MORE® CHANCE 茂昌电子

CUSTOMER :	STD
PRODUCTS :	Molding Typ SMD Power Inductor
PART NO :	MCSM-T Series
CUST P/ NO :	
DATE :	2022.12.09
SALES DEP :	
E-MAIL :	

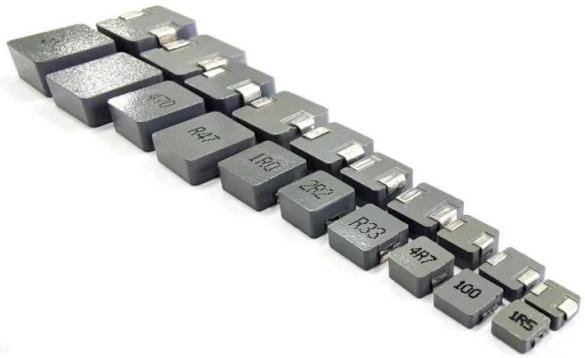
VERSION :	REV.B
CHANGE PROJECT :	
BEFORE :	
AFTER :	
CHANGE DATE :	新版
CUSTOMER SIGNATURE :	

APPROVAL BY :	*CHECK BY :*	*DRAWN BY :*
Honey Wei	***Leo Wang***	***Lan***

CHANGE HISTORY

Ver	Revision Items	Before Revision	After Revision	Date
Rev.A	新制定	-	-	2022.12.09
Rev.B	新增32尺寸			2023.2.22
	新增75尺寸			

MCSM-T Series



- *SHIELDED SMD POWER INDUCTOR*
- *Operating Temperature up tp -40 ℃ ~ 125 ℃*
- *High Current up to 60 A*
- *Low DCR down to 1.0mOhms*
- *Environmental Lead free*
- *Environmental RoHS2.0 compliant*
- *Environmental halogen free*
- *Storage Temperature ：-40 ℃ ~ +85 ℃*
- *Packaging 13"Reel, Plastic tape: 12/16/24 mm wide*

FEATURES

. Lowest DCR/UH in this package size
. Ultra low buzz noise due to composite construction
. Frequency up to 5MHZ

Applications

. Laptops and PCs and Graphics cards.
· Voltage Regulator Module (VRM).
· DC/DC converter in distributed power systems or VRM applications
· Battery power systems
· DC/DC converters

PRODUCT IDENTIFICATION

MC	SM	104	Z	1R0	M	T	□□□□
①	②	③	④	⑤	⑥	⑦	⑧

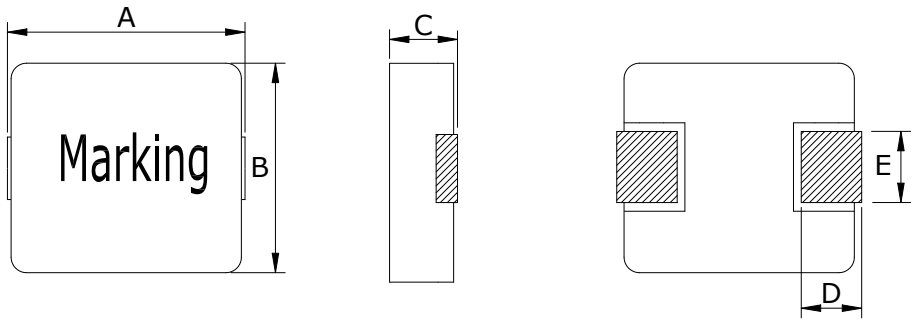
① Brand & Product classification
② Product Series NO.(SM：SMD Molding Typ Powder Inductor.)
③ External Dimensions.(104：L:10.0 × W:10.0 × H:4.0) [mm]
④ Separator code.
⑤ Nominal Inductance

Example	Nominal Value
R22	0.22uH
1R0	1.0uH
100	10uH
101	100uH
N70	70nH

⑥ Inductance Tolerance.(L：±15% ; M：±20% ; N：±30%)
⑦ Material Code.(T：T Type material.)
⑧ Design Code.(* Standard product is blank)

Mechanical & Dimensions

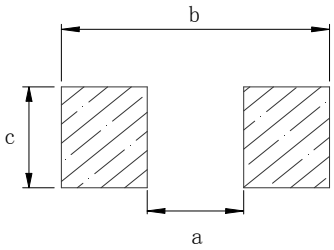
(Unit: mm)



Code	Dimensions
A	3.8Max
B	3.5Max
C	2.0Max
D	0.7±0.2
E	1.2±0.2

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
a	1.9 Typ
b	4.1 Typ
c	1.45 Typ

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR[2] (mΩ) Max	I-sat[3] (Amps)Typ	I-rms[4] (Amps)Typ	Marking	
MCSM32ZR33MT	0.33±20%	21.0	10.0	8.0	R33	
MCSM32ZR47MT	0.47±20%	23.0	9.0	7.0	R47	
MCSM32ZR68MT	0.68±20%	29.0	7.0	5.5	R68	
MCSM32Z1R0MT	1.0±20%	38.0	5.0	4.0	1R0	
MCSM32Z1R5MT	1.5±20%	50.0	4.0	3.8	1R5	
MCSM32Z2R2MT	2.2±20%	75.0	3.7	3.5	2R2	
MCSM32Z3R3MT	3.3±20%	145.0	3.5	3.0	3R3	
MCSM32Z4R7MT	4.7±20%	200.0	3.0	2.6	4R7	
MCSM32Z5R6MT	5.6±20%	238.0	2.6	2.2	5R6	
MCSM32Z6R8MT	6.8±20%	300.0	2.2	1.9	6R8	
MCSM32Z8R2MT	8.2±20%	390.0	1.9	1.6	8R2	
MCSM32Z100MT	10±20%	422.0	1.6	1.4	100	

Note:

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

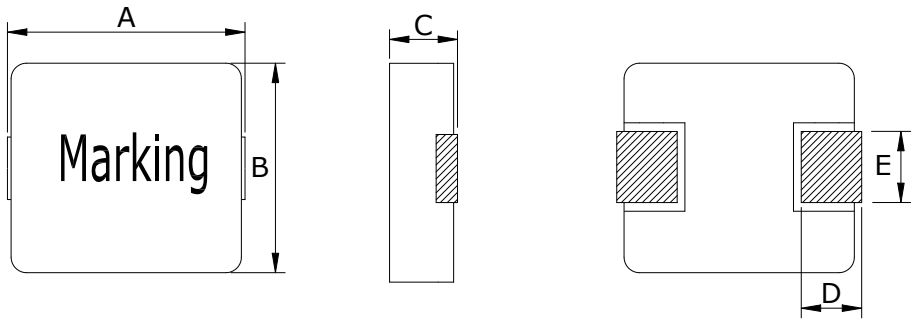
2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 30% rolloff at 25℃.

4.The I-rms that will cause temperature rise approximate 40°C without core loss.

