MORE® CHANCE 茂昌电子

CUSTOMER :	STD
PRODUCTS :	SHIELDED SMD Power Inductor
PART NO :	MCSCH Series
CUST P/ NO :	
DATE :	2024.7.18
SALES DEP :	
E-MAIL :	

VERSION :	REV.A
CHANGE PROJECT :	-
BEFORE :	-
AFTER :	-
CHANGE DATE :	-
CUSTOMER SIGNATURE :	-

APPROVAL BY :	*CHECK BY :*	*DRAWN BY :*
Honey Wei	***Leo Wang***	***May Gao***

CHANGE HISTORY

Ver	Revision Items	Before Revision	After Revision	Date
Rev.A	-	-	-	2024.7.18

MCSHC Series

- *SHIELDED SMD POWER INDUCTOR*
- *Operating Temperature up tp -40 ℃ ~ 125 ℃*
- *High Current up to 19.9 A*
- *Low DCR down to 6.0mOhms*
- *Environmental Lead free*
- *Environmental RoHS2.0 compliant*
- *Environmental halogen free*
- *Storage Temperature ：-40 ℃ ~ +85 ℃*
- *Packaging 13"Reel ,Plastic tape:16.0/24.0mm wide*

FEATURES

. High current and inductance capacity.
. Specially designed for surface mounting. equipment, good for high density application.
. Low profile very effective in space-conscious applications.
. Low resistance and high-energy storage.

Applications

. Power supply for VTR, OA equipment, LCD TV,
. Notebook PC, DC/DC Converter,DC/AC Inverter.

PRODUCT IDENTIFICATION

MC	SCH	73	Z	1R0	N
①	②	③	④	⑤	⑥

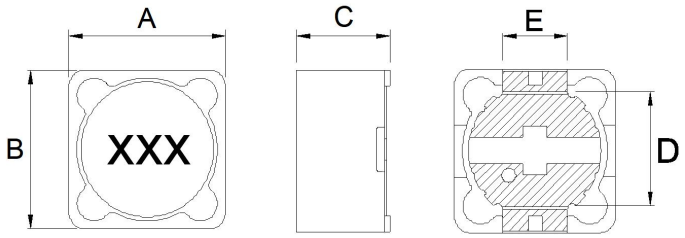
① Brand & Product classification
② Product Series NO.
③ External Dimensions.(73：L:7.0 × W:7.0 × H:3.0) [mm]
④ Separator code.
⑤ Inductance. (Exp. 1.0 uH = 1R0)

Example	Nominal Value
1R0	1.0uH
1R5	1.5uH
3R3	3.3uH
2R2	2.2uH

⑥Inductance Tolerance.(L：±15% ; M：±20% ; N：±30%)

Mechanical & Dimensions

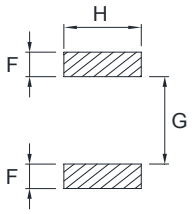
(Unit: mm)



Code	Dimensions
A	7.3 ± 0.3
B	7.3 ± 0.3
C	3.5 Max
D	5.4 ± 0.2
E	1.8 Ref

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
F	1.6 Ref
G	4.8 Ref
H	2.2 Ref

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR2 (mΩ) Max	I-sat[3] (Amps) Typ	Marking		
MCSCH73Z1R0N	1.0 ± 30%	16.0	7.97	1R0		
MCSCH73Z1R5N	1.5 ± 30%	23.0	5.5	1R5		
MCSCH73Z2R2N	2.2 ± 30%	27.0	4.5	2R2		
MCSCH73Z3R3N	3.3 ± 30%	31.0	4.0	3R3		
MCSCH73Z4R7N	4.7 ± 30%	48.0	3.5	4R7		
MCSCH73Z5R6N	5.6 ± 30%	56.0	3.0	5R6		
MCSCH73Z6R8N	6.8 ± 30%	62.0	2.5	6R8		
MCSCH73Z100N	10.0 ± 30%	72.0	1.68	100		
MCSCH73Z150M	15.0 ± 20%	130.0	1.33	150		
MCSCH73Z180M	18.0 ± 20%	140.0	1.2	180		
MCSCH73Z220M	22.0 ± 20%	190.0	1.07	220		
MCSCH73Z330M	33.0 ± 20%	240.0	0.91	330		
MCSCH73Z390M	39.0 ± 20%	320.0	0.77	390		
MCSCH73Z470M	47.0 ± 20%	360.0	0.76	470		
MCSCH73Z680M	68.0 ± 20%	520.0	0.61	680		
MCSCH73Z101M	100 ± 20%	790.0	0.50	101		

Note:

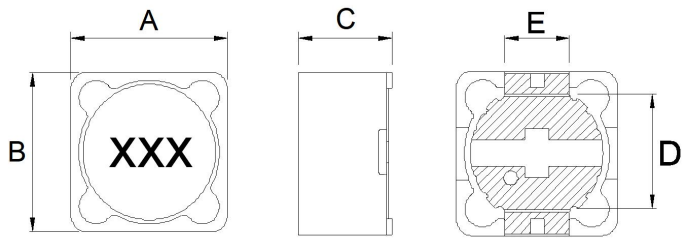
1.Inductance is measured at 100 KHz and 1.0 Vrms.

2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 25% rolloff.

Mechanical & Dimensions

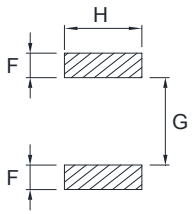
(Unit: mm)



Code	Dimensions
A	7.3 ± 0.3
B	7.3 ± 0.3
C	3.5 Max
D	5.4 ± 0.2
E	1.8 Ref

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
F	1.6 Ref
G	4.8 Ref
H	2.2 Ref

Electrical Characteristics

Part Number	Inductance[1] (µH)	DCR2 (mΩ) Max	I-sat3 (Amps) Typ	Marking		
MCSCH73Z151M	150 ± 20%	1270	0.43	151		
MCSCH73Z181M	180 ± 20%	1450	0.39	181		
MCSCH73Z221M	220 ± 20%	1650	0.35	221		
MCSCH73Z331M	330 ± 20%	2620	0.28	331		
MCSCH73Z391M	390 ± 20%	2940	0.26	391		
MCSCH73Z471M	470 ± 20%	4180	0.24	471		
MCSCH73Z561M	560 ± 20%	4670	0.22	561		
MCSCH73Z681M	680 ± 20%	5730	0.19	681		
MCSCH73Z821M	820 ± 20%	6540	0.18	821		
MCSCH73Z102M	1000 ± 20%	9440	0.16	102		

Note:

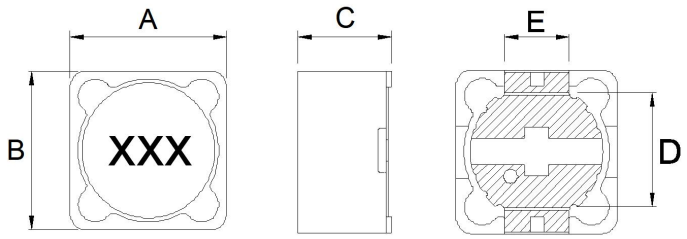
1.Inductance is measured at 100 KHz and 1.0 Vrms.

2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 25% rolloff.

