

# Signal Inductor Multilayer Chip Bead Type

SIM-CB Series

MERITEK

## FEATURE

- Operating Temperature: -55°C ~ +125°C
- Effective EMI protection
- Low DCR
- High soldering heat resistance



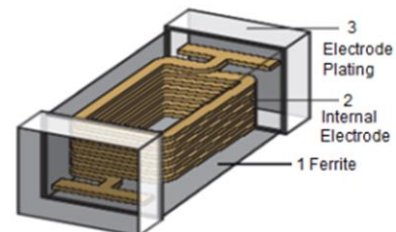
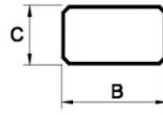
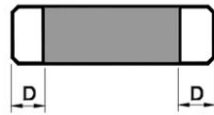
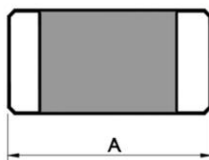
## PART NUMBERING SYSTEM



**SIM** **20** **Y** **551** **CB** **AC**  
(1) (2) (3) (4) (5) (6)

No	Item	Code	Description	Series Reference
(1)	Meritek Series	SIM	Signal Inductor	Multilayer Type
(2)	Dimension	20	20 or 2220: 5.59x5.08mm	See Below Dimension for size detail
(3)	Tolerance	Y	Y: ±25%	-25 ~ +25%
(4)	Impedance	551	551: 550Ω	First 2 are significant, Third is a multiplier (10 <sup>x</sup> )
(5)	Package	CB	CB or C: Chip Bead	Package Information
(6)	Internal Code	AC	Internal Reference	Internal Code or Project Reference

## DIMENSION



Series	EIA Size	Type	A (mm)	B (mm)	C (mm)	D (mm)	Weight (g) (1000pcs)
<a href="#">SIM01</a>	0201	N	0.6±0.03	0.30±0.03	0.30±0.03	0.1~0.2	1.1
<a href="#">SIM02</a>	0402	N, G, F	1.0±0.10	0.50±0.10	0.5±0.10	0.1~0.35	2.6
<a href="#">SIM03</a>	0603	N, G, F	1.6±0.20	0.80±0.15	0.8±0.15	0.1~0.6	6.2
<a href="#">SIM05</a>	0805	N, H, G	2.0±0.20	1.25±0.20	0.9±0.20	0.2~0.8	10
<a href="#">SIM04</a>	1206	N, H, G	3.2±0.20	1.60±0.20	1.1±0.20	0.2~1.0	30
<a href="#">SIM10</a>	1210	N, H, G	3.2±0.20	2.50±0.20	1.3±0.20	0.2~1.0	54
<a href="#">SIM08</a>	1806	N, H, G	4.5±0.25	1.60±0.20	1.6±0.20	0.2~1.0	60
<a href="#">SIM12</a>	1812	N, H, G	4.5±0.25	3.20±0.20	1.5±0.20	0.2~1.0	62
<a href="#">SIM20 (170Ω)</a>	2220	H	5.59±0.51	5.08±0.25	1.52±0.25	0.51~1.01	62
<a href="#">SIM20 (150Ω)</a>	2220	H	5.59±0.51	5.08±0.25	1.80±0.25	0.51~1.01	62
<a href="#">SIM20 (550Ω)</a>	2220	C	5.59±0.51	5.08±0.25	3.05±0.25	0.51~1.01	62
<a href="#">SIM20 (600Ω)</a>	2220	H	5.59±0.51	5.08±0.25	3.05±0.25	0.51~1.01	62

Notes:: General Current, H: High Current, G: Medium, F: High Frequency, C: High Frequency and Current

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SIM-CB Series

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## ELECTRICAL CHARACTERISTICS

### SIM01 Series – Size 0201

Part Number	Impedance @ 100MHz (Ω)	Max DCR (Ω)	Max Rated Current (mA)	Application
SIM01Y100CBNA	10 ± 25%	0.10	500	General signal line
SIM01Y300CBNA	30 ± 25%	0.30	300	General signal line
SIM01Y400CBNA	40 ± 25%	0.30	300	General signal line
SIM01Y500CBNA	50 ± 25%	0.30	300	General signal line
SIM01Y600CBNA	60 ± 25%	0.35	300	General signal line
SIM01Y700CBNA	70 ± 25%	0.35	300	General signal line
SIM01Y121CBNA	120 ± 25%	0.45	200	General signal line
SIM01Y151CBNA	150 ± 25%	0.50	200	General signal line
SIM01Y221CBNA	220 ± 25%	0.75	200	General signal line
SIM01Y301CBNA	300 ± 25%	0.90	150	General signal line

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### SIM02 Series – Size 0402

