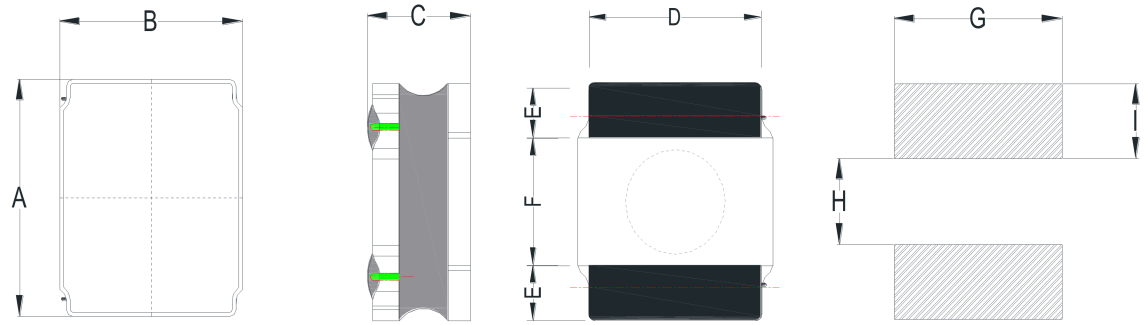
1. Shape and Dimensions (Unit:mm)



A	B	C	D	E	F	G	H	I
2.0 ± 0.2	1.6± 0.2	1.08Max	1.6±0.2	0.6±0.2	0.8 ± 0.2	1.60	0.80	0.80

2. Electrical Characteristics

Part Number	Inductance	DC Resistance		Saturation Current		Heat Rating Current	
	1MHz/1V	Max.	Typ.	Max.	Typ.	Max.	Typ.
Units	uH	Ω	Ω	A	A	A	A
Symbol	L	DCR		Isat		Irms	
TMAI201610S-R24MT	0.24±20%	0.040	0.033	4.50	5.50	3.00	3.45
TMAI201610S-R33MT	0.33±20%	0.049	0.041	4.40	5.20	2.70	3.10
TMAI201610S-R47MT	0.47±20%	0.049	0.041	4.06	4.70	2.70	3.10
TMAI201610S-R56MT	0.56±20%	0.053	0.043	3.80	4.50	2.60	2.80
TMAI201610S-R68MT	0.68±20%	0.065	0.057	3.50	4.00	2.50	2.80
TMAI201610S-1R0MT	1.0±20%	0.095	0.078	3.30	3.80	2.00	2.30
TMAI201610S-1R5MT	1.5±20%	0.130	0.110	1.95	2.30	1.70	2.00
TMAI201610S-2R2MT	2.2±20%	0.180	0.160	1.90	2.15	1.40	1.60
TMAI201610S-3R3MT	3.3±20%	0.307	0.245	1.40	1.60	1.10	1.30
TMAI201610S-4R7MT	4.7±20%	0.425	0.370	1.10	1.40	0.90	1.00
TMAI201610S-8R2MT	8.2±20%	0.870	0.670	0.86	1.00	0.66	0.76
TMAI201610S-100MT	10±20%	0.875	0.700	0.80	0.95	0.60	0.70

Note:※1: Rated current: Isat(max.)or Irms(max.),whichever is smaller;

※2: Saturation Current: Max. Value, DC current at which the inductance drops less than 30% from its value without current; Typ. Value, DC current at which the inductance drops 30% from its value without current;

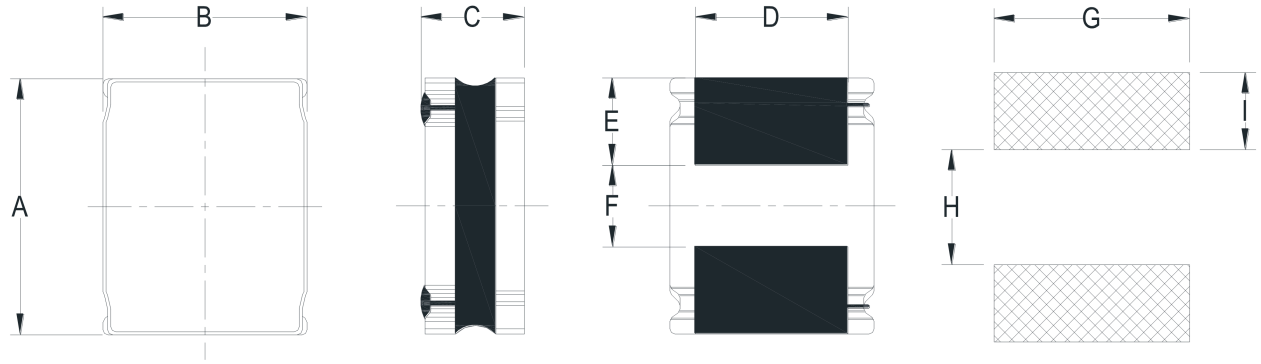
※3: Irms: DC current that causes the temperature rise (△T) from 20℃ ambient.

