	900	1.00	300	5

Note: When ordering, please specify tolerance code. Tolerance: S= \pm 0.3nH / J= \pm 5%

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3. Residual impedance of short chip : 0nH
4. Measure Equipment:

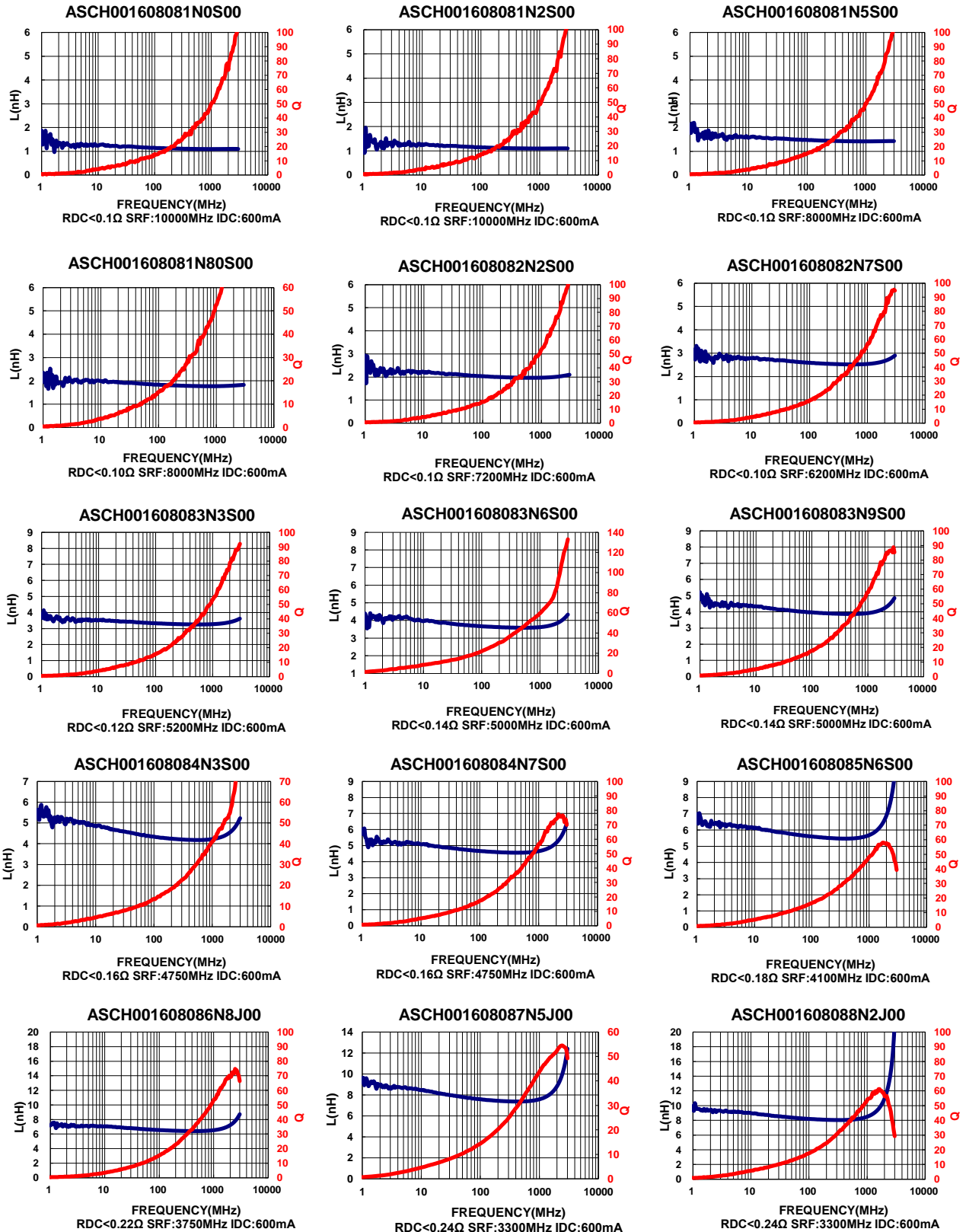
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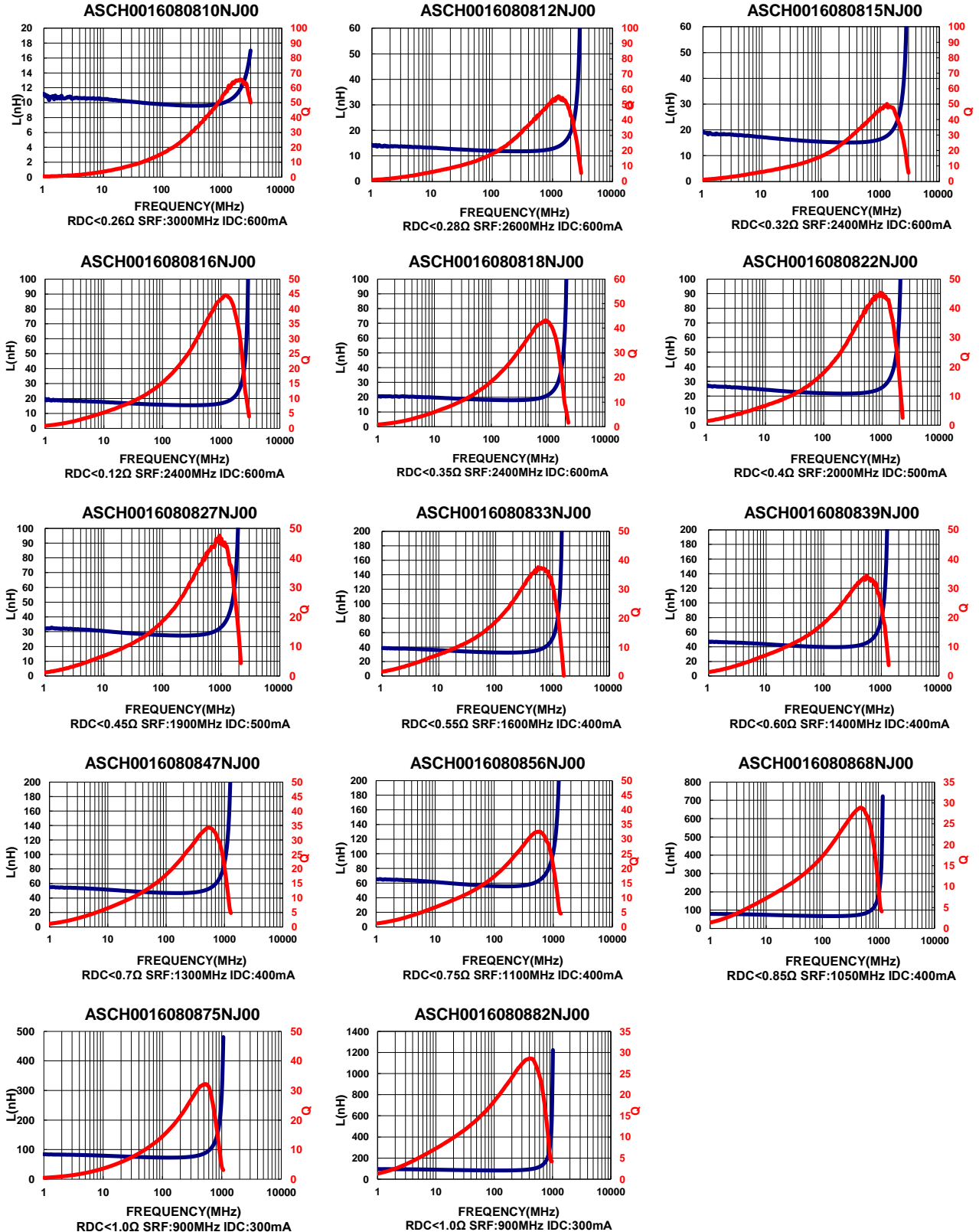
ASCH00160808 Type