Mechanical & Dimensions

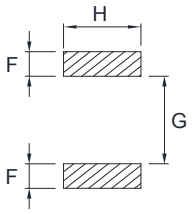
(Unit: mm)



Code	Dimensions
A	7.3 ± 0.3
B	7.3 ± 0.3
C	4.5 Max
D	5.4 ± 0.2
E	1.8 Ref

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
F	1.6 Ref
G	4.8 Ref
H	2.2 Ref

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR2 (mΩ) Max	I-sat[3] (Amps) Typ	Marking		
MCSCH74Z1R0N	1.0 ± 30%	15.0	9.0	1R0		
MCSCH74Z1R5N	1.5 ± 30%	18.0	7.0	1R5		
MCSCH74Z2R2N	2.2 ± 30%	28.0	6.0	2R2		
MCSCH74Z3R3N	3.3 ± 30%	32.0	4.8	3R3		
MCSCH74Z3R9N	3.9 ± 30%	35.0	4.4	3R9		
MCSCH74Z4R7N	4.7 ± 30%	38.0	4.0	4R7		
MCSCH74Z5R6N	5.6 ± 30%	40.0	3.5	5R6		
MCSCH74Z6R8N	6.8 ± 30%	45.0	3.0	6R8		
MCSCH74Z100N	10.0 ± 30%	49.0	1.84	100		
MCSCH74Z120M	12.0 ± 20%	58.0	1.71	120		
MCSCH74Z150M	15.0 ± 20%	81.0	1.47	150		
MCSCH74Z180M	18.0 ± 20%	91.0	1.31	180		
MCSCH74Z220M	22.0 ± 20%	110.0	1.23	220		
MCSCH74Z270M	27.0 ± 20%	150.0	1.12	270		
MCSCH74Z330M	33.0 ± 20%	170.0	0.96	330		
MCSCH74Z390M	39.0 ± 20%	230.0	0.91	390		

Note:

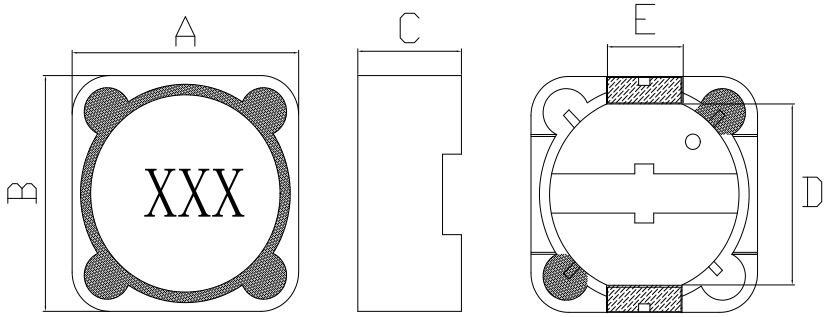
1.Inductance is measured at 100 KHz and 1.0 Vrms.

2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 25% rolloff.

Mechanical & Dimensions

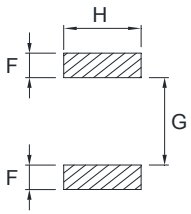
(Unit: mm)



Code	Dimensions
A	7.3 ± 0.3
B	7.3 ± 0.3
C	4.5 Max
D	5.4 ± 0.2
E	1.8 Ref

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
F	1.6 Ref
G	4.8 Ref
H	2.2 Ref

Electrical Characteristics

Part Number	Inductance[1] (µH)	DCR2 (mΩ) Max	I-sat[3] (Amps) Typ	Marking		
MCSCH74Z470M	47.0 ± 20%	260	0.88	470		
MCSCH74Z560M	56.0 ± 20%	350	0.8	560		
MCSCH74Z680M	68.0 ± 20%	380	0.7	680		
MCSCH74Z820M	82.0 ± 20%	430	0.61	820		
MCSCH74Z101M	100 ± 20%	610	0.6	101		
MCSCH74Z121M	120 ± 20%	660	0.52	121		
MCSCH74Z151M	150 ± 20%	880	0.46	151		
MCSCH74Z181M	180 ± 20%	980	0.42	181		
MCSCH74Z221M	220 ± 20%	1170	0.36	221		
MCSCH74Z271M	270 ± 20%	1640	0.34	271		
MCSCH74Z331M	330 ± 20%	1860	0.32	331		
MCSCH74Z391M	390 ± 20%	2850	0.29	391		
MCSCH74Z471M	470 ± 20%	3010	0.26	471		
MCSCH74Z561M	560 ± 20%	3620	0.23	561		
MCSCH74Z681M	680 ± 20%	4630	0.22	681		
MCSCH74Z821M	820 ± 20%	5200	0.2	821		
MCSCH74Z102M	1000 ± 20%	6000	0.18	102		

Note:

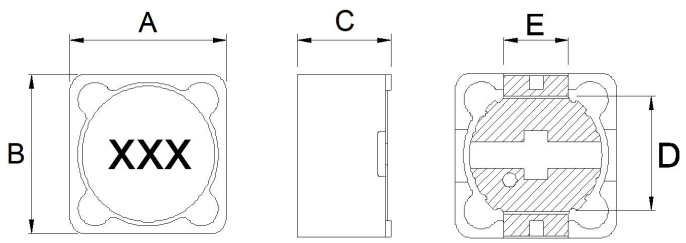
1.Inductance is measured at 100 KHz and 1.0 Vrms.

2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 25% rolloff.

Mechanical & Dimensions

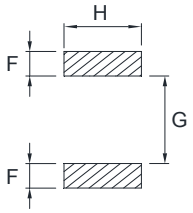
(Unit: mm)



Code	Dimensions
A	12.5 Max
B	12.5 Max
C	5.0 Max
D	7.6 ± 0.2
E	5.0 Ref

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
F	2.8 Ref
G	7.0 Ref
H	5.4 Ref

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR2 (mΩ) Max	I-sat[3] (Amps) Typ	Marking		
MCSCH124Z3R9M	3.9 ± 20%	15.0	6.5	3R9		
MCSCH124Z4R7M	4.7 ± 20%	18.0	5.7	4R7		
MCSCH124Z6R8M	6.8 ± 20%	23.0	4.9	6R8		
MCSCH124Z8R2M	8.2 ± 20%	26.0	4.6	8R2		
MCSCH124Z100M	10.0 ± 30%	28.0	4.5	100		
MCSCH124Z120M	12.0 ± 20%	38.0	4.0	120		
\MCSCH124Z150M	15.0 ± 20%	50.0	3.2	150		
MCSCH124Z180M	18.0 ± 20%	57.0	3.1	180		
MCSCH124Z220M	22.0 ± 20%	66.0	2.9	220		
MCSCH124Z270M	27.0 ± 20%	80.0	2.8	270		
MCSCH124Z330M	33.0 ± 20%	97.0	2.7	330		
MCSCH124Z390M	39.0 ± 20%	132	2.1	390		
MCSCH124Z470M	47.0 ± 20%	150	1.9	470		
MCSCH124Z560M	56.0 ± 20%	190	1.8	560		
MCSCH124Z680M	68.0 ± 20%	220	1.5	680		
MCSCH124Z820M	82.0 ± 20%	260	1.3	820		

Note:

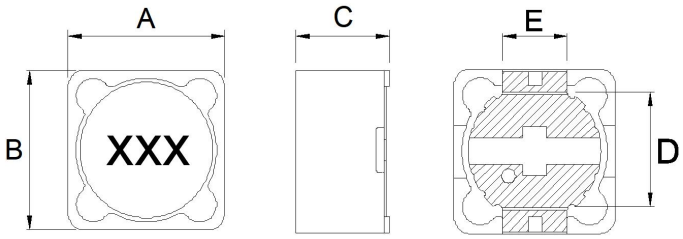
1.Inductance is measured at 100 KHz and 1.0 Vrms.

2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 25% rolloff.