Part Number	Impedance @ 100MHz (Ω)	Max DCR (Ω)	Max Rated Current (mA)	Application
SIM02Y100CBNA	10 ± 25%	0.05	500	General signal line
SIM02Y100CBNH	10 ± 25%	0.1	500	Ultra-high speed signal line
SIM02Y100CBGA	10 ± 25%	0.03	2000	Medium current line
SIM02Y300CBNK	30 ± 25%	0.15	300	General current high frequency
SIM02Y300CBNA	30 ± 25%	0.2	300	General signal line
SIM02Y300CBNB	30 ± 25%	0.2	300	High speed signal line
SIM02Y300CBNH	30 ± 25%	0.2	300	Ultra-high speed signal line
SIM02Y300CBGA2	30 ± 25%	0.035	2200	Medium current line
SIM02Y300CBGA	30 ± 25%	0.03	3000	Medium current line
SIM02Y330CBNH	33 ± 25%	0.4	300	Ultra-high speed signal line
SIM02Y400CBNA	40 ± 25%	0.2	300	General signal line
SIM02Y600CBNK	60 ± 25%	0.3	200	General current high frequency
SIM02Y600CBNA	60 ± 25%	0.4	200	General signal line
SIM02Y600CBNB	60 ± 25%	0.4	200	High speed signal line
SIM02Y600CBNH	60 ± 25%	0.4	300	Ultra-high speed signal line
SIM02Y700CBNA	70 ± 25%	0.4	200	General signal line
SIM02Y800CBNA	80 ± 25%	0.4	200	General signal line
SIM02Y101CBNA	100 ± 25%	0.45	200	General signal line
SIM02Y101CBNB	100 ± 25%	0.5	200	High speed signal line
SIM02Y101CBNK	100 ± 25%	0.5	200	General current high frequency
SIM02Y101CBNH	100 ± 25%	0.55	300	Ultra-high speed signal line
SIM02Y101CBGA	100 ± 25%	0.09	1200	Medium current line
SIM02Y121CBNA	120 ± 25%	0.5	200	General signal line
SIM02Y121CBNB	120 ± 25%	0.5	200	High speed signal line
SIM02Y121CBNK	120 ± 25%	0.5	200	General current high frequency
SIM02Y121CBNH	120 ± 25%	0.55	300	Ultra-high speed signal line
SIM02Y121CBNA1	120 ± 25%	0.2	500	General signal line
SIM02Y121CBGA	120 ± 25%	0.09	1200	Medium current line
SIM02Y121CBGA1	120 ± 25%	0.09	1300	Medium current line

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## ELECTRICAL CHARACTERISTICS

### SIM02 Series – Size 0402

Part Number	Impedance @ 100MHz (Ω)	Impedance @1GHz (Ω)	Max DCR (Ω)	Max Rated Current (mA)	Application
SIM02Y151CBNA	150 ± 25%	-	0.6	200	General signal line
SIM02Y181CBNA	180 ± 25%	-	0.65	100	General signal line
SIM02Y221CBNA	220 ± 25%	-	0.7	100	General signal line
SIM02Y221CBNB	220 ± 25%	-	0.8	100	High speed signal line
SIM02Y221CBNK	220 ± 25%	-	0.8	100	General current high frequency
SIM02Y221CBNH	220 ± 25%	-	0.8	200	Ultra-High speed signal line
SIM02Y221CBNA3	220 ± 25%	-	0.35	300	General signal line
SIM02Y221CBNA1	220 ± 25%	-	0.28	700	General signal line
SIM02Y221CBNK1	220 ± 25%	-	0.35	800	General current high frequency
SIM02Y221CBGA	220 ± 25%	-	0.2	1000	Medium current line
SIM02Y301CBNA	300 ± 25%	-	0.75	100	General signal line
SIM02Y301CBNB	300 ± 25%	-	0.85	100	High speed signal line
SIM02Y301CBNK	300 ± 25%	-	0.85	100	General current high frequency
SIM02Y301CBNH	300 ± 25%	-	1	100	Ultra-High speed signal line
SIM02Y301CBFA	300 ± 25%	560±40%	0.8	200	High frequency line
SIM02Y301CBNA1	300 ± 25%	-	0.45	400	General signal line
SIM02Y331CBNA	330 ± 25%	-	0.75	100	General signal line
SIM02Y471CBNH	470 ± 25%	-	1.5	50	Ultra-High speed signal line
SIM02Y471CBNA	470 ± 25%	-	0.9	100	General signal line
SIM02Y471CBFA	470 ± 25%	1000±40%	1	100	High frequency line
SIM02Y471CBNB	470 ± 25%	-	1	100	High speed signal line
SIM02Y471CBNK	470 ± 25%	-	1	100	General current high frequency
SIM02Y501CBNA	500 ± 25%	-	1	100	General signal line
SIM02Y601CBNA	600 ± 25%	-	1.1	50	General signal line
SIM02Y601CBNB	600 ± 25%	-	1.5	50	High speed signal line
SIM02Y601CBNK	600 ± 25%	-	1.5	50	General current high frequency
SIM02Y601CBNH	600 ± 25%	-	2.5	50	Ultra-High speed signal line
SIM02Y601CBFA	600 ± 25%	1100±40%	1.2	100	High frequency line
SIM02Y601CBNA1	600 ± 25%	-	1	300	General signal line
SIM02Y102CBNA	1000 ± 25%	-	1.5	50	General signal line
SIM02Y102CBFA	1000 ± 25%	1700±40%	1.6	100	High frequency line
SIM02Y102CBNB	1000 ± 25%	-	1	200	High speed signal line
SIM02Y102CBNA1	1000 ± 25%	-	0.8	250	General signal line
SIM02Y102CBNA2	1000 ± 25%	-	0.58	300	General signal line
SIM02Y102CBNA3	1000 ± 25%	-	0.49	350	General signal line
SIM02Y152CBNA2	1500 ± 25%	-	0.8	250	General signal line
SIM02Y182CBFA	1800 ± 25%	1500±40%	2.2	200	High frequency line
SIM02Y182CBNA2	1800 ± 25%	-	0.8	250	General signal line

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# Signal Inductor Multilayer Chip Bead Type

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## ELECTRICAL CHARACTERISTICS