Mechanical & Dimensions

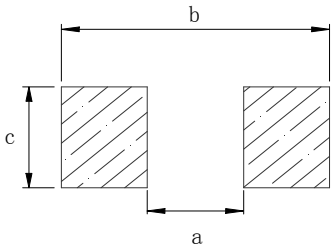
(Unit: mm)



Code	Dimensions
A	4.9Max
B	4.5Max
C	2.0Max
D	1.0±0.5
E	2.0±0.3

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
a	2.2 Typ
b	5.2 Typ
c	2.5 Typ

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR[2] (mΩ) Max	I-sat[3] (Amps)Typ	I-rms[4] (Amps)Typ	Marking	
MCSM42ZR10MT	0.1±20%	5.0	35.0(70% L0)	16.0	R10	
MCSM42ZR22MT	0.22±20%	6.0	18.0(75% L0)	10.0	R22	
MCSM42ZR47MT	0.47±20%	14.0	9.5(75% L0)	8.0	R47	
MCSM42Z1R0MT	1.0±20%	30.0	10.0(75% L0)	5.0	1R0	
MCSM42Z1R5MT	1.5±20%	42.0	7.0(75% L0)	4.0	1R5	
MCSM42Z2R2MT	2.2±20%	64.0	6.0(75% L0)	3.0	2R2	
MCSM42Z3R3MT	3.3±20%	100.0	5.0(70% L0)	2.5	3R3	
MCSM42Z4R7MT	4.7±20%	150.0	4.0(80% L0)	3.0	4R7	
MCSM42Z6R8MT	6.8±20%	222.0	3.5(75% L0)	2.0	6R8	

Note:

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

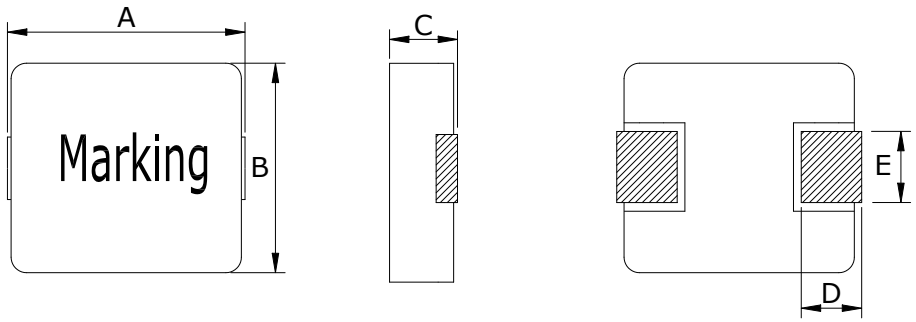
2.The nominal DCR is measured at 25℃ ambient temperature.

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

4.The I-rms that will cause temperature rise approximate 40°C without core loss.

Mechanical & Dimensions

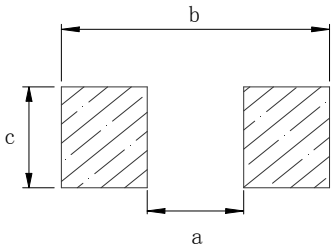
(Unit: mm)



Code	Dimensions
A	5.9Max
B	5.5Max
C	2.0Max
D	1.2±0.3
E	2.0±0.5

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
a	2.2 Typ
b	6.0 Typ
c	2.5 Typ

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR[2] (mΩ) Max	I-sat[3] (Amps)Typ	I-rms[4] (Amps)Typ	Marking	
MCSM52ZR22MT	0.22±20%	5.2	22.0(70% L0)	15.0	R22	
MCSM52ZR33MT	0.33±20%	8.2	25.0(75% L0)	12.0	R33	
MCSM52ZR68MT	0.68±20%	12.4	15.0(75% L0)	10.0	R68	
MCSM52Z1R0MT	1.0±20%	20.0	16.0(75% L0)	7.0	1R0	
MCSM52Z2R2MT	2.20±20%	50.1	10.0(75% L0)	4.2	2R2	
MCSM52Z100MT	10.0±20%	155.0	3.0(75% L0)	2.0	100	

Note:

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

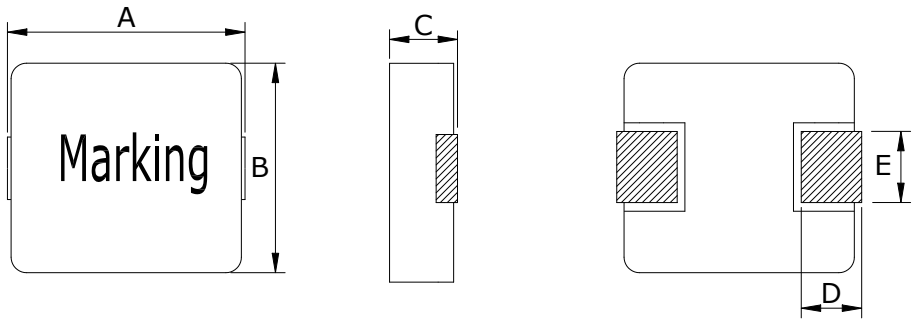
2.The nominal DCR is measured at 25℃ ambient temperature.

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

4.The I-rms that will cause temperature rise approximate 40°C without core loss.

Mechanical & Dimensions

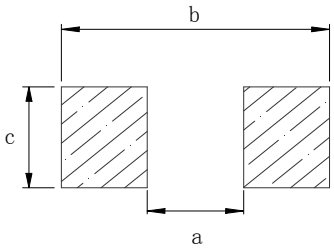
(Unit: mm)



Code	Dimensions
A	5.9Max
B	5.5Max
C	3.0Max
D	1.2±0.3
E	2.0±0.5

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
a	2.2 Typ
b	6.0 Typ
c	2.5 Typ

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR[2] (mΩ) Max	I-sat[3] (Amps)Typ	I-rms[4] (Amps)Typ	Marking	
MCSM53ZR15MT	0.15±20%	4.5	55.0(75% L0)	30.0	R15	
MCSM53ZR22MT	0.22±20%	4.8	35.0(75% L0)	20.0	R22	
MCSM53Z1R0MT	1.0±20%	13.7	12.0	9.2	1R0	
MCSM53Z2R2MT	2.2±20%	29.2	10.0	5.8	2R2	
MCSM53Z330MT	33±20%	340.0	3.5	2.0	330	

Note:

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

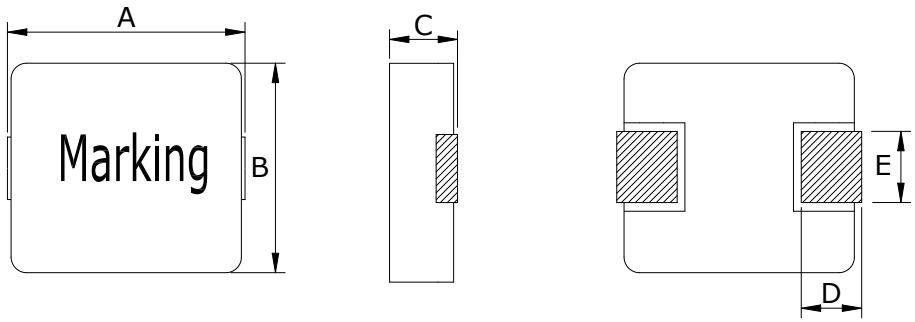
2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 30% rolloff at 25℃.

4.The I-rms that will cause temperature rise approximate 40°C without core loss.