Mechanical & Dimensions

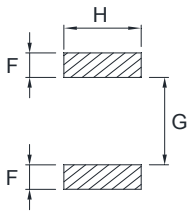
(Unit: mm)



Code	Dimensions
A	12.5 Max
B	12.5 Max
C	5.0 Max
D	7.6 ± 0.2
E	5.0 Ref

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
F	2.8 Ref
G	7.0 Ref
H	5.4 Ref

Electrical Characteristics

Part Number	Inductance[1] (µH)	DCR2 (mΩ) Max	I-sat[3] (Amps) Typ	Marking		
MCSCH124Z101M	100 ± 20%	308	1.2	101		
MCSCH124Z121M	120 ± 20%	380	1.1	121		
MCSCH124Z151M	150 ± 20%	530	0.95	151		
MCSCH124Z181M	180 ± 20%	620	0.85	181		
MCSCH124Z221M	220 ± 20%	700	0.8	221		
MCSCH124Z271M	270 ± 20%	870	0.6	271		
MCSCH124Z331M	330 ± 20%	990	0.5	331		

Note:

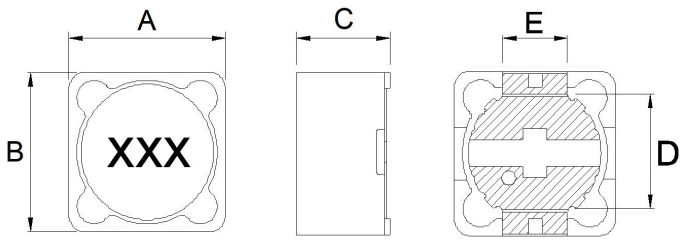
1.Inductance is measured at 100 KHz and 1.0 Vrms.

2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 25% rolloff.

Mechanical & Dimensions

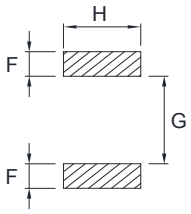
(Unit: mm)



Code	Dimensions
A	12.5 Max
B	12.5 Max
C	6.0 Max
D	7.6 ± 0.2
E	5.0 Ref

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
F	2.8 Ref
G	7.0 Ref
H	5.4 Ref

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR2 (mΩ) Max	I-sat[3] (Amps) Typ	Marking		
MCSCH125Z1R3N	1.3 ± 30%	12.0	8.0	1R3		
MCSCH125Z2R1N	2.1 ± 30%	14.0	7.0	2R1		
MCSCH125Z3R1N	3.1 ± 30%	17.0	6.0	3R1		
MCSCH125Z4R4N	4.4 ± 30%	20.0	5.0	4R4		
MCSCH125Z5R8N	5.8 ± 30%	21.0	4.4	5R8		
MCSCH125Z7R5N	7.5 ± 30%	24.0	4.2	7R5		
MCSCH125Z100N	10.0 ± 30%	25.0	4.0	100		
MCSCH125Z120M	12.0 ± 20%	27.0	3.5	120		
MCSCH125Z150M	15.0 ± 20%	30.0	3.3	150		
MCSCH125Z180M	18.0 ± 20%	34.0	3.0	180		
MCSCH125Z220M	22.0 ± 20%	36.0	2.8	220		
MCSCH125Z270M	27.0 ± 20%	51.0	2.3	270		
MCSCH125Z330M	33.0 ± 20%	57.0	2.1	330		
MCSCH125Z390M	39.0 ± 20%	68.0	2.0	390		
MCSCH125Z470M	47.0 ± 20%	75.0	1.8	470		
MCSCH125Z560M	56.0 ± 20%	110	1.7	560		

Note:

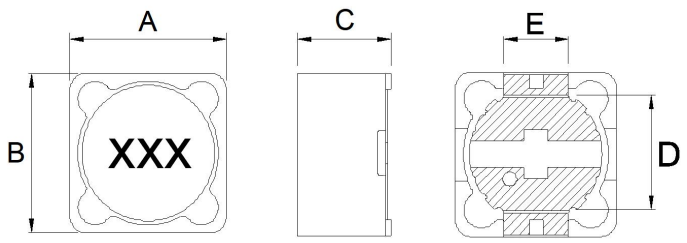
1.Inductance is measured at 100 KHz and 1.0 Vrms.

2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 25% rolloff.

Mechanical & Dimensions

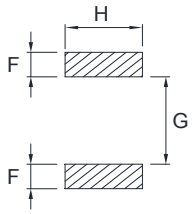
(Unit: mm)



Code	Dimensions
A	12.5 Max
B	12.5 Max
C	6.0 Max
D	7.6 ± 0.2
E	5.0 Ref

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
F	2.8 Ref
G	7.0 Ref
H	5.4 Ref

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR2 (mΩ) Max	I-sat[3] (Amps) Typ	Marking		
MCSCH125Z680M	68.0 ± 20%	120	1.5	680		
MCSCH125Z820M	82.0 ± 20%	140	1.4	820		
MCSCH125Z101M	100 ± 20%	160	1.3	101		
MCSCH125Z121M	120 ± 20%	170	1.1	121		
MCSCH125Z151M	150 ± 20%	230	1.0	151		
MCSCH125Z181M	180 ± 20%	290	0.9	181		
MCSCH125Z221M	220 ± 20%	400	0.8	221		
MCSCH125Z271M	270 ± 20%	460	0.75	271		
MCSCH125Z331M	330 ± 20%	510	0.68	331		
MCSCH125Z391M	390 ± 20%	690	0.65	391		
MCSCH125Z471M	470 ± 20%	770	0.58	471		
MCSCH125Z561M	560 ± 20%	860	0.54	561		
MCSCH125Z681M	680 ± 20%	1200	0.48	681		
MCSCH125Z821M	820 ± 20%	1340	0.43	821		
MCSCH125Z102M	1000 ± 20%	1530	0.4	102		

Note:

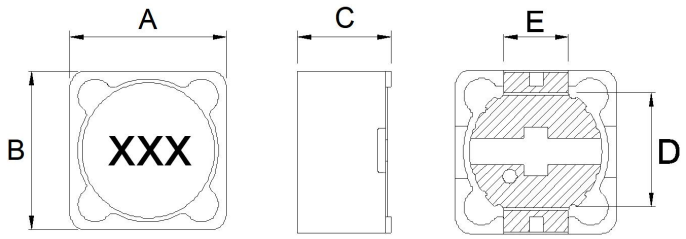
1.Inductance is measured at 100 KHz and 1.0 Vrms.

2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 25% rolloff.

Mechanical & Dimensions

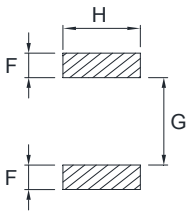
(Unit: mm)



Code	Dimensions
A	12.5 Max
B	12.5 Max
C	8.0 Max
D	7.6 ± 0.2
E	5.0 Ref

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
F	2.8 Ref
G	7.0 Ref
H	5.4 Ref

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR2 (mΩ) Max	I-sat[3] (Amps) Typ	Marking		
MCSCH127Z1R2N	1.2 ± 30%	7.0	9.8	1R2		
MCSCH127Z2R4N	2.4 ± 30%	12.0	8.0	2R4		
MCSCH127Z3R5N	3.5 ± 30%	14.0	7.5	3R5		
MCSCH127Z4R7N	4.7 ± 30%	16.0	6.8	4R7		
MCSCH127Z6R1N	6.1 ± 30%	18.0	6.6	6R1		
MCSCH127Z7R6N	7.6 ± 30%	20.0	5.9	7R6		
MCSCH127Z100N	10.0 ± 30%	22.0	5.4	100		
MCSCH127Z120M	12.0 ± 20%	24.0	4.9	120		
MCSCH127Z150M	15.0 ± 20%	30.0	4.5	150		
MCSCH127Z180M	18.0 ± 20%	39.0	3.9	180		
MCSCH127Z220M	22.0 ± 20%	43.0	3.6	220		
MCSCH127Z270M	27.0 ± 20%	46.0	3.4	270		
MCSCH127Z330M	33.0 ± 20%	65.0	3.0	330		
MCSCH127Z390M	39.0 ± 20%	73.0	2.75	390		
MCSCH127Z470M	47.0 ± 20%	100	2.5	470		
MCSCH127Z560M	56.0 ± 20%	110	2.35	560		