### SIM03 Series – Size 0603

Part Number	Impedance @ 100MHz (Ω)	Impedance @1GHz (Ω)	Max DCR (Ω)	Max Rated Current (mA)	Application
SIM03Y050CBNB	5 ± 25%	-	0.08	700	High speed signal line
SIM03Y070CBNH	7 ± 25%	-	0.1	900	Ultra-High speed signal line
SIM03Y100CBNH	10 ± 25%	-	0.1	900	Ultra-High speed signal line
SIM03Y190CBNA	19 ± 25%	-	0.1	400	General signal line
SIM03Y200CBNH	20 ± 25%	-	0.2	600	Ultra-High speed signal line
SIM03Y300CBNB	30 ± 25%	-	0.2	500	High speed signal line
SIM03Y300CBGA2	30 ± 25%	-	0.04	3000	Medium current line
SIM03Y300CBGA	30 ± 25%	-	0.03	3000	Medium current line
SIM03Y300CBGA1	30 ± 25%	-	0.02	4000	Medium current line
SIM03Y310CBNA	31 ± 25%	-	0.1	400	General signal line
SIM03Y330CBGA	33 ± 25%	-	0.025	3000	Medium current line
SIM03Y470CBNB	47 ± 25%	-	0.2	500	High speed signal line
SIM03Y470CBNH	47 ± 25%	-	0.3	500	Ultra-High speed signal line
SIM03Y520CBNA	52 ± 25%	-	0.15	400	General signal line
SIM03Y600CBNA	60 ± 25%	-	0.15	400	General signal line
SIM03Y600CBNB	60 ± 25%	-	0.25	450	High speed signal line
SIM03Y600CBGA	60 ± 25%	-	0.04	3000	Medium current line
SIM03Y680CBNH	68 ± 25%	-	0.1	700	Ultra-High speed signal line
SIM03Y750CBNA	75 ± 25%	-	0.15	400	General signal line
SIM03Y800CBNA	80 ± 25%	-	0.15	400	General signal line
SIM03Y101CBNA	100 ± 25%	-	0.15	400	General signal line
SIM03Y101CBNB	100 ± 25%	-	0.3	450	High speed signal line
SIM03Y101CBGH	100 ± 25%	-	0.03	3000	Medium current line
SIM03Y101CBGA	100 ± 25%	-	0.05	3000	Medium current line
SIM03Y121CBFH	120 ± 25%	500±40%	0.5	200	High frequency line
SIM03Y121CBNH	120 ± 25%	-	0.3	300	Ultra-High speed signal line
SIM03Y121CBNA	120 ± 25%	-	0.15	400	General signal line
SIM03Y121CBNB	120 ± 25%	-	0.3	450	High speed signal line
SIM03Y121CBGA	120 ± 25%	-	0.05	2000	Medium current line
SIM03Y151CBNA	150 ± 25%	-	0.15	400	General signal line
SIM03Y151CBNB	150 ± 25%	-	0.35	450	High speed signal line
SIM03Y181CBNA	180 ± 25%	-	0.2	400	General signal line
SIM03Y181CBGA	180 ± 25%	-	0.08	2000	Medium current line
SIM03Y201CBNA	200 ± 25%	-	0.2	400	General signal line
SIM03Y221CBFH	220 ± 25%	1100±40%	0.8	100	High frequency line
SIM03Y221CBNA	220 ± 25%	-	0.2	400	General signal line
SIM03Y221CBNB	220 ± 25%	-	0.35	450	High speed signal line
SIM03Y221CBGA	220 ± 25%	-	0.08	2000	Medium current line

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## ELECTRICAL CHARACTERISTICS

### SIM03 Series – Size 0603

Part Number	Impedance @ 100MHz (Ω)	Impedance @1GHz (Ω)	Max DCR (Ω)	Max Rated Current (mA)	Application
SIM03Y301CBNH	300 ± 25%	-	0.35	300	Ultra-High speed signal line
SIM03Y301CBNA	300 ± 25%	-	0.3	400	General signal line
SIM03Y301CBNB	300 ± 25%	-	0.35	450	High speed signal line
SIM03Y301CBGA1	300 ± 25%	-	0.08	1000	Medium current line
SIM03Y301CBGA	300 ± 25%	-	0.15	2000	Medium current line
SIM03Y331CBFH	330 ± 25%	1300±40%	1.2	50	High frequency line
SIM03Y331CBGA1	330 ± 25%	-	0.07	2000	Medium current line
SIM03Y401CBNA	400 ± 25%	-	0.3	400	General signal line
SIM03Y401CBNA1	400 ± 25%	-	0.2	500	General signal line
SIM03Y421CBNA	420 ± 25%	-	0.3	400	General signal line
SIM03Y451CBNA	450 ± 25%	-	0.3	400	General signal line
SIM03Y471CBNK	470 ± 25%	-	0.55	200	General current high frequency
SIM03Y471CBNB	470 ± 25%	-	0.35	450	High speed signal line
SIM03Y471CBGA1	470 ± 25%	-	0.25	1000	Medium current line
SIM03Y471CBGA	470 ± 25%	-	0.15	1500	Medium current line
SIM03Y601CBFA	600 ± 25%	600±40%	0.9	100	High frequency line
SIM03Y601CBNK	600 ± 25%	-	0.65	200	General current high frequency
SIM03Y601CBNH	600 ± 25%	-	0.65	300	Ultra-High speed signal line
SIM03Y601CBNA	600 ± 25%	-	0.35	400	General signal line
SIM03Y601CBNB	600 ± 25%	-	0.4	450	High speed signal line
SIM03Y601CBGA	600 ± 25%	-	0.3	1000	Medium current line
SIM03Y601CBGA1	600 ± 25%	-	0.1	2000	Medium current line
SIM03Y751CBNK	750 ± 25%	-	0.7	200	General current high frequency
SIM03Y751CBNA	750 ± 25%	-	0.35	400	General signal line
SIM03Y751CBGA	750 ± 25%	-	0.3	1000	Medium current line
SIM03Y102CBNH	1000 ± 25%	-	1.1	50	Ultra-High speed signal line
SIM03Y102CBFA	1000 ± 25%	1200±40%	1.5	50	High frequency line
SIM03Y102CBNK	1000 ± 25%	-	0.85	100	General current high frequency
SIM03Y102CBNA	1000 ± 25%	-	0.55	300	General signal line
SIM03Y102CBNB	1000 ± 25%	-	0.6	300	High speed signal line
SIM03Y102CBNA1	1000 ± 25%	-	0.25	800	General signal line
SIM03Y10CBGA	1000 ± 25%	-	0.25	1000	Medium current line
SIM03Y122CBNK	1200 ± 25%	-	0.85	100	General current high frequency
SIM03Y152CBNK	1500 ± 25%	-	0.9	100	General current high frequency
SIM03Y152CBNA	1500 ± 25%	-	0.6	200	General signal line
SIM03Y152CBNK1	1500 ± 25%	-	0.4	500	General current high frequency
SIM03Y202CBNK	2000 ± 25%	-	1	100	General current high frequency
SIM03Y222CBNK1	2200 ± 25%	-	0.8	50	General current high frequency
SIM03Y252CBNK	2500 ± 25%	-	1	50	General current high frequency
SIM03Y252CBNK1	2500 ± 25%	-	0.7	150	General current high frequency
SIM03Y252CBNK2	2500 ± 25%	-	0.8	200	General current high frequency