For Max. Value, △T＜40℃; for Typ. Value, △T is approximate 40℃.

The part temperature (ambient + temp. rise) should not exceed 125℃ under worst case operating conditions. Circuit design, component placement, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

※4: Absolute maximum voltage:DC 25V

1. Shape and Dimensions (Unit:mm)



A	B	C	D	E	F	G	H	I
2.5± 0.2	2.0 ± 0.2	1.05Max	1.5±0.2	0.80±0.2	0.80±0.2	2.0	0.8	0.85

2. Electrical Characteristics

Part Number	Inductance	DC Resistance		Saturation Current		Heat Rating Current	
	1MHz/1V	Max.	Typ.	Max.	Typ.	Max.	Typ.
Units	uH	Ω	Ω	A	A	A	A
Symbol	L	DCR		Isat		Irms	
TMAI 252010S-R24MT	0.24±20%	0.033	0.025	6.10	7.10	3.70	4.50
TMAI 252010S-R33MT	0.33±20%	0.039	0.033	4.80	5.50	3.50	4.05
TMAI 252010S-R47MT	0.47±20%	0.045	0.040	4.40	5.20	3.20	3.60
TMAI 252010S-R68MT	0.68±20%	0.059	0.049	3.20	3.60	2.75	3.20
TMAI 252010S-1R0MT	1.0±20%	0.085	0.071	3.10	3.50	2.20	2.50
TMAI 252010S-1R5MT	1.5±20%	0.106	0.090	2.60	3.00	2.00	2.30
TMAI 252010S-2R2MT	2.2±20%	0.155	0.129	1.90	2.20	1.50	1.80
TMAI 252010S-3R3MT	3.3±20%	0.235	0.196	1.60	1.80	1.20	1.40
TMAI 252010S-4R7MT	4.7±20%	0.290	0.255	1.30	1.50	1.00	1.10
TMAI 252010S-6R8MT	6.8±20%	0.480	0.380	1.00	1.15	0.95	1.00
TMAI 252010S-100MT	10±20%	0.740	0.630	0.90	1.00	0.65	0.75

Note:※1: Rated current: Isat(max.)or Irms(max.),whichever is smaller;

※2: Saturation Current: Max. Value, DC current at which the inductance drops less than 30% from its value without current; Typ. Value, DC current at which the inductance drops 30% from its value without current;

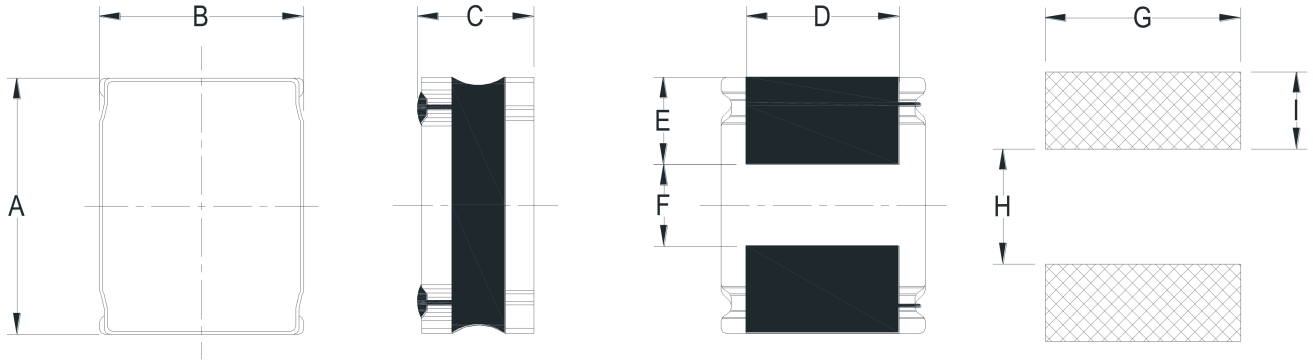
※3: Irms: DC current that causes the temperature rise (△T) from 20℃ ambient.