Note:

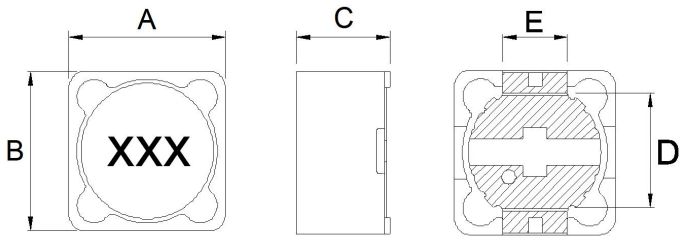
1.Inductance is measured at 100 KHz and 1.0 Vrms.

2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 25% rolloff.

Mechanical & Dimensions

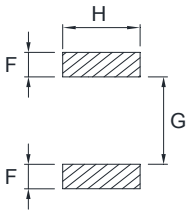
(Unit: mm)



Code	Dimensions
A	12.5 Max
B	12.5 Max
C	8.0 Max
D	7.6 ± 0.2
E	5.0 Ref

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
F	2.8 Ref
G	7.0 Ref
H	5.4 Ref

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR2 (mΩ) Max	I-sat[3] (Amps) Typ	Marking		
MCSCH127Z680M	68.0 ± 20%	140	2.1	680		
MCSCH127Z820M	82.0 ± 20%	160	1.95	820		
MCSCH127Z101M	100 ± 20%	220	1.7	101		
MCSCH127Z121M	120 ± 20%	250	1.6	121		
MCSCH127Z151M	150 ± 20%	280	1.42	151		
MCSCH127Z181M	180 ± 20%	350	1.3	181		
MCSCH127Z221M	220 ± 20%	390	1.16	221		
MCSCH127Z271M	270 ± 20%	560	1.06	271		
MCSCH127Z331M	330 ± 20%	640	0.95	331		
MCSCH127Z391M	390 ± 20%	700	0.88	391		
MCSCH127Z471M	470 ± 20%	980	0.79	471		
MCSCH127Z561M	560 ± 20%	1070	0.73	560		
MCSCH127Z681M	680 ± 20%	1460	0.67	681		
MCSCH127Z821M	820 ± 20%	1640	0.6	821		
MCSCH127Z102M	1000 ± 20%	1820	0.55	102		

Note:

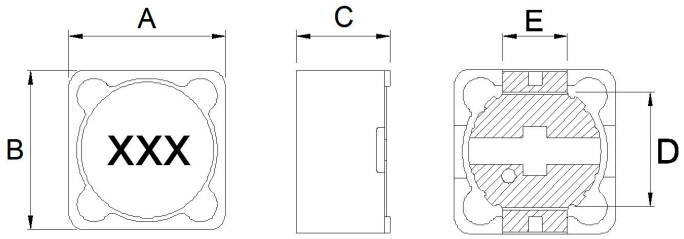
1.Inductance is measured at 100 KHz and 1.0 Vrms.

2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 25% rolloff.

Mechanical & Dimensions

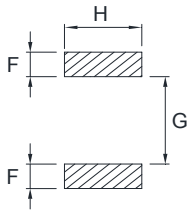
(Unit: mm)



Code	Dimensions
A	12.5 Max
B	12.5 Max
C	10.0 Max
D	7.6 ± 0.2
E	5.0 Ref

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
F	2.8 Ref
G	7.0 Ref
H	5.4 Ref

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR2 (mΩ) Max	I-sat[3] (Amps) Typ	Marking		
MCSCH129Z1R0N	1.0 ± 30%	6.0	19.9	1R0		
MCSCH129Z1R8N	1.8 ± 30%	7.0	13.4	1R8		
MCSCH129Z2R5N	2.5 ± 30%	8.0	12.16	2R5		
MCSCH129Z3R5N	3.5 ± 30%	10.0	12.0	3R5		
MCSCH129Z4R7N	4.7 ± 30%	11.0	10.0	4R7		
MCSCH129Z6R8N	6.8 ± 30%	13.0	8.56	6R8		
MCSCH129Z7R5N	7.5 ± 30%	14.0	8.48	7R5		
MCSCH129Z100N	10.0 ± 30%	18.0	7.12	100		
MCSCH129Z120M	12.0 ± 20%	19.0	7.04	120		
MCSCH129Z150M	15.0 ± 20%	26.0	5.84	150		
MCSCH129Z180M	18.0 ± 20%	28.0	5.48	180		
MCSCH129Z220M	22.0 ± 20%	29.0	5.12	220		
MCSCH129Z270M	27.0 ± 20%	42.0	4.68	270		
MCSCH129Z330M	33.0 ± 20%	53.0	4.25	330		
MCSCH129Z390M	39.0 ± 20%	58.0	3.92	390		
MCSCH129Z470M	47.0 ± 20%	63.0	3.6	470		

Note:

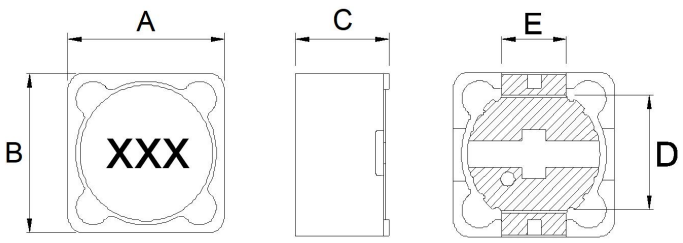
1.Inductance is measured at 100 KHz and 1.0 Vrms.

2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 25% rolloff.

Mechanical & Dimensions

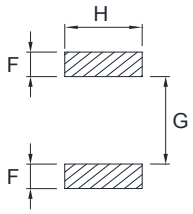
(Unit: mm)



Code	Dimensions
A	12.5 Max
B	12.5 Max
C	10.0 Max
D	7.6 ± 0.2
E	5.0 Ref

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
F	2.8 Ref
G	7.0 Ref
H	5.4 Ref

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR2 (mΩ) Max	I-sat[3] (Amps) Typ	Marking		
MCSCH129Z560M	56.0 ± 20%	68.0	2.85	560		
MCSCH129Z680M	68.0 ± 20%	93.0	2.76	680		
MCSCH129Z820M	82.0 ± 20%	99.0	2.62	820		
MCSCH129Z101M	100 ± 20%	126	2.31	101		
MCSCH129Z121M	120 ± 20%	154	2.05	121		
MCSCH129Z151M	150 ± 20%	174	1.8	151		
MCSCH129Z181M	180 ± 20%	191	1.66	181		
MCSCH129Z221M	220 ± 20%	246	1.64	221		
MCSCH129Z271M	270 ± 20%	314	1.46	271		
MCSCH129Z331M	330 ± 20%	386	1.28	331		
MCSCH129Z391M	390 ± 20%	428	1.17	391		
MCSCH129Z471M	470 ± 20%	471	1.06	471		
MCSCH129Z561M	560 ± 20%	650	1.01	561		
MCSCH129Z681M	680 ± 20%	730	0.83	681		
MCSCH129Z821M	820 ± 20%	824	0.81	821		
MCSCH129Z102M	1000 ± 20%	1220	0.7	102		

Note:

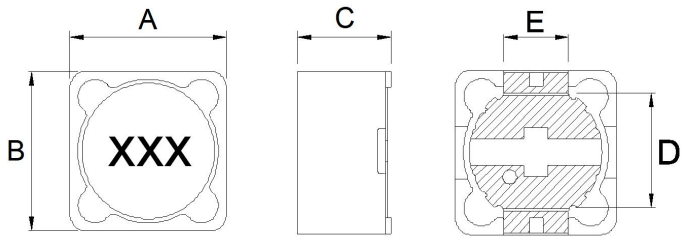
1.Inductance is measured at 100 KHz and 1.0 Vrms.