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## ELECTRICAL CHARACTERISTICS

### SIM05 Series – Size 0805

Part Number	Impedance @ 100MHz ( $\Omega$ )	Max DCR ( $\Omega$ )	Max Rated Current (mA)	Application
SIM05Y050CBNB	5 $\pm$ 25%	0.07	500	High speed signal line
SIM05Y050CBNH	5 $\pm$ 25%	0.07	500	Ultra-High speed signal line
SIM05Y070CBNH	7 $\pm$ 25%	0.07	500	Ultra-High speed signal line
SIM05Y100CBNH	10 $\pm$ 25%	0.07	500	Ultra-High speed signal line
SIM05Y100CBGH	10 $\pm$ 25%	0.03	3000	Medium current line
SIM05Y110CBGA	11 $\pm$ 25%	0.03	3000	Medium current line
SIM05Y170CBNA	17 $\pm$ 25%	0.1	300	General signal line
SIM05Y170CBGA	17 $\pm$ 25%	0.03	3000	Medium current line
SIM05Y170CBHA	17 $\pm$ 25%	0.008	6000	High current line
SIM05Y220CBHA	22 $\pm$ 25%	0.008	6000	High current line
SIM05Y260CBNA	26 $\pm$ 25%	0.1	300	General signal line
SIM05Y300CBNA	30 $\pm$ 25%	0.1	300	General signal line
SIM05Y300CBNB	30 $\pm$ 25%	0.15	300	High speed signal line
SIM05Y300CBGA	30 $\pm$ 25%	0.05	3000	Medium current line
SIM05Y300CBHA1	30 $\pm$ 25%	0.015	4000	High current line
SIM05Y300CBHA	30 $\pm$ 25%	0.008	6000	High current line
SIM05Y310CBNA	31 $\pm$ 25%	0.1	300	General signal line
SIM05Y310CBGA	31 $\pm$ 25%	0.03	3000	Medium current line
SIM05Y390CBGA	39 $\pm$ 25%	0.03	3000	Medium current line
SIM05Y390CBHA	39 $\pm$ 25%	0.008	6000	High current line
SIM05Y470CBGA	47 $\pm$ 25%	0.03	3000	Medium current line
SIM05Y500CBGA	50 $\pm$ 25%	0.03	3000	Medium current line
SIM05Y500CBHA	50 $\pm$ 25%	0.02	6000	High current line
SIM05Y520CBNA	52 $\pm$ 25%	0.15	300	General signal line
SIM05Y520CBGA	52 $\pm$ 25%	0.03	3000	Medium current line
SIM05Y600CBNA	60 $\pm$ 25%	0.15	300	General signal line
SIM05Y600CBNB	60 $\pm$ 25%	0.15	300	High speed signal line
SIM05Y600CBGA	60 $\pm$ 25%	0.04	3000	Medium current line
SIM05Y600CBHA	60 $\pm$ 25%	0.02	6000	High current line
SIM05Y750CBNB	75 $\pm$ 25%	0.2	300	High speed signal line
SIM05Y800CBNA	80 $\pm$ 25%	0.15	300	General signal line
SIM05Y800CBNK	80 $\pm$ 25%	0.3	300	General current high frequency
SIM05Y800CBGA	80 $\pm$ 25%	0.04	3000	Medium current line
SIM05Y800CBHA1	80 $\pm$ 25%	0.015	5000	High current line
SIM05Y800CBHA	80 $\pm$ 25%	0.02	6000	High current line
SIM05Y101CBNA	100 $\pm$ 25%	0.2	300	General signal line
SIM05Y101CBNB	100 $\pm$ 25%	0.2	300	High speed signal line
SIM05Y101CBGA	100 $\pm$ 25%	0.04	3000	Medium current line
SIM05Y101CBHA	100 $\pm$ 25%	0.02	5000	High current line
SIM05Y121CBNA	120 $\pm$ 25%	0.2	300	General signal line
SIM05Y121CBNB	120 $\pm$ 25%	0.2	300	High speed signal line
SIM05Y121CBNH	120 $\pm$ 25%	0.35	300	Ultra-High speed signal line

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## ELECTRICAL CHARACTERISTICS