Mechanical & Dimensions

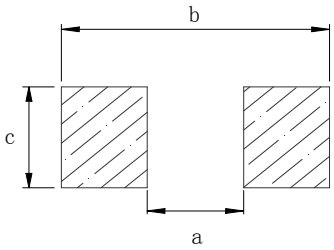
(Unit: mm)



Code	Dimensions
A	7.6 MAX
B	6.9 MAX
C	3.0 MAX
D	1.6±0.3
E	3.0±0.3

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
a	3.7 Typ
b	8.4 Typ
c	3.5 Typ

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR[2] (mΩ) Max	I-sat[3] (Amps)Typ	I-rms[4] (Amps)Typ	Marking	
MCSM63ZR10MT	0.10±20%	1.7	60.0	32.5	R10	
MCSM63ZR12MT	0.12±20%	0.7	46.0	30.0	R12	
MCSM63ZR15MT	0.15±20%	2.1	52.0	30.0	R15	
MCSM63ZR22MT	0.22±20%	2.7	40.0	23.0	R22	
MCSM63ZR24MT	0.24±20%	2.8	40.0	23.0	R24	
MCSM63ZR33MT	0.33±20%	3.9	30.0(70% L0)	20.0	R33	
MCSM63ZR36MT	0.36±20%	2.5	30.0	26.0	R36	
MCSM63ZR47MT	0.47±20%	4.1	26.0	17.5	R47	
MCSM63ZR68MT	0.68±20%	5.5	26.0	15.0	R68	
MCSM63Z1R0MT	1.0±20%	10.0	22.0	11.0	1R0	
MCSM63Z1R5MT	1.5±20%	15.0	18.0	11.0	1R5	
MCSM63Z2R2MT	2.2±20%	18.5	18.0	10.0	2R2	
MCSM63Z3R3MT	3.3±20%	30.0	13.5	6.0	3R3	
MCSM63Z4R7MT	4.7±20%	40.0	15.0(70% L0)	7.0	4R7	
MCSM63Z6R8MT	6.8±20%	60.0	8.0	4.5	6R8	
MCSM63Z100MT	10.0±20%	96.0	7.0	4.0	100	

Note:

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

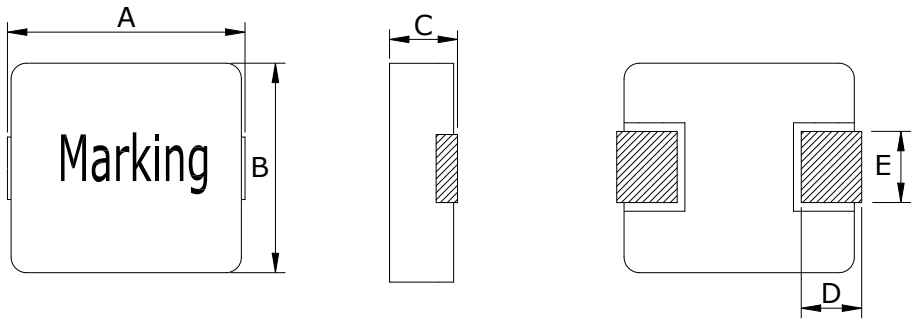
2.The nominal DCR is measured at 25℃ ambient temperature.

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

4.The I-rms that will cause temperature rise approximate 40°C without core loss.

Mechanical & Dimensions

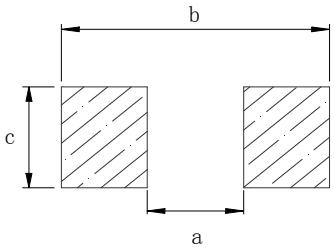
(Unit: mm)



Code	Dimensions
A	7.6 MAX
B	6.9 MAX
C	4.0 MAX
D	1.6±0.3
E	2.8±0.5

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
a	3.7 Typ
b	8.4 Typ
c	3.5 Typ

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR[2] (mΩ) Max	I-sat[3] (Amps)Typ	I-rms[4] (Amps)Typ	Marking	
MCSM64ZR15MT	0.15±20%	0.72	50.0	45.0	R15	
MCSM64ZR22MT	0.22±20%	0.98±7%	50.0	39.0	R22	
MCSM64ZR33MT	0.33±20%	1.85±10%	32.0	24.0	R33	
MCSM64Z1R0MT	1.0±20%	6.50	25.0	11.5	1R0	

Note:

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

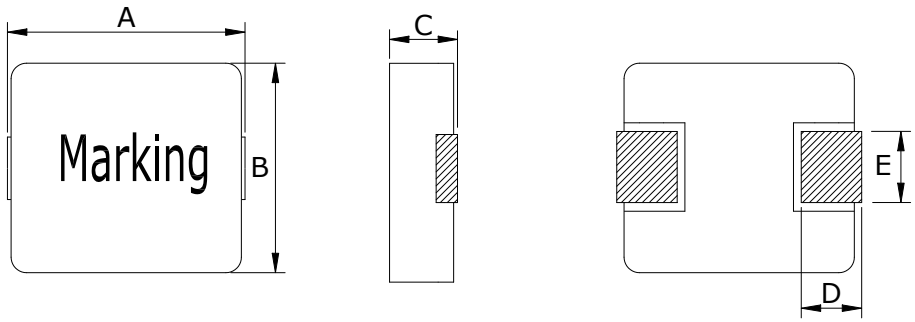
2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 30% rolloff at 25℃.

4.The I-rms that will cause temperature rise approximate 40°C without core loss.

Mechanical & Dimensions

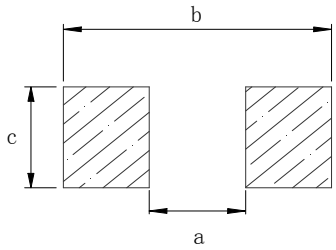
(Unit: mm)



Code	Dimensions
A	8.5 MAX
B	7.3 MAX
C	5.0 MAX
D	2.0±0.3
E	3.0±0.3

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
a	3.1 Typ
b	8.8 Typ
c	3.3 Typ

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR[2] (mΩ) Max	I-sat[3] (Amps)Typ	I-rms[4] (Amps)Typ	Marking	
MCSM75Z1R5MT	1.5±20%	6.6	21.5	13.0	R15	
MCSM75Z2R2MT	2.2±20%	8.1	20.0	12.0	R22	
MCSM75Z3R3MT	3.3±20%	13.9	14.4	10.4	R33	

Note:

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

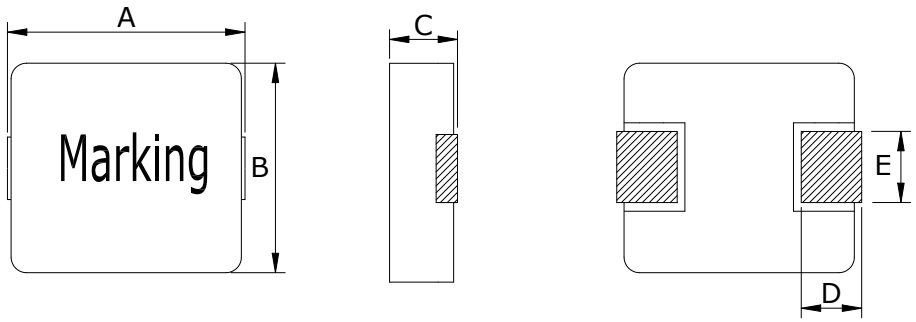
2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 30% rolloff at 25℃.

4.The I-rms that will cause temperature rise approximate 40°C without core loss.