2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 25% rolloff.

Mechanical & Dimensions

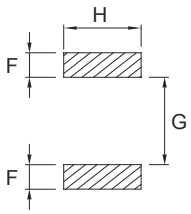
(Unit: mm)



Code	Dimensions
A	12.5 Max
B	12.5 Max
C	10.0 Max
D	7.6 ± 0.2
E	5.0 Ref

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
F	2.8 Ref
G	7.0 Ref
H	5.4 Ref

Electrical Characteristics

Part Number	Inductance[1] (µH)	DCR2 (mΩ) Max	I-sat[3] (Amps) Typ	Marking		
MCSCH129Z122M	1200 ± 20%	1330	0.64	122		
MCSCH129Z152M	1500 ± 20%	1990	0.56	152		
MCSCH129Z182M	1800 ± 20%	2180	0.48	182		
MCSCH129Z222M	2200 ± 20%	2580	0.43	222		

Note:

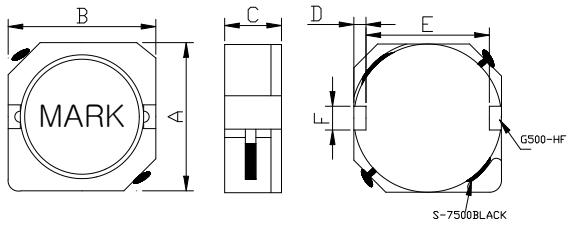
1.Inductance is measured at 100 KHz and 1.0 Vrms.

2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 25% rolloff.

Mechanical & Dimensions

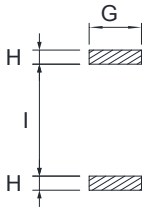
(Unit: mm)



Code	Dimensions
A	10.0 ± 0.5
B	10.0 ± 0.5
C	3.0 Max
D	1.2 Typ
E	7.7 Typ
F	3.0 Typ

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
G	3.2 Ref
H	1.6 Ref
I	7.3 Ref

Electrical Characteristics

Part Number	Inductance[1] (µH)	DCR2 (mΩ) Max	I-sat3 (Amps) Typ	Marking		
MCSCH103RZ1R0N	1.0 ± 30%	9.0	7.5	1R0		
MCSCH103RZ1R5N	1.5 ± 30%	11.0	7.0	1R5		
MCSCH103RZ2R2M	2.2 ± 20%	16.9	6.7	2R2		
MCSCH103RZ3R3M	3.3 ± 20%	24.0	5.56	3R3		
MCSCH103RZ3R6M	3.8 ± 20%	26.0	5.56	3R6		
MCSCH103RZ4R7M	4.7 ± 20%	30.0	4.65	4R7		
MCSCH103RZ6R8M	6.8 ± 20%	35.0	3.84	6R8		
MCSCH103RZ8R2M	8.2 ± 20%	50.0	3.54	8R2		
MCSCH103RZ100M	10.0 ± 20%	59.0	3.18	100		
MCSCH103RZ150M	15.0 ± 20%	91.0	2.6	150		
MCSCH103RZ220M	22.0 ± 20%	143	2.16	220		
MCSCH103RZ270M	27.0 ± 20%	180	1.8	270		
MCSCH103RZ330M	33.0 ± 20%	202	1.74	330		
MCSCH103RZ470M	47.0 ± 20%	299	1.43	470		
MCSCH103RZ560M	56.0 ± 20%	325	1.36	560		

Note:

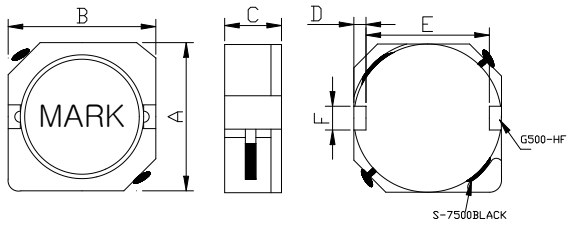
1.Inductance is measured at 100 KHz and 1.0 Vrms.

2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 25% rolloff.

Mechanical & Dimensions

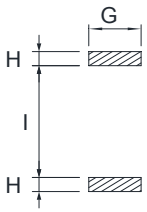
(Unit: mm)



Code	Dimensions
A	10.0 ± 0.5
B	10.0 ± 0.5
C	3.0 Max
D	1.2 Typ
E	7.7 Typ
F	3.0 Typ

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
G	3.2 Ref
H	1.6 Ref
I	7.3 Ref

Electrical Characteristics

Part Number	Inductance[1] (µH)	DCR2 (mΩ) Max	I-sat3 (Amps) Typ	Marking		
MCSCH103RZ680M	68.0 ± 20%	429	1.22	680		
MCSCH103RZ101M	100 ± 20%	683	1.02	101		
MCSCH103RZ151M	150 ± 20%	876.3	0.7	151		
MCSCH103RZ221M	220 ± 20%	1625	0.6	221		
MCSCH103RZ301M	300 ± 20%	1700	0.55	301		
MCSCH103RZ331M	330 ± 20%	1700	0.5	331		
MCSCH103RZ391M	390 ± 20%	1900	0.3	391		
MCSCH103RZ102M	1000 ± 20%	4500	0.23	102		

Note:

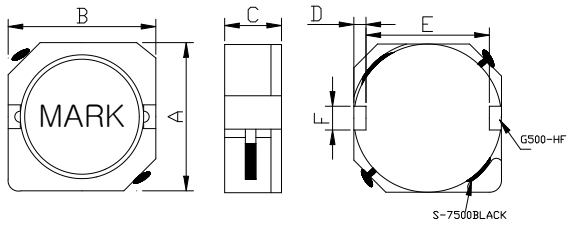
1.Inductance is measured at 100 KHz and 1.0 Vrms.

2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 25% rolloff.