### SIM05 Series – Size 0805

Part Number	Impedance @ 100MHz ( $\Omega$ )	Max DCR ( $\Omega$ )	Max Rated Current (mA)	Application
SIM05Y121CBGA	120 $\pm$ 25%	0.05	3000	Medium current line
SIM05Y121CBHA	120 $\pm$ 25%	0.02	4000	High current line
SIM05Y121CBHA1	120 $\pm$ 25%	0.015	5000	High current line
SIM05Y151CBNA	150 $\pm$ 25%	0.2	300	General signal line
SIM05Y181CBGA	180 $\pm$ 25%	0.05	3000	Medium current line
SIM05Y221CBNB	220 $\pm$ 25%	0.25	200	High speed signal line
SIM05Y221CBNA	220 $\pm$ 25%	0.25	300	General signal line
SIM05Y221CBGA	220 $\pm$ 25%	0.05	3000	Medium current line
SIM05Y301CBNB	300 $\pm$ 25%	0.25	200	High speed signal line
SIM05Y301CBNA	300 $\pm$ 25%	0.25	300	General signal line
SIM05Y301CBGA	300 $\pm$ 25%	0.05	3000	Medium current line
SIM05Y331CBGA	330 $\pm$ 25%	0.05	3000	Medium current line
SIM05Y401CBNA	400 $\pm$ 25%	0.3	300	General signal line
SIM05Y401CBNB	400 $\pm$ 25%	0.2	300	High speed signal line
SIM05Y471CBGA	470 $\pm$ 25%	0.1	2000	Medium current line
SIM05Y531CBNA	530 $\pm$ 25%	0.35	300	General signal line
SIM05Y601CBNB	600 $\pm$ 25%	0.25	200	High speed signal line
SIM05Y601CBNH	600 $\pm$ 25%	0.65	200	Ultra-High speed signal line
SIM05Y601CBNK	600 $\pm$ 25%	0.35	200	General current high frequency
SIM05Y601CBNA	600 $\pm$ 25%	0.35	300	General signal line
SIM05Y601CBGA1	600 $\pm$ 25%	0.3	1000	Medium current line
SIM05Y601CBGA	600 $\pm$ 25%	0.1	2000	Medium current line
SIM05Y751CBNB	750 $\pm$ 25%	0.3	200	High speed signal line
SIM05Y751CBNK	750 $\pm$ 25%	0.35	200	General current high frequency
SIM05Y102CBNB	1000 $\pm$ 25%	0.3	200	High speed signal line
SIM05Y102CBNK	1000 $\pm$ 25%	0.4	200	General current high frequency
SIM05Y102CBNA	1000 $\pm$ 25%	0.45	300	General signal line
SIM05Y102CBGA1	1000 $\pm$ 25%	0.12	1500	Medium current line
SIM05Y122CBNK	1200 $\pm$ 25%	0.4	200	General current high frequency
SIM05Y152CBNB	1500 $\pm$ 25%	0.35	200	High speed signal line
SIM05Y152CBNK	1500 $\pm$ 25%	0.45	200	General current high frequency
SIM05Y152CBNA	1500 $\pm$ 25%	0.7	300	General signal line
SIM05Y152CBGA	1500 $\pm$ 25%	0.3	1000	Medium current line
SIM05Y182CBNB	1800 $\pm$ 25%	0.4	200	High speed signal line
SIM05Y202CBNB	2000 $\pm$ 25%	0.4	200	High speed signal line
SIM05Y202CBNK	2000 $\pm$ 25%	0.6	200	General current high frequency
SIM05Y222CBNB	2200 $\pm$ 25%	0.5	200	High speed signal line
SIM05Y222CBNK	2200 $\pm$ 25%	0.6	200	General current high frequency
SIM05Y252CBNB	2500 $\pm$ 25%	0.6	200	High speed signal line
SIM05Y252CBNK	2500 $\pm$ 25%	0.7	200	General current high frequency
SIM05Y272CBNB	2700 $\pm$ 25%	0.6	200	High speed signal line
SIM05Y502CBNK	5000 $\pm$ 25%	0.6	300	General current high frequency

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# Signal Inductor Multilayer Chip Bead Type

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## ELECTRICAL CHARACTERISTICS