For Max. Value, △T＜40℃; for Typ. Value, △T is approximate 40℃.

The part temperature (ambient + temp. rise) should not exceed 125℃ under worst case operating conditions. Circuit design, component placement, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

※4:Absolute maximum voltage:DC 25V

1. Shape and Dimensions (Unit:mm)



A	B	C	D	E	F	G	H	I
2.5± 0.2	2.0 ± 0.2	1.26Max	1.5±0.2	0.80±0.2	0.80±0.2	2.0	0.8	0.85

2. Electrical Characteristics

Part Number	Inductance	DC Resistance		Saturation Current		Heat Rating Current	
	1MHz/1V	Max.	Typ.	Max.	Typ.	Max.	Typ.
Units	uH	Ω	Ω	A	A	A	A
Symbol	L	DCR		Isat		Irms	
TMAI252012S-R24MT	0.24±20%	0.023	0.019	6.50	7.80	4.05	4.70
TMAI252012S-R33MT	0.33±20%	0.028	0.023	5.35	6.30	3.70	4.30
TMAI252012S-R47MT	0.47±20%	0.035	0.029	4.90	5.60	3.45	4.00
TMAI252012S-R68MT	0.68±20%	0.045	0.039	3.80	4.50	3.15	3.60
TMAI252012S-1R0MT	1.0±20%	0.054	0.048	3.60	4.20	3.00	3.40
TMAI252012S-2R2MT	2.2±20%	0.120	0.100	2.60	3.00	1.90	2.15
TMAI252012S-3R3MT	3.3±20%	0.215	0.175	1.70	2.10	1.50	1.80
TMAI252012S-4R7MT	4.7±20%	0.260	0.225	1.60	1.90	1.25	1.45
TMAI252012S-6R8MT	6.8±20%	0.366	0.305	1.20	1.40	0.95	1.10
TMAI252012S-100MT	10±20%	0.480	0.435	1.10	1.35	0.85	1.00

Note:※1: Rated current: Isat(max.)or Irms(max.),whichever is smaller;

※2: Saturation Current: Max. Value, DC current at which the inductance drops less than 30% from its value without current; Typ. Value, DC current at which the inductance drops 30% from its value without current;

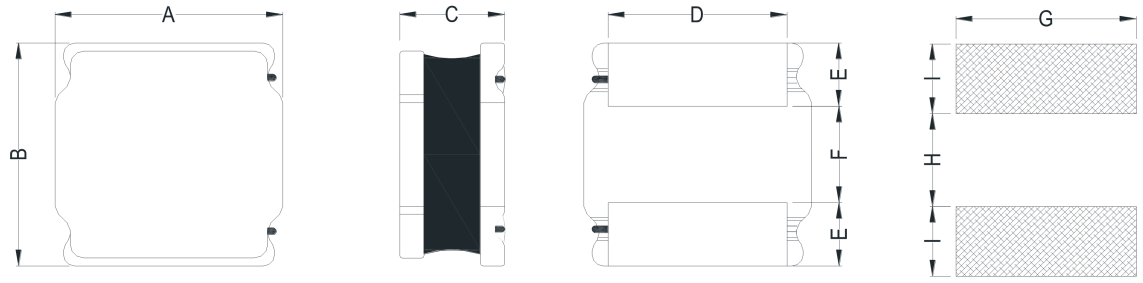
※3: Irms: DC current that causes the temperature rise (△T) from 20℃ ambient.

For Max. Value, △T＜40℃; for Typ. Value, △T is approximate 40℃.

The part temperature (ambient + temp. rise) should not exceed 125℃ under Circuit design, component placement, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