Mechanical & Dimensions

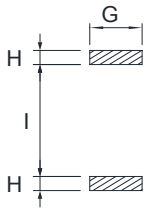
(Unit: mm)



Code	Dimensions
A	10.0 ± 0.5
B	10.0 ± 0.5
C	4.0 Max
D	1.2 Typ
E	7.7 Typ
F	3.0 Typ

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
G	3.2 Ref
H	1.6 Ref
I	7.3 Ref

Electrical Characteristics

Part Number	Inductance[1] (µH)	DCR2 (mΩ) Max	I-sat3 (Amps) Typ	Marking		
MCSCH104RZ1R0N	1.0 ± 30%	6.5	10.5	1R0		
MCSCH104RZ1R5N	1.5 ± 30%	10.5	9.5	1R5		
MCSCH104RZ1R8N	1.8 ± 30%	10.5	9.5	1R8		
MCSCH104RZ2R2N	2.2 ± 30%	10.5	7.5	2R2		
MCSCH104RZ2R5N	2.5 ± 30%	10.5	7.5	2R5		
MCSCH104RZ3R3N	3.3 ± 30%	13.0	6.0	3R3		
MCSCH104RZ3R8N	3.8 ± 30%	15.0	6.0	3R8		
MCSCH104RZ4R7M	4.7 ± 20%	23.0	5.8	4R7		
MCSCH104RZ5R2M	5.2 ± 20%	23.0	5.5	5R2		
MCSCH104RZ6R8M	6.8 ± 20%	27.0	4.8	6R8		
MCSCH104RZ7R0M	7.0 ± 20%	27.0	4.8	7R0		
MCSCH104RZ8R2M	8.2 ± 20%	35.0	4.4	8R2		
MCSCH104RZ100M	10.0 ± 20%	35.0	4.4	100		
MCSCH104RZ120M	12.0 ± 20%	46.0	4.0	120		
MCSCH104RZ150M	15.0 ± 20%	50.0	3.6	150		

Note:

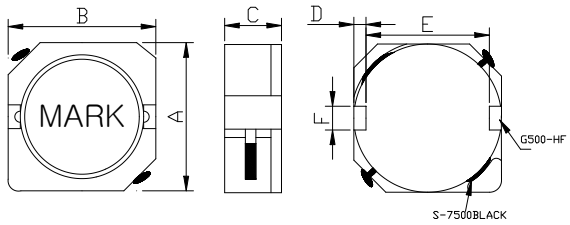
1.Inductance is measured at 100 KHz and 1.0 Vrms.

2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 25% rolloff.

Mechanical & Dimensions

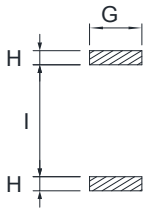
(Unit: mm)



Code	Dimensions
A	10.0 ± 0.5
B	10.0 ± 0.5
C	4.0 Max
D	1.2 Typ
E	7.7 Typ
F	3.0 Typ

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
G	3.2 Ref
H	1.6 Ref
I	7.3 Ref

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR2 (mΩ) Max	I-sat3 (Amps) Typ	Marking		
MCSCH104RZ180M	18.0 ± 20%	70.0	3.1	180		
MCSCH104RZ220M	22.0 ± 20%	73.0	2.9	220		
MCSCH104RZ270M	27.0 ± 20%	89.0	2.6	270		
MCSCH104RZ330M	33.0 ± 20%	93.0	2.3	330		
MCSCH104RZ390M	39.0 ± 20%	125	2.2	390		
MCSCH104RZ470M	47.0 ± 20%	128	2.1	470		
MCSCH104RZ560M	56.0 ± 20%	188	1.65	560		
MCSCH104RZ680M	68.0 ± 20%	213	1.5	680		
MCSCH104RZ820M	82.0 ± 20%	300	1.4	820		
MCSCH104RZ101M	100 ± 20%	304	1.35	101		
MCSCH104RZ121M	120 ± 20%	420	1.18	121		
MCSCH104RZ151M	150 ± 20%	506	1.15	151		
MCSCH104RZ181M	180 ± 20%	650	1.0	181		
MCSCH104RZ221M	220 ± 20%	756	0.92	221		
MCSCH104RZ271M	270 ± 20%	1020	0.8	271		

Note:

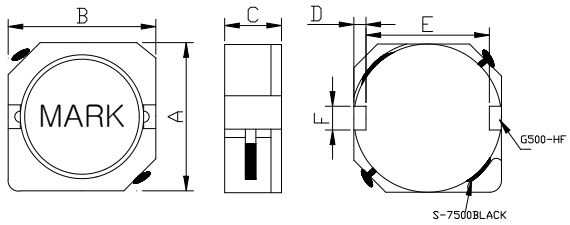
1.Inductance is measured at 100 KHz and 1.0 Vrms.

2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 35% rolloff.

Mechanical & Dimensions

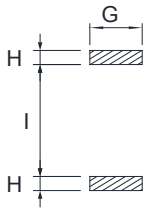
(Unit: mm)



Code	Dimensions
A	10.0 ± 0.5
B	10.0 ± 0.5
C	4.0 Max
D	1.2 Typ
E	7.7 Typ
F	3.0 Typ

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
G	3.2 Ref
H	1.6 Ref
I	7.3 Ref

Electrical Characteristics

Part Number	Inductance[1] (µH)	DCR2 (mΩ) Max	I-sat3 (Amps) Typ	Marking		
MCSCH104RZ331M	330 ± 20%	1090	0.7	331		
MCSCH104RZ391M	390 ± 20%	1500	0.6	391		
MCSCH104RZ471M	470 ± 20%	1690	0.5	471		
MCSCH104RZ561M	560 ± 20%	2550	0.45	561		
MCSCH104RZ681M	680 ± 20%	2600	0.45	681		
MCSCH104RZ821M	820 ± 20%	3800	0.45	821		
MCSCH104RZ102M	1000 ± 20%	4050	0.4	102		
MCSCH104RZ152M	1500 ± 20%	5200	0.14	152		
MCSCH104RZ202M	2000 ± 20%	7800	0.12	202		

Note:

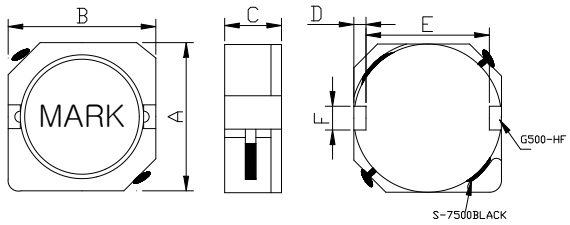
1.Inductance is measured at 100 KHz and 1.0 Vrms.

2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 25% rolloff.

Mechanical & Dimensions

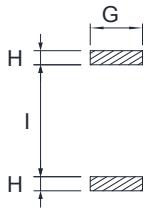
(Unit: mm)



Code	Dimensions
A	10.0 ± 0.5
B	10.0 ± 0.5
C	5.1 Max
D	1.2 Typ
E	7.7 Typ
F	3.0 Typ

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
G	3.2 Ref
H	1.6 Ref
I	7.3 Ref

Electrical Characteristics

Part Number	Inductance[1] (µH)	DCR2 (mΩ) Max	I-sat3 (Amps) Typ	Marking		
MCSCH105RZ1R5N	1.5 ± 30%	6.5	10.5	1R5		
MCSCH105RZ2R2N	2.2 ± 30%	7.2	9.25	2R2		
MCSCH105RZ3R3N	3.3 ± 30%	10.4	7.8	3R3		
MCSCH105RZ4R7M	4.7 ± 20%	12.3	6.4	4R7		
MCSCH105RZ6R8M	6.8 ± 20%	18.0	5.4	6R8		
MCSCH105RZ8R2M	8.2 ± 20%	24.0	4.85	8R2		
MCSCH105RZ100M	10.0 ± 20%	26.0	4.5	100		
MCSCH105RZ120M	12.0 ± 20%	33.0	4.0	120		
MCSCH105RZ150M	15.0 ± 20%	41.0	3.6	150		
MCSCH105RZ220M	22.0 ± 20%	61.0	2.95	220		
MCSCH105RZ270M	27.0 ± 20%	69.0	2.6	270		
MCSCH105RZ330M	33.0 ± 20%	84.0	2.5	330		
MCSCH105RZ390M	39.0 ± 20%	106	2.3	390		
MCSCH105RZ470M	47.0 ± 20%	130	2.0	470		
MCSCH105RZ560M	56.0 ± 20%	149	1.8	560		

Note:

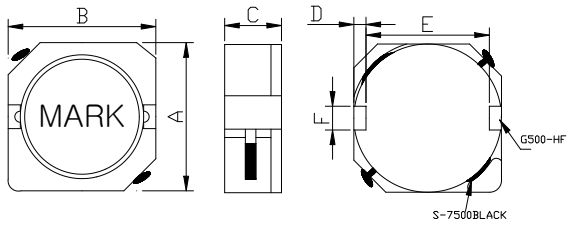
1.Inductance is measured at 100 KHz and 1.0 Vrms.