Mechanical & Dimensions

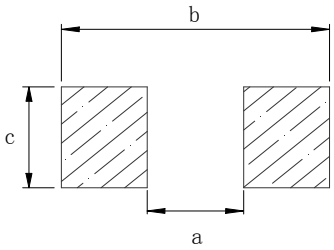
(Unit: mm)



Code	Dimensions
A	9.2 MAX
B	8.3 MAX
C	3.0 MAX
D	1.8±0.3
E	3.0±0.3

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
a	4.8 Typ
b	9.8 Typ
c	2.5 Typ

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR[2] (mΩ) Max	I-sat[3] (Amps)Typ	I-rms[4] (Amps)Typ	Marking	
MCSM83ZR22MT	0.22±20%	1.9	55.0	30.0	R22	
MCSM83ZR47MT	0.47±20%	3.6	35.0(75% L0)	21.5	R47	
MCSM83ZR68MT	0.68±20%	4.5	25.0	18.0	R68	
MCSM83Z330MT	33±20%	187.0	4.5	2.5	330	
MCSM83Z4R7MT	4.7±20%	38.0	15.0	9.0	4R7	

Note:

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

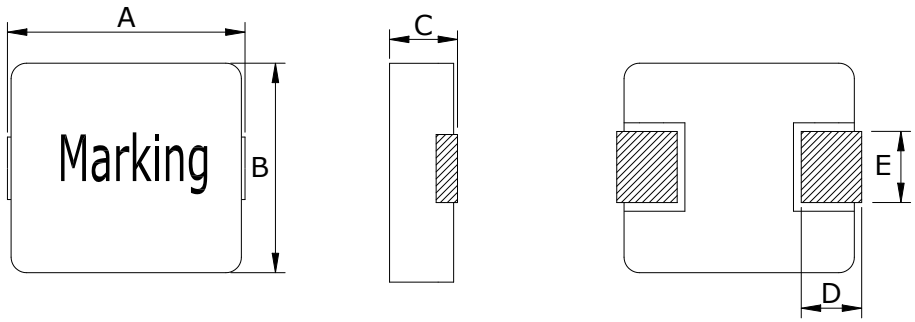
2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 30% rolloff at 25℃.

4.The I-rms that will cause temperature rise approximate 40°C without core loss.

Mechanical & Dimensions

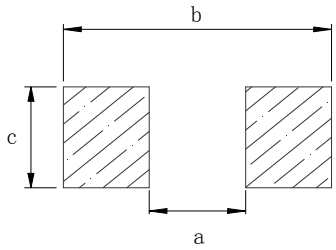
(Unit: mm)



Code	Dimensions
A	9.2 MAX
B	8.3 MAX
C	4.0 MAX
D	1.8±0.3
E	3.0±0.3

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
a	4.8 Typ
b	9.8 Typ
c	2.5 Typ

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR[2] (mΩ) Max	I-sat[3] (Amps)Typ	I-rms[4] (Amps)Typ	Marking	
MCSM84ZR82MT	0.82±20%	4.0	16.0	20.0	R82	
MCSM84Z1R5MT	1.50±20%	7.25	14.0	15.5	1R5	

Note:

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

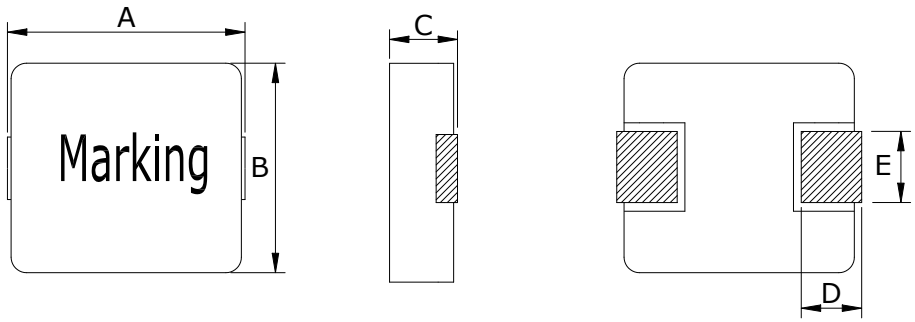
2.The nominal DCR is measured at 25℃ ambient temperature.

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

4.The I-rms that will cause temperature rise approximate 40°C without core loss.

Mechanical & Dimensions

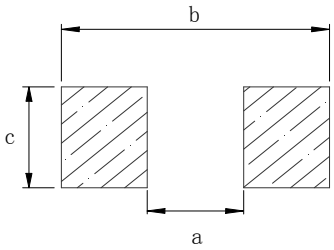
(Unit: mm)



Code	Dimensions
A	9.2 MAX
B	8.3 MAX
C	5.0 MAX
D	1.8±0.3
E	3.0±0.3

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
a	4.8 Typ
b	9.8 Typ
c	2.5 Typ

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR[2] (mΩ) Max	I-sat[3] (Amps)Typ	I-rms[4] (Amps)Typ	Marking	
MCSM85Z1R0MT	1.0±20%	3.85	21.0(75% L0)	19.0	1R0	
MCSM85Z2R2MT	2.2±20%	10.30	24.0	16.0	2R2	
MCSM85Z3R3MT	3.3±20%	12.00	18.0	12.0	3R3	

Note:

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

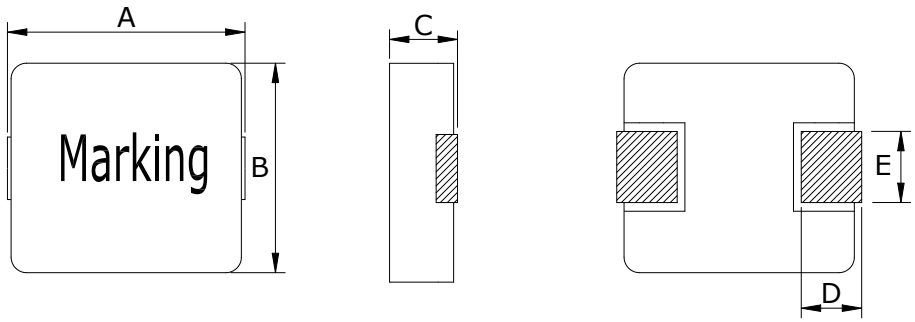
2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 30% rolloff at 25℃.

4.The I-rms that will cause temperature rise approximate 40°C without core loss.

Mechanical & Dimensions

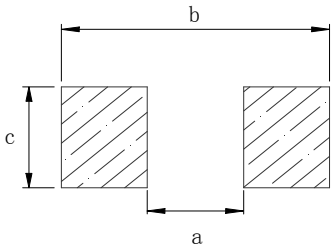
(Unit: mm)



Code	Dimensions
A	11.5 MAX
B	10.6 MAX
C	4.0 MAX
D	2.0±0.5
E	3.0±0.5

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
a	6.0 Typ
b	13.0 Typ
c	4.0 Typ