※4: Absolute maximum voltage:DC 25V

1. Shape and Dimensions (Unit:mm)



A	B	C	D	E	F	G	H	I
3.0 ± 0.2	3.0± 0.2	1.2Max	2.5±0.2	0.75±0.2	1.5±0.2	2.7	1.5	0.8

2. Electrical Characteristics

Part Number	Inductance	DC Resistance		Saturation Current		Heat Rating Current	
	1MHz/1V	Max.	Typ.	Max.	Typ.	Max.	Typ.
Units	uH	Ω	Ω	A	A	A	A
Symbol	L	DCR		Isat		Irms	
TMAI3012S-R33MT	0.33±20%	0.032	0.024	7.20	8.90	4.10	4.80
TMAI3012S-R47MT	0.47±20%	0.040	0.031	6.80	8.00	3.80	4.20
TMAI3012S-1R0MT	1.0±20%	0.054	0.046	4.20	5.40	2.70	3.10
TMAI3012S-1R5MT	1.5±20%	0.074	0.062	3.40	4.10	2.50	2.90
TMAI3012S-2R2MT	2.2±20%	0.108	0.090	2.80	3.35	2.05	2.35
TMAI3012S-3R3MT	3.3±20%	0.185	0.144	2.20	2.60	1.50	1.80
TMAI3012S-4R7MT	4.7±20%	0.255	0.215	2.00	2.50	1.15	1.35
TMAI3012S-6R8MT	6.8±20%	0.340	0.290	1.60	1.90	1.10	1.25
TMAI3012S-100MT	10±20%	0.474	0.395	1.20	1.45	1.00	1.15

Note:※1: Rated current: Isat(max.)or Irms(max.),whichever is smaller;

※2: Saturation Current: Max. Value, DC current at which the inductance drops less than 30% from its value without current; Typ. Value, DC current at which the inductance drops 30% from its value without current;

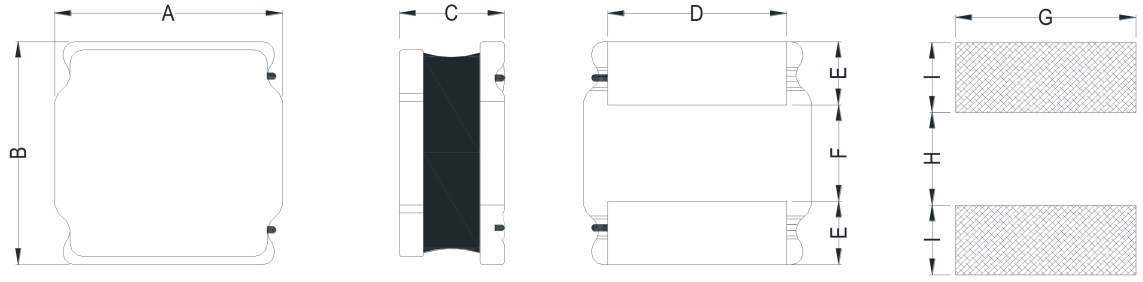
※3: Irms: DC current that causes the temperature rise (△T) from 20℃ ambient.

For Max. Value, △T＜40℃; for Typ. Value, △T is approximate 40℃.

The part temperature (ambient + temp. rise) should not exceed 125℃ under worst case operating conditions. Circuit design, component placement, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

Absolute Maximum Voltage ： DC 40V

1. Shape and Dimensions (Unit:mm)



A	B	C	D	E	F	G	H	I
3.0 ± 0.2	3.0± 0.2	1.55Max	2.5Ref	0.8 Ref	1.4 Ref	2.7 Ref	1.5 Ref	0.8 Ref

2. Electrical Characteristics

Part Number	Inductance	DC Resistance		Saturation Current		Heat Rating Current	
	1MHz/1V	Max.	Typ.	Max.	Typ.	Max.	Typ.
Units	uH	Ω	Ω	A	A	A	A
Symbol	L	DCR		Isat		Irms	
TMAI3015S-R22MT	0.22±20%	0.019	0.0154	8.80	11.0	5.20	6.00
TMAI3015S-R33MT	0.33±20%	0.021	0.016	8.00	10.0	5.00	6.00
TMAI3015S-R47MT	0.47±20%	0.026	0.020	7.60	9.50	4.60	5.20
TMAI3015S-R68MT	0.68±20%	0.0365	0.028	7.00	8.30	4.00	4.60
TMAI 3015S-1R0MT	1.0±20%	0.048	0.037	5.80	7.00	3.50	4.00
TMAI3015S-1R5MT	1.5±20%	0.072	0.055	4.60	5.50	2.20	2.70
TMAI3015S-2R2MT	2.2±20%	0.095	0.074	3.70	4.60	2.20	2.70
TMAI3015S-3R3MT	3.3±20%	0.150	0.110	3.40	3.40	2.00	2.50
TMAI3015S-4R7MT	4.7±20%	0.185	0.150	2.50	3.00	1.70	2.00
TMAI3015S-6R8MT	6.8±20%	0.320	0.245	2.00	2.40	1.20	1.35
TMAI3015S-100MT	10±20%	0.450	0.350	1.60	2.00	1.10	1.25