### SIM04 Series – Size 1206

Part Number	Impedance @ 100MHz ( $\Omega$ )	Max DCR ( $\Omega$ )	Max Rated Current (mA)	Application
SIM04Y050CBNH	5 $\pm$ 25%	0.07	500	Ultra-High speed signal line
SIM04Y070CBNH	7 $\pm$ 25%	0.07	500	Ultra-High speed signal line
SIM04Y190CBNB	19 $\pm$ 25%	0.1	500	High speed signal line
SIM04Y190CBNA	19 $\pm$ 25%	0.1	800	General signal line
SIM04Y190CBGA	19 $\pm$ 25%	0.03	3000	Medium current line
SIM04Y260CBNA	26 $\pm$ 25%	0.1	800	General signal line
SIM04Y260CBHA	26 $\pm$ 25%	0.006	6000	High current line
SIM04Y310CBNB	31 $\pm$ 25%	0.15	500	High speed signal line
SIM04Y310CBNA	31 $\pm$ 25%	0.1	800	General signal line
SIM04Y310CBGA	31 $\pm$ 25%	0.03	3000	Medium current line
SIM04Y310CBHA	31 $\pm$ 25%	0.006	6000	High current line
SIM04Y480CBHA	48 $\pm$ 25%	0.008	6000	High current line
SIM04Y500CBHA	50 $\pm$ 25%	0.008	6000	High current line
SIM04Y520CBNA	52 $\pm$ 25%	0.15	800	General signal line
SIM04Y520CBGA	52 $\pm$ 25%	0.03	3000	Medium current line
SIM04Y520CBHA	52 $\pm$ 25%	0.008	6000	High current line
SIM04Y600CBNA	60 $\pm$ 25%	0.15	500	General signal line
SIM04Y600CBNB	60 $\pm$ 25%	0.2	500	High speed signal line
SIM04Y600CBHA	60 $\pm$ 25%	0.02	4000	High current line
SIM04Y700CBNA	70 $\pm$ 25%	0.15	500	General signal line
SIM04Y700CBGA	70 $\pm$ 25%	0.04	3000	Medium current line
SIM04Y800CBGA	80 $\pm$ 25%	0.04	3000	Medium current line
SIM04Y800CBHA	80 $\pm$ 25%	0.02	4000	High current line
SIM04Y101CBNB	100 $\pm$ 25%	0.25	300	High speed signal line
SIM04Y101CBNA	100 $\pm$ 25%	0.2	450	General signal line
SIM04Y101CBGA	100 $\pm$ 25%	0.04	3000	Medium current line
SIM04Y121CBNB	120 $\pm$ 25%	0.25	300	High speed signal line
SIM04Y121CBNA	120 $\pm$ 25%	0.2	450	General signal line
SIM04Y121CBGA	120 $\pm$ 25%	0.05	3000	Medium current line
SIM04Y121CBHA	120 $\pm$ 25%	0.02	4000	High current line
SIM04Y151CBNA	150 $\pm$ 25%	0.2	450	General signal line
SIM04Y151CBGA	150 $\pm$ 25%	0.05	3000	Medium current line
SIM04Y181CBGA	180 $\pm$ 25%	0.05	3000	Medium current line
SIM04Y201CBNB	200 $\pm$ 25%	0.25	300	High speed signal line
SIM04Y221CBNA	220 $\pm$ 25%	0.2	350	General signal line
SIM04Y221CBGA	220 $\pm$ 25%	0.05	3000	Medium current line
SIM04Y301CBNB	300 $\pm$ 25%	0.3	300	High speed signal line
SIM04Y301CBNH	300 $\pm$ 25%	0.3	300	Ultra-High speed signal line
SIM04Y301CBNA	300 $\pm$ 25%	0.2	350	General signal line
SIM04Y301CBGA	300 $\pm$ 25%	0.06	3000	Medium current line
SIM04Y401CBNA	400 $\pm$ 25%	0.25	350	General signal line

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# Signal Inductor Multilayer Chip Bead Type

SIM-CB Series

MERITEK

## ELECTRICAL CHARACTERISTICS

### SIM04 Series – Size 1206

Part Number	Impedance @ 100MHz ( $\Omega$ )	Max DCR ( $\Omega$ )	Max Rated Current (mA)	Application
SIM04Y501CBGA	500 $\pm$ 25%	0.07	2500	Medium current line
SIM04Y601CBNK	600 $\pm$ 25%	0.5	200	General current high frequency
SIM04Y601CBNB	600 $\pm$ 25%	0.35	300	High speed signal line
SIM04Y601CBNH	600 $\pm$ 25%	0.45	300	Ultra-High speed signal line
SIM04Y601CBNA	600 $\pm$ 25%	0.25	350	General signal line
SIM04Y601CBNA1	600 $\pm$ 25%	0.25	500	General signal line
SIM04Y601CBGA	600 $\pm$ 25%	0.08	2000	Medium current line
SIM04Y751CBNB	750 $\pm$ 25%	0.35	300	High speed signal line
SIM04Y751CBNA	750 $\pm$ 25%	0.3	350	General signal line
SIM04Y801CBNA	800 $\pm$ 25%	0.3	350	General signal line
SIM04Y102CBNB	1000 $\pm$ 25%	0.4	200	High speed signal line
SIM04Y102CBNK	1000 $\pm$ 25%	0.7	200	General current high frequency
SIM04Y102CBNA	1000 $\pm$ 25%	0.35	350	General signal line
SIM04Y102CBGA	1000 $\pm$ 25%	0.3	1000	Medium current line
SIM04Y122CBNK	1200 $\pm$ 25%	0.7	200	General current high frequency
SIM04Y152CBNB	1500 $\pm$ 25%	0.45	200	High speed signal line
SIM04Y152CBNA	1500 $\pm$ 25%	0.4	350	General signal line
SIM04Y152CBNA1	1500 $\pm$ 25%	0.2	800	General signal line
SIM04Y202CBNB	2000 $\pm$ 25%	0.6	200	High speed signal line
SIM04Y202CBNK	2000 $\pm$ 25%	0.4	500	General current high frequency

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# Signal Inductor Multilayer Chip Bead Type

SIM-CB Series

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## ELECTRICAL CHARACTERISTICS

### SIM10 Series – Size 1210

Part Number	Impedance @ 100MHz ( $\Omega$ )	Max DCR ( $\Omega$ )	Max Rated Current (mA)	Application
SIM10Y310CBNA	31 $\pm$ 25%	0.1	500	General signal line
SIM10Y310CBNB	31 $\pm$ 25%	0.1	500	High speed signal line
SIM10Y520CBNA	52 $\pm$ 25%	0.3	400	General signal line
SIM10Y520CBGA	52 $\pm$ 25%	0.03	3000	Medium current line
SIM10Y520CBHA	52 $\pm$ 25%	0.008	6000	High current line
SIM10Y600CBNA	60 $\pm$ 25%	0.3	400	General signal line
SIM10Y600CBGA	60 $\pm$ 25%	0.03	3000	Medium current line
SIM10Y600CBHA	60 $\pm$ 25%	0.008	6000	High current line

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### SIM08 Series – Size 1806