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR[2] (mΩ) Max	I-sat[3] (Amps)Typ	I-rms[4] (Amps)Typ	Marking	
MCSM104ZR10MT	0.1±20%	0.4	110.0	55.0	R10	
MCSM104ZR22MT	0.22±20%	0.80	70.0	36.0	R22	
MCSM104ZR33MT	0.33±20%	1.4	60.0(75% L0)	32.0	R33	
MCSM104ZR36MT	0.36±20%	1.4	60.0	31.5	R36	
MCSM104ZR47MT	0.47±20%	1.6	52.0(75% L0)	28.5	R47	
MCSM104ZR56MT	0.56±20%	1.8	49.0(75% L0)	27.5	R56	
MCSM104ZR68MT	0.68±20%	2.4	45.0(75% L0)	25.0	R68	
MCSM104Z1R0MT	1.0±20%	3.3	36.0(75% L0)	17.5	1R0	
MCSM104Z1R2MT	1.2±20%	4.7	24.5	17.0	1R2	
MCSM104Z1R5MT	1.5±20%	4.2	33.0	16.0	1R5	
MCSM104Z2R2MT	2.2±20%	10.0	25.6	12.0	2R2	
MCSM104Z3R3MT	3.3±20%	11.8	18.6(75% L0)	10.0	3R3	
MCSM104Z4R7MT	4.7±20%	16.5	17.0(75% L0)	10.0	4R7	
MCSM104Z5R6MT	5.6±20%	18.5	16.0	10.0	5R6	
MCSM104Z6R8MT	6.8±20%	23.3	13.5(75% L0)	8.0	6R8	
MCSM104Z100MT	10.0±20%	36.5	12.0(75% L0)	6.8	100	

Note:

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

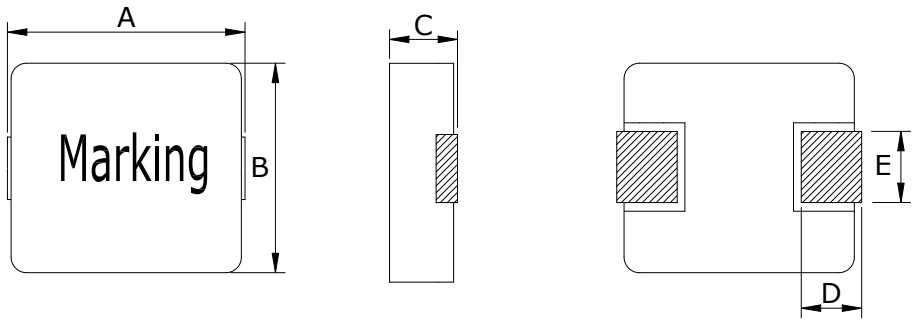
2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 30% rolloff at 25℃.

4.The I-rms that will cause temperature rise approximate 40°C without core loss.

Mechanical & Dimensions

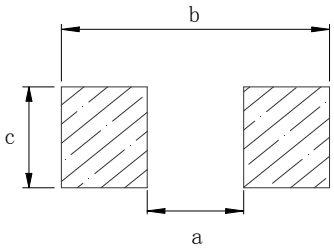
(Unit: mm)



Code	Dimensions
A	11.5 MAX
B	10.6 MAX
C	5.0 MAX
D	2.0±0.5
E	3.0±0.5

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
a	6.0 Typ
b	13.0 Typ
c	4.0 Typ

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR[2] (mΩ) Max	I-sat[3] (Amps)Typ	I-rms[4] (Amps)Typ	Marking	
MCSM105ZR36MT	0.36±20%	0.75±10%	50.0(80% L0)	32.0	R36	
MCSM105ZR47MT	0.47±20%	1.3	70.0	32.0	R47	
MCSM105Z1R0MT	1.0±20%	2.8	36(75% L0)	24.0	1R0	
MCSM105Z2R2MT	2.2±20%	7.1	40.0	17.0	2R2	

Note:

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

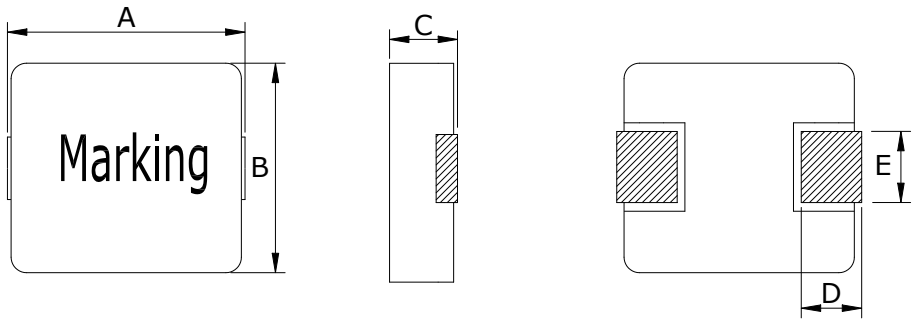
2.The nominal DCR is measured at 25℃ ambient temperature.

3.The I-sat that will cause initial inductance value approximately 30% rolloff at 25℃.

4.The I-rms that will cause temperature rise approximate 40°C without core loss.

Mechanical & Dimensions

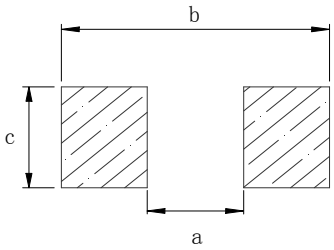
(Unit: mm)



Code	Dimensions
A	14.2 MAX
B	13.3 MAX
C	3.5 MAX
D	2.5±0.5
E	3.6±0.5

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
a	8.0 Typ
b	15.0 Typ
c	5.0 Typ

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR[2] (mΩ) Max	I-sat[3] (Amps)Typ	I-rms[4] (Amps)Typ	Marking	
MCSM1235Z1R5MT	1.5±20%	5.5	35.0	19.0	1R0	

Note:

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

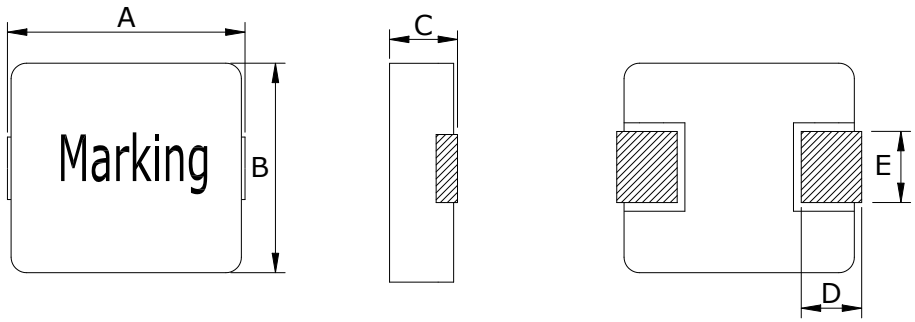
2.The nominal DCR is measured at 25℃ ambient temperature.

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

4.The I-rms that will cause temperature rise approximate 40°C without core loss.

Mechanical & Dimensions

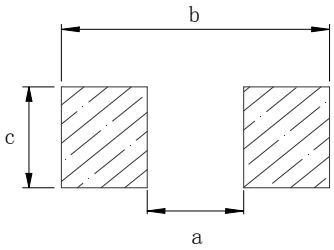
(Unit: mm)



Code	Dimensions
A	14.2 MAX
B	13.3 MAX
C	5.0 MAX
D	2.5±0.5
E	3.6±0.5

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
a	8.0 Typ
b	15.0 Typ
c	5.0 Typ

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR[2] (mΩ) Max	I-sat[3] (Amps)Typ	I-rms[4] (Amps)Typ	Marking	
MCSM125ZR33MT	0.33±20%	1.1	80.0	42.0	R33	
MCSM125ZR68MT	0.68±20%	1.2	60.0	35.0(75% L0)	R68	
MCSM125Z1R0MT	1.0±20%	2.5	50.0	29.0	1R0	
MCSM125Z1R5MT	1.5±20%	4.1	48.0	23.0	1R5	

Note:

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

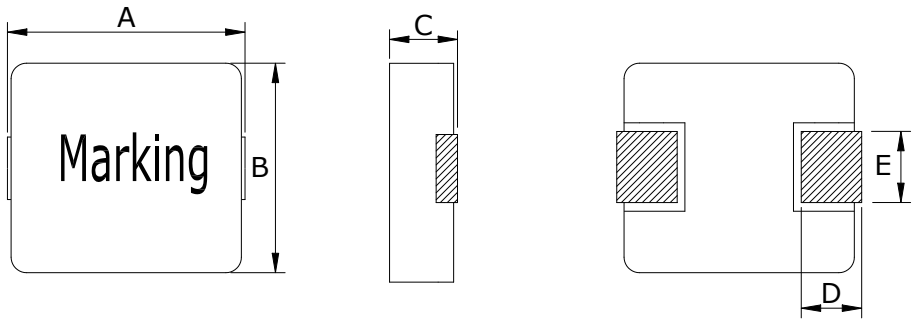
2.The nominal DCR is measured at 25℃ ambient temperature.