2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 25% rolloff.

Mechanical & Dimensions

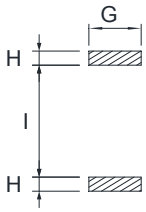
(Unit: mm)



Code	Dimensions
A	10.0 ± 0.5
B	10.0 ± 0.5
C	5.1 Max
D	1.2 Typ
E	7.7 Typ
F	3.0 Typ

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
G	3.2 Ref
H	1.6 Ref
I	7.3 Ref

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR2 (mΩ) Max	I-sat3 (Amps) Typ	Marking		
MCSCH105RZ680M	68.0 ± 20%	201	1.65	680		
MCSCH105RZ820M	82.0 ± 20%	227	1.45	820		
MCSCH105RZ101M	100 ± 20%	253	1.35	101		
MCSCH105RZ121M	120 ± 20%	350	1.2	121		
MCSCH105RZ151M	150 ± 20%	370	1.1	151		
MCSCH105RZ181M	180 ± 20%	419	1.04	181		
MCSCH105RZ221M	220 ± 20%	484	0.75	221		
MCSCH105RZ331M	330 ± 20%	812	0.73	331		
MCSCH105RZ391M	390 ± 20%	953	0.7	391		
MCSCH105RZ471M	470 ± 20%	1289	0.6	471		
MCSCH105RZ561M	560 ± 20%	1430	0.5	561		
MCSCH105RZ681M	680 ± 20%	1600	0.5	681		
MCSCH105RZ821M	820 ± 20%	1768	0.48	821		
MCSCH105RZ102M	1000 ± 20%	1989	0.42	102		

Note:

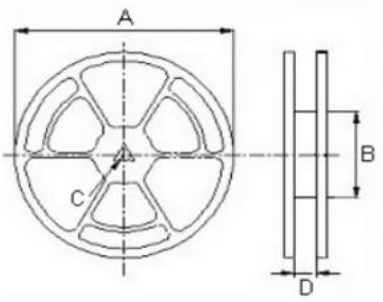
1.Inductance is measured at 100 KHz and 1.0 Vrms.

2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 25% rolloff.

Packaging

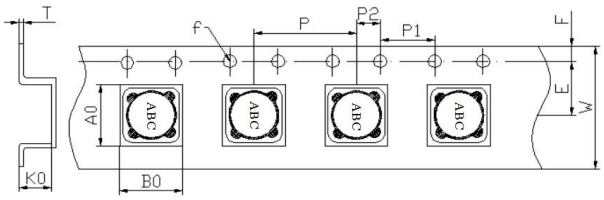
Reel Dimension:



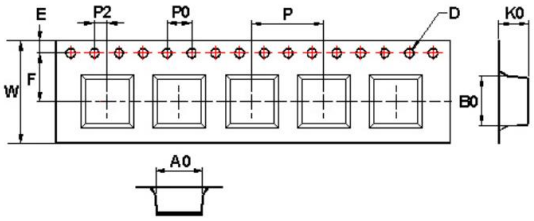
P/N	Type	A(mm)	B(mm)	C(mm)	D(mm)	Chip/Reel
MCSCH73Z Series	13" x 16mm	330	100	13.5	16.5	1,000
MCSCH74Z Series	13" x 16mm	330	100	13.5	16.5	1,000
MCSCH124Z Series	13" x 24mm	330	100	13.5	24.5	500
MCSCH125Z Series	13" x 24mm	330	100	13.5	24.5	500
MCSCH127Z Series	13" x 24mm	330	100	13.5	24.5	500
MCSCH129Z Series	13" x 24mm	330	100	13.5	24.5	350
MCSCH103RZ Series	13" x 24mm	330	100	13.5	24.5	1,000
MCSCH104RZ Series	13" x 24mm	330	100	13.5	24.5	1,000
MCSCH105RZ Series	13" x 24mm	330	100	13.5	24.5	750

Packaging

Tape Dimension:



图一

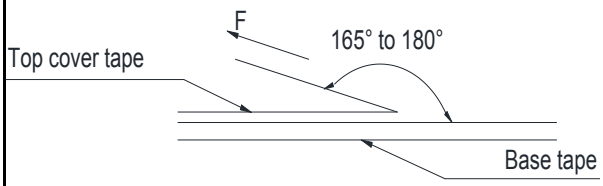


图二

P/N	Ao(mm)	Bo(mm)	Ko(mm)	E(mm)	P(mm)	T(mm)	W(mm)		
MCSCH73Z Series	8.0±0.15	8.0±0.15	4.7±0.1	7.1±0.1	12	0.4	16.0±0.3		图1
MCSCH74Z Series	8.0±0.15	8.0±0.15	4.7±0.1	7.1±0.1	12	0.4	16.0±0.3		图1
MCSCH124Z Series	12.6±0.1	12.6±0.1	4.2±0.1	11.5±0.1	16	0.4	24.0±0.3		图1
MCSCH125Z Series	12.6±0.1	12.6±0.1	6.2±0.1	11.5±0.1	16	0.4	24.0±0.3		图1
MCSCH127Z Series	12.6±0.1	12.6±0.1	9.0±0.1	11.5±0.1	16	0.4	24.0±0.3		图1
MCSCH129Z Series	12.6±0.1	12.6±0.1	10.3±0.1	11.5±0.1	16	0.4	24.0±0.3		图1
P/N	Ao(mm)	Bo(mm)	Ko(mm)	E(mm)	W(mm)	P(mm)	P2(mm)		
MCSCH103RZ Series	10.7±0.1	10.7±0.1	3.3±0.1	1.75±0.1	24.0±0.3	16.0±0.1	2.0±0.1		图2
MCSCH104RZ Series	10.7±0.1	10.7±0.1	4.2±0.1	1.75±0.1	24.0±0.3	16.0±0.1	2.0±0.1		图2
MCSCH105RZ Series	10.7±0.1	10.7±0.1	5.5±0.1	1.75±0.1	24.0±0.3	16.0±0.1	2.0±0.1		图2

Packaging

Tearing Off Force:



The force tearing off cobe tape is 10 to 130 g.f in the arrow direction under the following conditions			
Room Temp (℃)	Room Humidity (%)	Room atrn (hPa)	Teaming Speed (mm/min)
5~35	45~85	860~1060	300

※Storage Conditions

1. Temperature and humidity conditions: -40℃ ~ +85℃ and 70% RH.
2. Recommended products should be used within 6 months form the time of delivery.
3. The packaging material should be kept where no chlorine or sulfur exists in the air.

※Transportation

1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
3. Bulk handling should ensure that abrasion and mechanical shock are minimized.