Part Number	Impedance @ 100MHz ( $\Omega$ )	Max DCR ( $\Omega$ )	Max Rated Current (mA)	Application
SIM08Y600CBNA	60 $\pm$ 25%	0.2	500	General signal line
SIM08Y600CBGA	60 $\pm$ 25%	0.04	3000	Medium current line
SIM08Y600CBHA	60 $\pm$ 25%	0.008	6000	High current line
SIM08Y750CBHA	75 $\pm$ 25%	0.008	6000	High current line
SIM08Y800CBNA	80 $\pm$ 25%	0.3	400	General signal line
SIM08Y800CBGA	80 $\pm$ 25%	0.04	3000	Medium current line
SIM08Y800CBHA	80 $\pm$ 25%	0.008	6000	High current line
SIM08Y101CBNA	100 $\pm$ 25%	0.3	400	General signal line
SIM08Y101CBGA	100 $\pm$ 25%	0.04	3000	Medium current line
SIM08Y151CBNA	150 $\pm$ 25%	0.5	200	General signal line
SIM08Y181CBGA	180 $\pm$ 25%	0.04	3000	Medium current line
SIM08Y471CBGA	470 $\pm$ 25%	0.09	2000	Medium current line
SIM08Y601CBNA	600 $\pm$ 25%	0.8	200	General signal line
SIM08Y851CBGA	850 $\pm$ 25%	0.1	1500	Medium current line
SIM08Y102CBGA	1000 $\pm$ 25%	0.09	1500	Medium current line

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# Signal Inductor Multilayer Chip Bead Type

SIM-CB Series

MERITEK

## ELECTRICAL CHARACTERISTICS

### SIM12 Series – Size 1812

Part Number	Impedance @ 100MHz ( $\Omega$ )	Max DCR ( $\Omega$ )	Max Rated Current (mA)	Application
SIM12Y310CBNA	31 $\pm$ 25%	0.1	500	General signal line
SIM12Y600CBNA	60 $\pm$ 25%	0.2	500	General signal line
SIM12Y600CBHA	60 $\pm$ 25%	0.008	6000	High current line
SIM12Y700CBNB	70 $\pm$ 25%	0.2	500	High speed signal line
SIM12Y800CBHA	80 $\pm$ 25%	0.008	6000	High current line
SIM12Y101CBHA	100 $\pm$ 25%	0.01	8000	High current line
SIM12Y121CBNA	120 $\pm$ 25%	0.2	500	General signal line
SIM12Y121CBGA	120 $\pm$ 25%	0.04	3000	Medium current line
SIM12Y121CBHA	120 $\pm$ 25%	0.02	6000	High current line
SIM12Y151CBNA	150 $\pm$ 25%	0.2	500	General signal line
SIM12Y151CBGA	150 $\pm$ 25%	0.04	3000	Medium current line
SIM12Y151CBHA	150 $\pm$ 25%	0.02	6000	High current line
SIM12Y191CBHA	190 $\pm$ 25%	0.02	4000	High current line
SIM12Y601CBGK	600 $\pm$ 25%	0.04	3000	Medium current line
SIM12Y781CBGK	780 $\pm$ 25%	0.04	3000	Medium current line
SIM12Y881CBHK	880 $\pm$ 25%	0.03	4000	High current line

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### SIM20 Series – Size 2220

Part Number	Impedance @ 100MHz ( $\Omega$ )	Max DCR ( $\Omega$ )	Max Rated Current (mA)	Application
SIM20Y151CBHI	150 $\pm$ 25%	0.015	5000	High current line
SIM20Y171CBHI	170 $\pm$ 25%	0.03	4000	High current line
SIM20Y551CBCI	550 $\pm$ 25%	0.035	4000	High current High frequency line
SIM20Y601CBHI	600 $\pm$ 25%	0.025	4000	High current line

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# Signal Inductor Multilayer Chip Bead Type

SIM-CB Series

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## RELIABILITY AND TEST CONDITIONS