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

4.The I-rms that will cause temperature rise approximate 40°C without core loss.

Mechanical & Dimensions

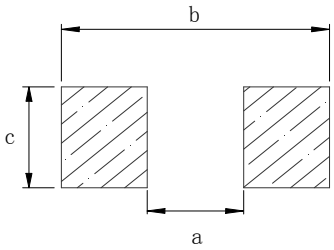
(Unit: mm)



Code	Dimensions
A	14.2 MAX
B	13.3 MAX
C	6.0 MAX
D	2.5±0.5
E	3.6±0.5

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
a	8.0 Typ
b	15.0 Typ
c	5.0 Typ

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR[2] (mΩ) Max	I-sat[3] (Amps)Typ	I-rms[4] (Amps)Typ	Marking	
MCSM126Z2R2MT	2.2±20%	6.3	45.0	27.0	2R2	
MCSM126Z3R3MT	3.3±20%	8.4	40.0	20.0	3R3	

Note:

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

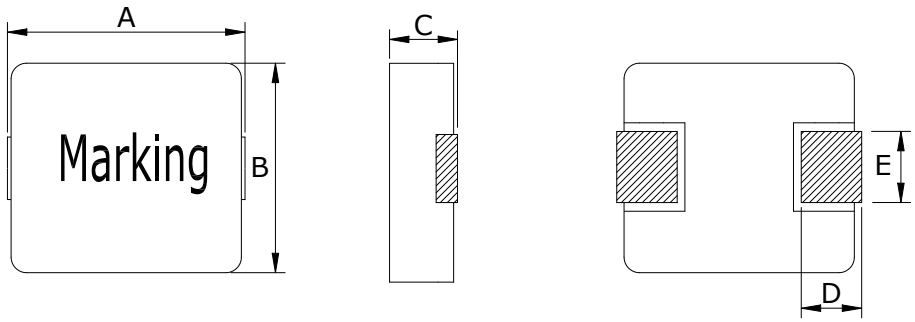
2.The nominal DCR is measured at 25℃ ambient temperature.

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

4.The I-rms that will cause temperature rise approximate 40°C without core loss.

Mechanical & Dimensions

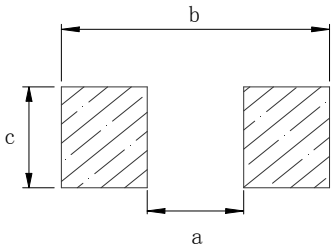
(Unit: mm)



Code	Dimensions
A	14.2 MAX
B	13.3 MAX
C	6.5 MAX
D	2.5±0.5
E	3.6±0.5

Recommend Land Pattern Dimensions

(Unit: mm)



Code	Dimensions
a	8.0 Typ
b	15.0 Typ
c	5.0 Typ

Electrical Characteristics

Part Number	Inductance[1] (μH)	DCR[2] (mΩ) Max	I-sat[3] (Amps)Typ	I-rms[4] (Amps)Typ	Marking	
MCSM1265Z1R0MT	1.0±20%	2.2	60(70% L0)	32.0	1R0	
MCSM1265Z1R5MT	1.5±20%	3.0	45.0	27.0	1R5	
MCSM1265Z2R2MT	2.2±20%	4.1	40.0	22.0	2R2	
MCSM1265Z3R3MT	3.3±20%	6.8	40(70% L0)	20.0	3R3	

Note:

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

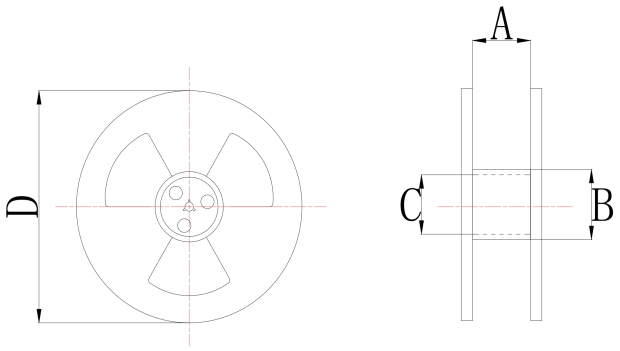
2.The nominal DCR is measured at 25℃ ambient temperature.

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

4.The I-rms that will cause temperature rise approximate 40°C without core loss.

Packaging

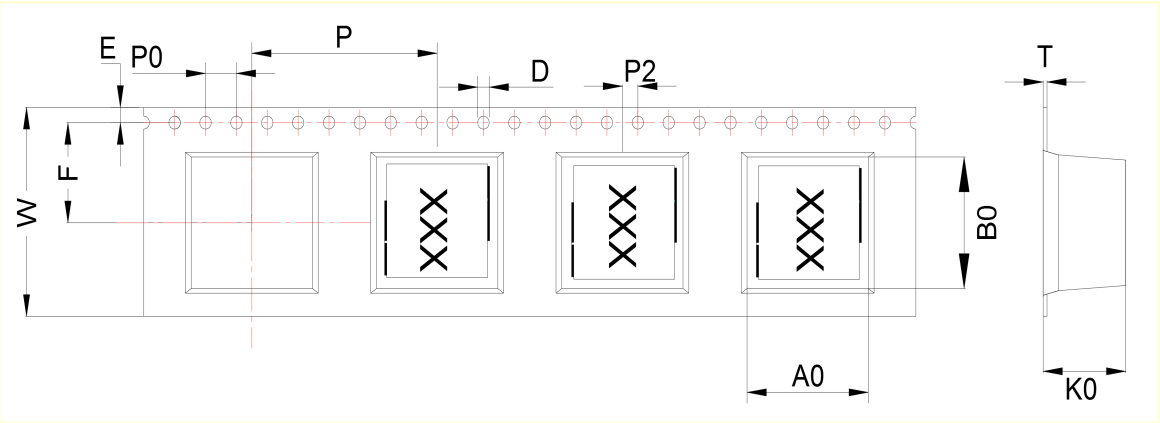
Reel Dimension:



P/N	Type	A(mm)	B(mm)	C(mm)	D(mm)	Chip/Reel
MCSM32Z-T	13" x 12mm	12.0±0.5	100±2.0	13.0±0.2	330+2.0	3,000
MCSM42Z-T	13" x 12mm	12.0±0.5	100±2.0	13.0±0.2	330+2.0	3,500
MCSM52Z-T	13" x 16mm	16.0±0.5	100±2.0	13.0±0.2	330+2.0	3,000
MCSM53Z-T	13" x 16mm	16.0±0.5	100±2.0	13.0±0.2	330+2.0	2,000
MCSM63Z-T	13" x 16mm	16.0±0.5	100±2.0	13.0±0.2	330+2.0	1,500
MCSM64Z-T	13" x 16mm	16.0±0.5	100±2.0	13.0±0.2	330+2.0	1,000
MCSM83Z-T	13" x 24mm	24.0±0.5	100±2.0	13.0±0.2	330+2.0	1,000
MCSM84Z-T	13" x 24mm	24.0±0.5	100±2.0	13.0±0.2	330+2.0	1,000
MCSM85Z-T	13" x 24mm	24.0±0.5	100±2.0	13.0±0.2	330+2.0	1,000
MCSM104Z-T	13" x 24mm	24.0±0.5	100±2.0	13.0±0.2	330+2.0	1,000
MCSM105Z-T	13" x 24mm	24.0±0.5	100±2.0	13.0±0.2	330+2.0	800
MCSM1235Z-T	13" x 24mm	24.0±0.5	100±2.0	13.0±0.2	330+2.0	500
MCSM125Z-T	13" x 24mm	24.0±0.5	100±2.0	13.0±0.2	330+2.0	500
MCSM126Z-T	13" x 24mm	24.0±0.5	100±2.0	13.0±0.2	330+2.0	500
MCSM1265Z-T	13" x 24mm	24.0±0.5	100±2.0	13.0±0.2	330+2.0	400

Packaging

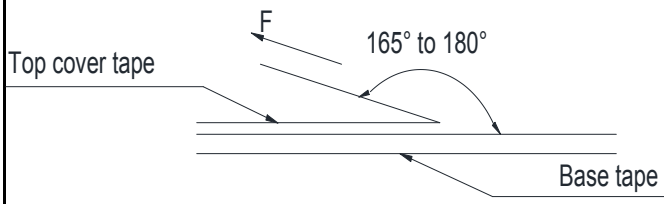
Tape Dimension:



P/N	Ao(mm)	Bo(mm)	Ko(mm)	E(mm)	F(mm)	D(mm)	P2(mm)	P(mm)	W(mm)	P0(mm)
MCSM32Z-T	3.4±0.1	3.7±0.1	2.4±0.1	1.75±0.1	5.5±0.1	1.5±0.1	2.0±0.1	8.0±0.1	12.0±0.3	4.0±0.1
MCSM42Z-T	4.4±0.1	5.2±0.1	2.2±0.1	1.75±0.1	5.5±0.1	1.5±0.1	2.0±0.1	8.0±0.1	12.0±0.3	4.0±0.1
MCSM52Z-T	5.4±0.1	6.2±0.1	2.2±0.1	1.75±0.1	7.5±0.1	1.5±0.1	2.0±0.1	8.0±0.1	16.0±0.3	4.0±0.1
MCSM53Z-T	5.4±0.1	6.2±0.1	3.2±0.1	1.75±0.1	7.5±0.1	1.5±0.1	2.0±0.1	8.0±0.1	16.0±0.3	4.0±0.1
MCSM63Z-T	7.0±0.1	7.8±0.1	3.2±0.1	1.75±0.1	7.5±0.1	1.5±0.1	2.0±0.1	12.0±0.1	16.0±0.3	4.0±0.1
MCSM64Z-T	7.0±0.1	7.8±0.1	4.2±0.1	1.75±0.1	7.5±0.1	1.5±0.1	2.0±0.1	12.0±0.1	16.0±0.3	4.0±0.1
MCSM83Z-T	8.5±0.1	9.5±0.1	3.2±0.1	1.75±0.1	11.5±0.1	1.5±0.1	2.0±0.1	12.0±0.1	24.0±0.3	4.0±0.1
MCSM84Z-T	8.5±0.1	9.5±0.1	4.2±0.1	1.75±0.1	11.5±0.1	1.5±0.1	2.0±0.1	12.0±0.1	24.0±0.3	4.0±0.1
MCSM85Z-T	8.5±0.1	9.5±0.1	5.2±0.1	1.75±0.1	11.5±0.1	1.5±0.1	2.0±0.1	12.0±0.1	24.0±0.3	4.0±0.1
MCSM104Z-T	10.6±0.1	12.0±0.1	4.2±0.1	1.75±0.1	11.5±0.1	1.5±0.1	2.0±0.1	16.0±0.1	24.0±0.3	4.0±0.1
MCSM105Z-T	10.6±0.1	12.0±0.1	5.2±0.1	1.75±0.1	11.5±0.1	1.5±0.1	2.0±0.1	16.0±0.1	24.0±0.3	4.0±0.1
MCSM1235Z-T	13.0±0.1	14.5±0.1	4.2±0.1	1.75±0.1	11.5±0.1	1.5±0.1	2.0±0.1	16.0±0.1	24.0±0.3	4.0±0.1
MCSM125Z-T	13.0±0.1	14.5±0.1	5.2±0.1	1.75±0.1	11.5±0.1	1.5±0.1	2.0±0.1	16.0±0.1	24.0±0.3	4.0±0.1
MCSM126Z-T	13.0±0.1	14.5±0.1	6.2±0.1	1.75±0.1	11.5±0.1	1.5±0.1	2.0±0.1	16.0±0.1	24.0±0.3	4.0±0.1
MCSM1265Z-T	13.0±0.1	14.5±0.1	7.2±0.1	1.75±0.1	11.5±0.1	1.5±0.1	2.0±0.1	16.0±0.1	24.0±0.3	4.0±0.1

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. Recommended products should be used within 6 months form the time of delivery.
2. 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