Characteristics Graph



ASCH00160808 Type

Characteristics Graph

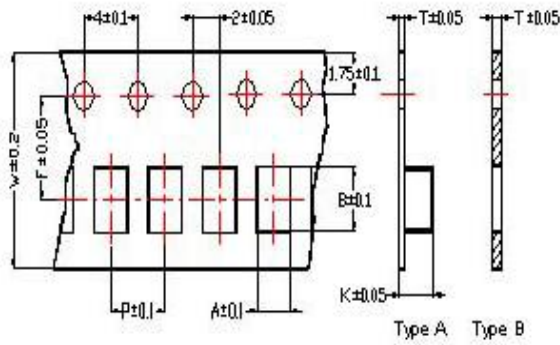


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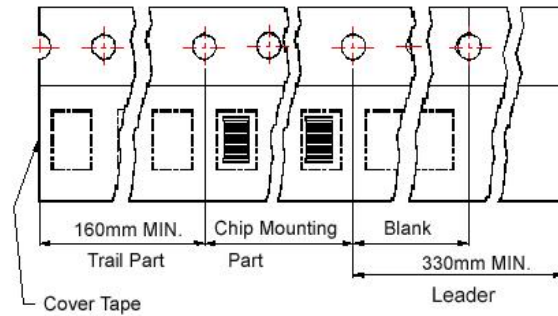
■ Packaging

Tape Dimensions

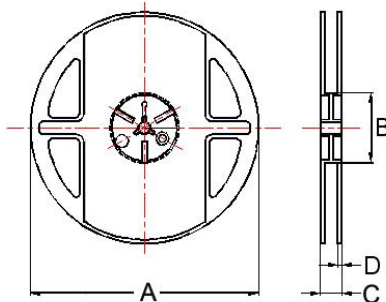


Tape Material

Carrier Tape: Polycarbonate (Tape A)
Carrier Tape: Paper (Tape B)
Cover Tape: Polystyrene



Reel Dimensions



Dimensions in mm

TYPE	Tape Dimensions							Reel Dimensions				Quantity PCS / Reel
	A	B	T	W	P	F	Tape	A	B	C	D	
ASCH00100505	0.62	1.12	0.60	8	2	3.5	B	178	60	12	1.5	10000
ASCH00160808	1.00	1.80	0.95	8	4	3.5	B	178	60	12	1.5	4000