Note:※1: Rated current: Isat(max.)or Irms(max.),whichever is smaller;

※2: Saturation Current: Max. Value, DC current at which the inductance drops less than 30% from its value without current; Typ. Value, DC current at which the inductance drops 30% from its value without current;

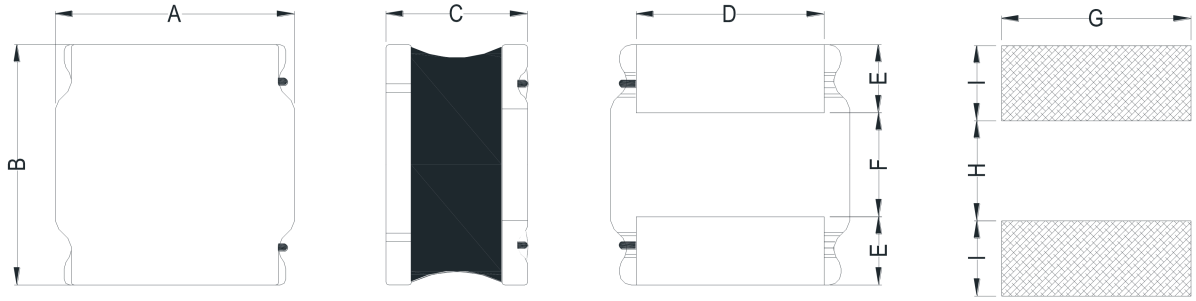
※3: Irms: DC current that causes the temperature rise (△T) from 20℃ ambient.

For Max. Value, △T＜40℃; for Typ. Value, △T is approximate 40℃.

The part temperature (ambient + temp. rise) should not exceed 125℃ under worst case operating conditions. Circuit design, component placement, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

Absolute Maximum Voltage ： DC 40V

1. Shape and Dimensions (Unit:mm)



A	B	C	D	E	F	G	H	I
3.0 ± 0.2	3.0± 0.2	2.2Max	2.5Ref	0.75 Ref	1.5 Ref	2.7 Ref	1.5 Ref	0.8 Ref

2. Electrical Characteristics

Part Number	Inductance	DC Resistance		Saturation Current		Heat Rating Current	
	1MHz/1V	Max.	Typ.	Max.	Typ.	Max.	Typ.
Units	uH	Ω	Ω	A	A	A	A
Symbol	L	DCR		Isat		Irms	
TMAI3020S-R24MT	0.24±20%	0.020	0.016	12.5	14.5	6.0	7.1
TMAI3020S-R47MT	0.47±20%	0.024	0.019	11.0	12.5	5.8	7.0
TMAI3020S-1R0MT	1.0±20%	0.045	0.036	8.0	10.0	4.5	5.2
TMAI3020S-3R3MT	3.3±20%	0.124	0.098	4.6	5.5	2.5	3.0

Note:※1: Rated current: Isat(max.)or Irms(max.),whichever is smaller;

※2: Saturation Current: Max. Value, DC current at which the inductance drops less than 30% from its value without current; Typ. Value, DC current at which the inductance drops 30% from its value without current;

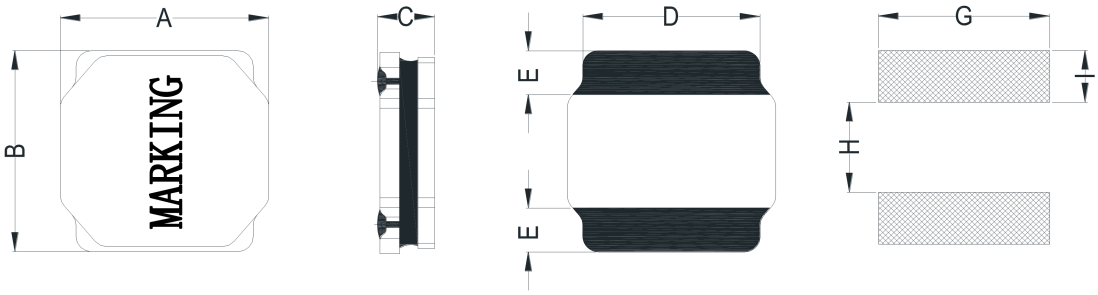
※3: Irms: DC current that causes the temperature rise (△T) from 20℃ ambient.