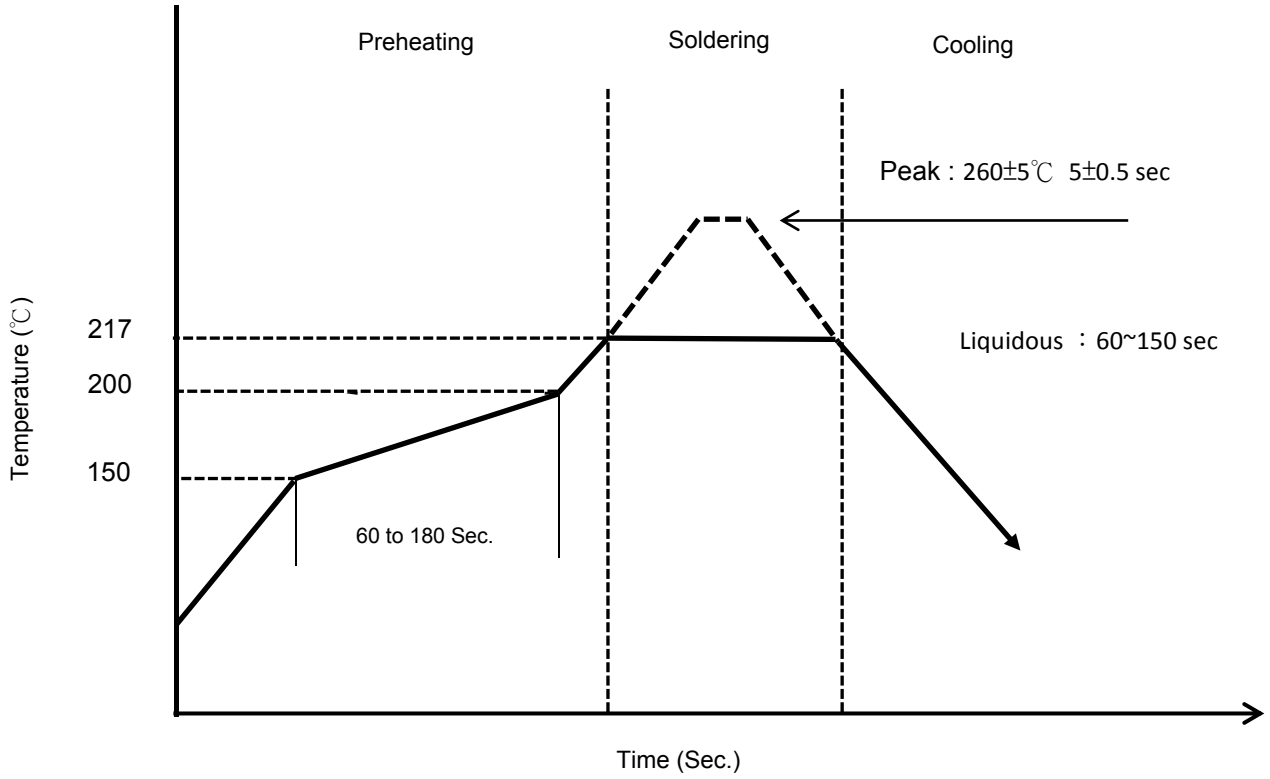
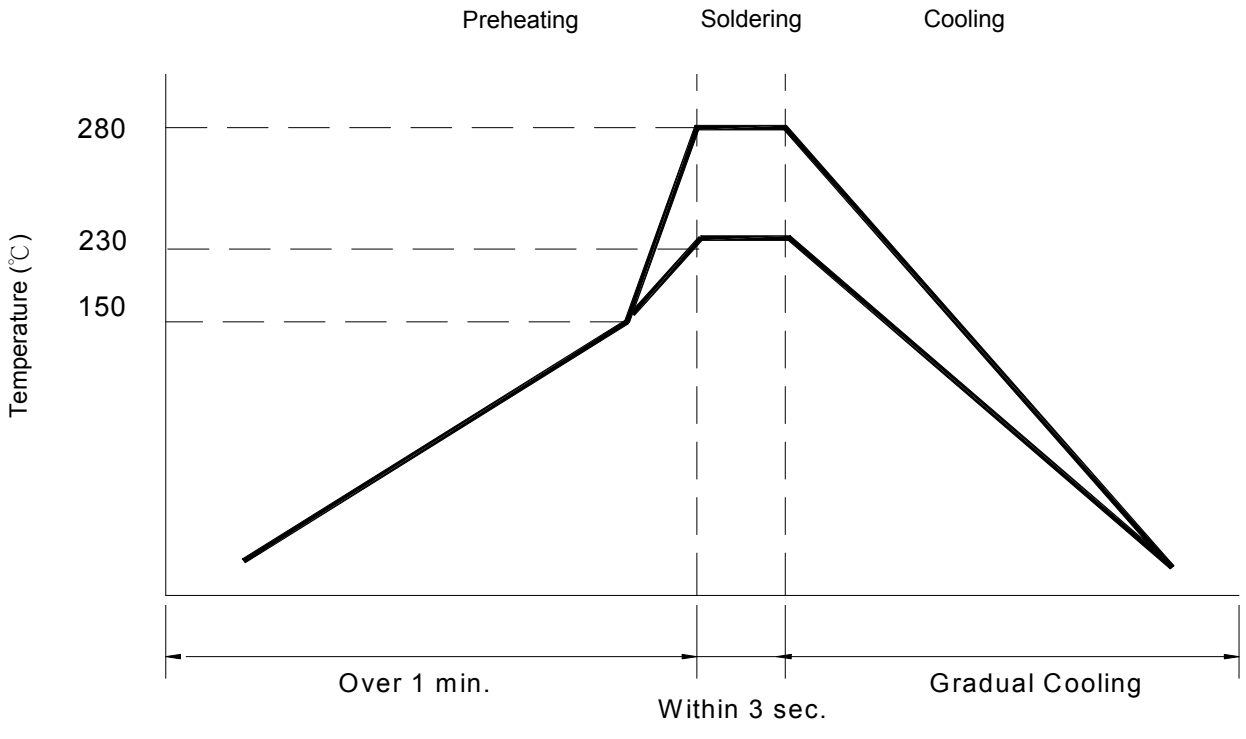
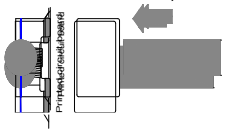


Figure 2. Hand Soldering



Reliability and Testing Conditions

<table>
<tr><th>Item</th><th>Specification</th><th>Conditions</th></tr>
<tr><td>Operating temperature range</td><td colspan="2">-40℃ ~ +125℃ (Including self-temperature rise)</td></tr>
<tr><td>Storage temperature and humidity range</td><td colspan="2">-40°C ~ +85°C , 70% RH Max</td></tr>
<tr><td>Solderability</td><td>More than 90% of the terminal electrode should be covered with solder.</td><td>- 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</td></tr>
<tr><td>Resistance to Soldering Heat</td><td>Inductance within ±20% of initial value.
No disconnection or short circuit.
The appearance shall not break.</td><td>- 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</td></tr>
<tr><td>Resistance to High Temperature</td><td>Inductance within ±20% of initial value.
No disconnection or short circuit.
The appearance shall not break.</td><td>500 hrs. at 125°C±3°C Unpowered.
Measurement at 24±4 hours after test conclusion.</td></tr>
<tr><td>Resistance to Low Temperature</td><td>Inductance within ±20% of initial value.
No disconnection or short circuit.
The appearance shall not break.</td><td>500 hrs. at -40°C±2°C. Unpowered.
Measurement at 24±4 hours after test conclusion.</td></tr>
<tr><td>Resistance to Humidity</td><td>Inductance within ±20% of initial value.
No disconnection or short circuit.
The appearance shall not break.</td><td>After 500 hours in 40±2℃ and 90 to 95% humidity , and 2 hour drying under normal condition.</td></tr>
<tr><td>Thermal shock</td><td>Inductance within ±20% of initial value.
No disconnection or short circuit.
The appearance shall not break.</td><td>After 100 cycles of following condition.
<table>
<tr><th>Step</th><th>Temperature (℃)</th><th>Times (min.)</th></tr>
<tr><td>1</td><td>-40±2°C</td><td>30</td></tr>
<tr><td>2</td><td>Room Temperature</td><td>Within 3</td></tr>
<tr><td>3</td><td>125±3°C</td><td>30</td></tr>
<tr><td>4</td><td>Room Temperature</td><td>Within 3</td></tr>
</table></td></tr>
<tr><td>Vibration Test</td><td>Inductance within ±10% of initial value and
appearance shall not break.</td><td>After vibration for 1hour,
In each of three orientations at
sweep vibration (10~55~10Hz) with 1.52mm P-P Amplitudes.</td></tr>
<tr><td>Terminal strength</td><td>The terminal electrode and the ferrite must not be damaged</td><td>Solder a chip to test substrate, and then laterally apply a load 10N in the arrow direction, Duration :5s
  </td></tr>
<tr><td>Drop Test</td><td>Inductance within ±20% of initial value.
The appearance shall not break.</td><td>Drop 3 times on a concrete floor from a height of 75cm by inimum packing</td></tr>
</table>