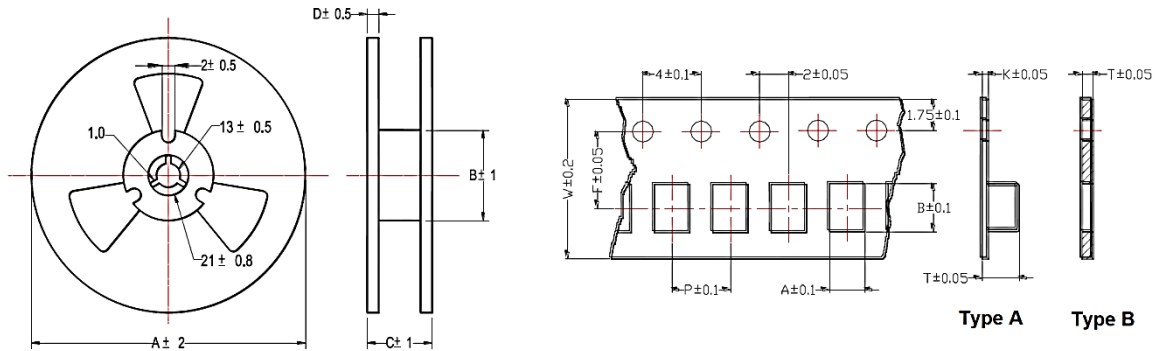
Item	Test Condition	Requirements
<b>Impedance</b>	HP4286A	Refer to standard electrical specification
<b>DC Resistance</b>	HP4338 digital mili-ohm meter	Refer to standard electrical specification
<b>Substrate Bending</b>	Test device shall be soldered on the substrate Substrate Dimension: 100x40x0.8mm Deflection: 3.0mm Keeping Time: 10 seconds and then return	Without deformation cases Impedance: within $\pm 30\%$ of initial value DC Resistance shall be satisfied
<b>Vibration</b>	Test device shall be soldered on the substrate Oscillation Frequency: 10 to 55 to 10Hz for 1 minute Amplitude: 1.5mm peak to peak Time: 2Hours for each axis, total 6 hours	No visible damage Impedance: within $\pm 30\%$ of initial value DC Resistance shall be satisfied
<b>Resistance to Soldering Heat</b>	Solder temperature: $265 \pm 5^\circ\text{C}$ Immersion time: $6 \pm 1$ second Preheating: $100 \sim 150^\circ\text{C}$ , 1 minute Measured after exposure in the room condition for 24 hours Solder: Sn-3Ag-0.5Cu	No visible damage Electrical CHARACTERISTICS and mechanical CHARACTERISTICS shall be satisfied
<b>Solderability</b>	Solder Temperature: $240 \pm 5^\circ\text{C}$ Immersion time: $3 \pm 1$ second Solder: Sn-3Ag-0.5Cu	95% minimum coverage of all metallized area
<b>Terminal Strength</b>	Solder chip on PCB and apply 10N (1.02Kgf) for 10 seconds	Without deformation cases Impedance: within $\pm 30\%$ of initial value DC Resistance shall be satisfied
<b>Temperature Cycle</b>	One cycle: step1: $-55 \pm 3^\circ\text{C}$ for $30 \pm 3$ minutes step2: Standard atmospheric conditions 5 seconds or less step3: $125 \pm 2^\circ\text{C}$ for $30 \pm 3$ minutes step4: Standard atmospheric conditions 5 seconds or less Total 100 cycles Measured after exposure in the room condition for 24 hours	No visible damage Impedance: within $\pm 30\%$ of initial value DC Resistance shall be satisfied
<b>Humidity Resistance</b>	Temperature: $60 \pm 2^\circ\text{C}$ Relative Humidity: 90~95% Apply max rated current for $1008 \pm 12$ hours Measured after exposure in the room condition for 24 hours	No visible damage Impedance: within $\pm 30\%$ of initial value DC Resistance shall be satisfied
<b>High Temperature Resistance</b>	Temperature: $125 \pm 2^\circ\text{C}$ Apply max rated current for $1008 \pm 12$ hours Measured after exposure in the room condition for 24 hours	No visible damage Impedance: within $\pm 30\%$ of initial value DC Resistance shall be satisfied
<b>Low Temperature Storage Life Test</b>	Temperature: $-55 \pm 2^\circ\text{C}$ Apply max rated current for $1008 \pm 12$ hours Measured after exposure in the room condition for 24 hours	No visible damage Impedance: within $\pm 30\%$ of initial value DC Resistance shall be satisfied
<b>Thermal Shock</b>	$-55 \sim 125^\circ\text{C}$ kept stabilized for 30 minutes each for 100 cycles Measured after exposure in the room condition for 24 hours	No visible damage Impedance: within $\pm 30\%$ of initial value DC Resistance shall be satisfied

# Signal Inductor Multilayer Chip Bead Type

SIM-CB Series

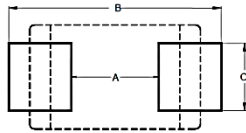
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## PACKAGING AND LAND PATTERN RECOMMENDATION

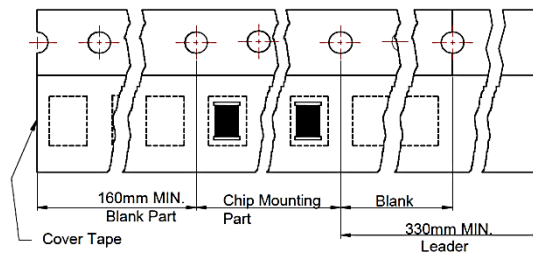


Reel Dimensions

Tape Dimensions



Recommended Pattern



Tape Material

Series	Size	Reel Dimensions (mm)				Recommended Pattern (mm)			Quantity (EA)
		A	B	C	D	A	B	C	
SIM01	0201	178	60	10	2	0.25	0.69	0.32	15,000
SIM02	0402	178	60	10	2	0.50	2.10	0.55	10,000
SIM03	0603	178	60	10	2	0.60	2.60	0.80	4,000
SIM05	0805	178	60	10	2	0.66	3.23	1.47	4,000
SIM04	1206	178	60	10	2	2.20	4.40	2.06	3,000
SIM10	1210	178	60	10	2	2.13	4.06	2.74	2,000
SIM08	1806	178	60	14	2	2.70	5.70	2.24	2,000
SIM12	1812	178	60	14	2	2.57	5.90	4.22	1,000
SIM20	2220	330	100	14.5	2	3.05	9.19	6.10	2,000

Series	Size	Tape Dimensions (mm)							Type
		W	F	P	A	B	K	T	
SIM01	0201	8.0	3.5	2.0	0.38	0.68	-	1.10	B
SIM02	0402	8.0	3.5	2.0	0.65	1.15	-	0.80	B
SIM03	0603	8.0	3.5	4.0	1.10	1.90	-	1.10	B
SIM05	0805	8.0	3.5	4.0	1.55	2.30	-	1.20	B
SIM04	1206	8.0	3.5	4.0	1.90	3.50	0.2	1.40	A
SIM10	1210	8.0	3.5	4.0	2.90	3.60	0.2	1.70	A
SIM08	1806	12	5.5	4.0	2.90	4.90	0.3	1.40	A
SIM12	1812	12	5.5	8.0	3.60	4.90	0.3	2.05	A
SIM20	2220	12	5.5	8.0	5.40	5.95	0.3	3.42	A

\*Specifications subject to change without notice.