For Max. Value, △T＜40℃; for Typ. Value, △T is approximate 40℃.

The part temperature (ambient + temp. rise) should not exceed 125℃ under worst case operating conditions. Circuit design, component placement, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

Absolute Maximum Voltage ： DC 40V

1. Shape and Dimensions (Unit:mm)



A	B	C	D	E	G	H	I
4.0 ± 0.2	4.0 ± 0.2	1.2Max	3.3±0.2	1.2 Ref	3.7 Ref	1.6 Ref	1.3 Ref

2. Electrical Characteristics

Part Number	Inductance	DC Resistance		Saturation Current		Heat Rating Current		Marking
	1MHz/1V	Max.	Typ.	Max.	Typ.	Max.	Typ.	
Units	uH	Ω	Ω	A	A	A	A	
Symbol	L	DCR		Isat		Irms		
TMAI4012A-R56MT	0.56±20%	0.050	0.040	6.00	7.00	3.20	3.80	R56
TMAI4012A-R68MT	0.68±20%	0.055	0.042	5.20	6.20	3.25	3.80	R68
TMAI4012A-1R0MT	1.0±20%	0.059	0.049	3.80	4.60	3.00	3.50	1R0
TMAI4012A-2R2MT	2.2±20%	0.090	0.075	2.80	3.30	2.50	3.00	2R2
TMAI4012A-3R3MT	3.3±20%	0.130	0.106	2.80	3.30	2.00	2.50	3R3
TMAI4012A-4R7MT	4.7±20%	0.175	0.145	2.30	2.60	1.80	2.10	4R7
TMAI4012A-6R8MT	6.8±20%	0.230	0.190	1.60	2.20	1.50	1.75	6R8
TMAI4012A-8R2MT	8.2±20%	0.273	0.210	1.58	1.95	1.46	1.68	8R2
TMAI4012A-100MT	10±20%	0.360	0.300	1.55	1.85	0.85	1.00	100

Note:※1: Rated current: Isat(max.)or Irms(max.),whichever is smaller;

※2: Saturation Current: Max. Value, DC current at which the inductance drops less than 30% from its value without current; Typ. Value, DC current at which the inductance drops 30% from its value without current;

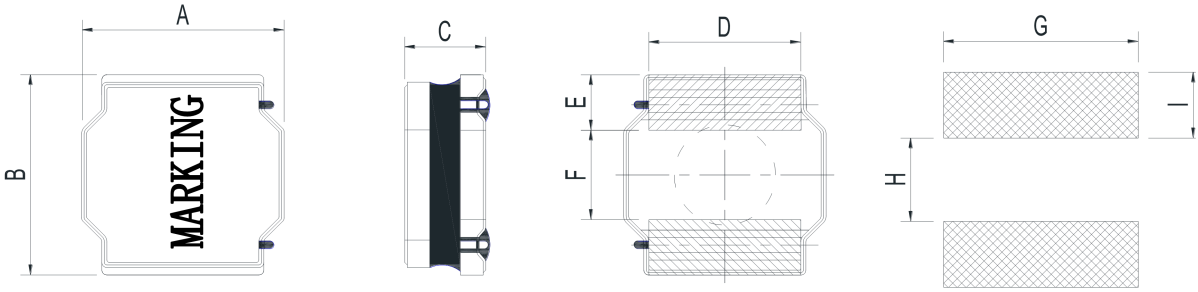
※3: Irms: DC current that causes the temperature rise (△T) from 20℃ ambient.

For Max. Value, △T＜40℃; for Typ. Value, △T is approximate 40℃.

The part temperature (ambient + temp. rise) should not exceed 125℃ under worst case operating conditions. Circuit design, component placement, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

※4: Absolute maximum voltage: DC 40V

1. Shape and Dimensions (Unit:mm)



A	B	C	D	E	F	G	H	I
4.0 ± 0.2	4.0 ± 0.2	1.2Max	3.1±0.2	0.95±0.2	2.1Ref	3.7 Ref	1.9 Ref	1.1 Ref