Recommended Soldering Conditions

Figure 1. Re-flow Soldering

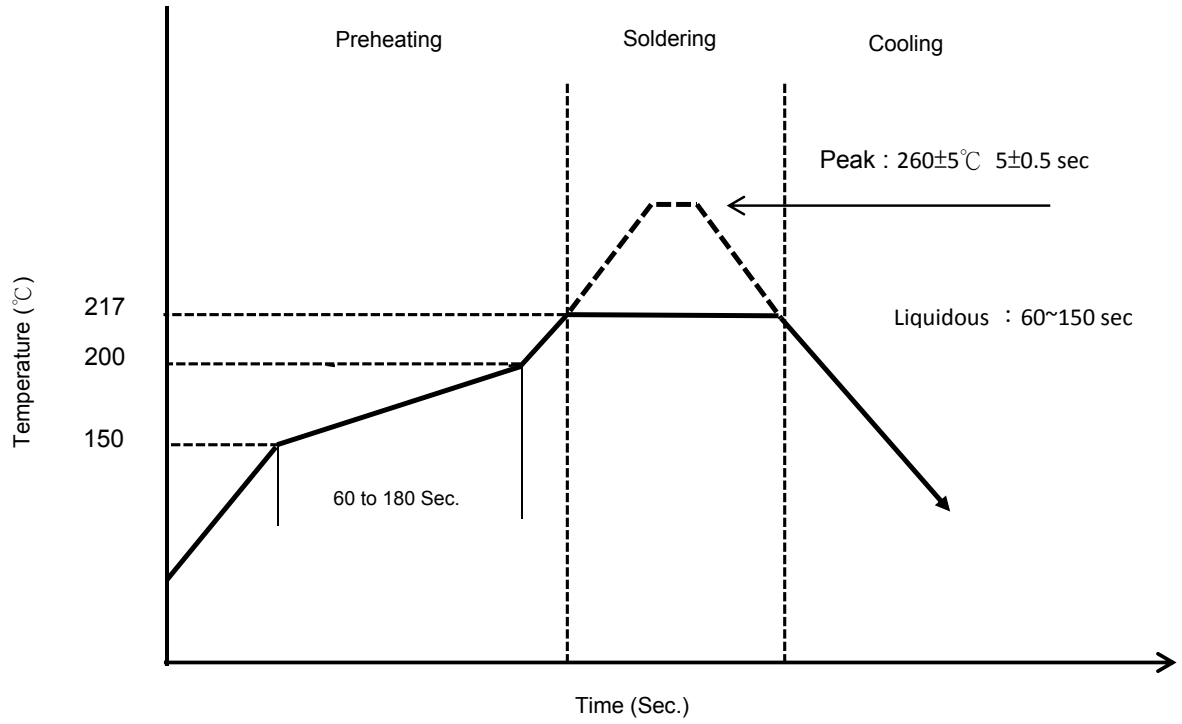
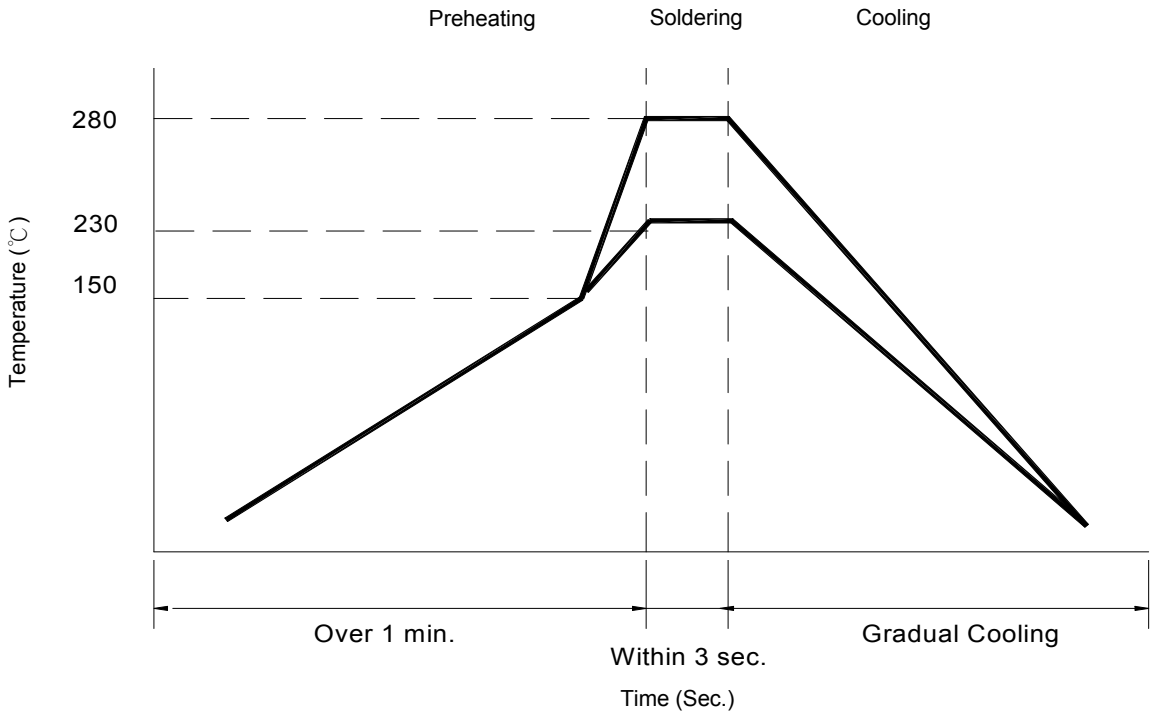
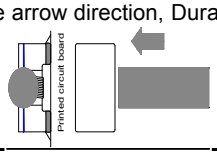


Figure 2. Hand Soldering



Reliability and Testing Conditions

Item	Specification	Conditions
Operating temperature range	-40℃ ~ +125℃ (Including self-temperature rise)	
Storage temperature and humidity range	-40°C ~ +85°C , 70% RH Max	
Solderability	More than 90% of the terminal electrode should be covered with solder.	- Preheat: 150 ℃, 60 sec - Solder: Sn96.5%-Ag3%-Cu0.5% - Temperature: 245±5℃ - Flux for lead free: Rosin 9.5% - Dip time: 4±1 sec - Depth: completely cover the termination
Resistance to Soldering Heat	Inductance within ±20% of initial value. No disconnection or short circuit. The appearance shall not break.	- Solder technique simulation: SMD - Temperature (°C): 260 ± 5 (solder temp) - Time (s): 10 ± 1 - Temperature ramp / immersion and emersion rate: 25 mm/s ± 6 mm/s - Number of heat cycles: 1
Resistance to High Temperature	Inductance within ±20% of initial value. No disconnection or short circuit. The appearance shall not break.	500 hrs. at 125°C±3°C Unpowered. Measurement at 24±4 hours after test conclusion.
Resistance to Low Temperature	Inductance within ±20% of initial value. No disconnection or short circuit. The appearance shall not break.	500 hrs. at -40°C±3°C. Unpowered. Measurement at 24±4 hours after test conclusion.
Resistance to Humidity	Inductance within ±20% of initial value. No disconnection or short circuit. The appearance shall not break.	After 500 hours in 40±2°C and 90 to 95% humidity , and 24±4 hour drying under normal condition.
Thermal shock	Inductance within ±20% of initial value. No disconnection or short circuit. The appearance shall not break.	After 100 cycles of following condition. Step / Temperature (℃) / Times (min.) 1 / -40±3°C / 30 2 / Room Temperature / Within 3 3 / 125±3°C / 30 4 / Room Temperature / Within 3
Vibration Test	Inductance within ±10% of initial value and appearance shall not break.	After vibration for 1hour, In each of three orientations at sweep vibration (10~55~10Hz) with 1.52mm P-P Amplitudes.
Terminal strength	The terminal electrode and the ferrite must not be damaged	Solder a chip to test substrate, and then laterally apply a load 10N in the arrow direction, Duration :5s 
Drop Test	Inductance within ±10% of initial value. The appearance shall not break.	Drop 3 times on a concrete floor from a height of 75cm by inimum packing