2. Electrical Characteristics

Part Number	Inductance	DC Resistance		Saturation Current		Heat Rating Current		Marking
	1MHz/1V	Max.	Typ.	Max.	Typ.	Max.	Typ.	
Units	uH	Ω	Ω	A	A	A	A	
Symbol	L	DCR		Isat		Irms		
TMAI4012S-R56MT	0.56±20%	0.050	0.040	6.00	7.00	3.20	3.80	R56
TMAI4012S-R68MT	0.68±20%	0.055	0.042	5.20	6.20	3.25	3.80	R68
TMAI4012S-1R0MT	1.0±20%	0.059	0.049	3.80	4.60	3.00	3.50	1R0
TMAI4012S-2R2MT	2.2±20%	0.090	0.075	2.80	3.30	2.50	3.00	2R2
TMAI4012S-3R3MT	3.3±20%	0.130	0.106	2.80	3.30	2.00	2.50	3R3
TMAI4012S-4R7MT	4.7±20%	0.175	0.145	2.30	2.60	1.80	2.10	4R7
TMAI4012S-6R8MT	6.8±20%	0.230	0.190	1.60	2.20	1.50	1.75	6R8
TMAI4012S-100MT	10±20%	0.360	0.300	1.55	1.85	0.85	1.00	100

Note:※1: Rated current: Isat(max.)or Irms(max.),whichever is smaller;

※2: Saturation Current: Max. Value, DC current at which the inductance drops less than 30% from its value without current; Typ. Value, DC current at which the inductance drops 30% from its value without current;

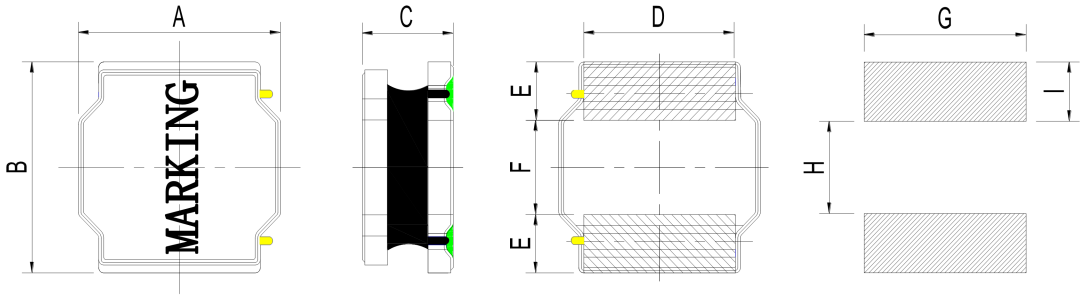
※3: Irms: DC current that causes the temperature rise (△T) from 20℃ ambient.

For Max. Value, △T＜40℃; for Typ. Value, △T is approximate 40℃.

The part temperature (ambient + temp. rise) should not exceed 125℃ under worst case operating conditions. Circuit design, component placement, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

※4: Absolute maximum voltage: DC 40V

1. Shape and Dimensions (Unit:mm)



A	B	C	D	E	F	G	H	I
4.0 ± 0.2	4.0 ± 0.2	2.0Max	3.3±0.2	1.0±0.2	2.0±0.2	3.7	1.9	1.1

2. Electrical Characteristics

Part Number	Inductance	DC Resistance		Saturation Current		Heat Rating Current		Marking
	1MHz/1V	Max.	Typ.	Max.	Typ.	Max.	Typ.	
Units	uH	Ω	Ω	A	A	A	A	
Symbol	L	DCR		Isat		Irms		
TMAI4020S-R24MT	0.24±20%	0.017	0.013	14.0	17.0	6.00	7.00	R24
TMAI4020S-R33MT	0.33±20%	0.020	0.015	13.0	16.0	5.90	6.80	R33
TMAI4020S-R47MT	0.47±20%	0.022	0.016	11.0	12.0	5.90	6.80	R47
TMAI4020S-R68MT	0.68±20%	0.0245	0.0192	9.00	11.5	5.80	6.70	R68
TMAI4020S-1R0MT	1.0±20%	0.028	0.023	8.70	11.0	5.80	6.70	1R0
TMAI4020S-1R5MT	1.5±20%	0.038	0.032	7.70	9.60	5.20	6.00	1R5
TMAI4020S-2R2MT	2.2±20%	0.056	0.046	6.00	7.50	4.00	4.80	2R2
TMAI4020S-3R3MT	3.3±20%	0.088	0.073	4.70	5.90	3.40	4.00	3R3
TMAI4020S-4R7MT	4.7±20%	0.115	0.095	4.00	4.90	2.85	3.30	4R7
TMAI4020S-6R8MT	6.8±20%	0.160	0.130	3.00	4.20	2.40	2.80	6R8
TMAI4020S-8R2MT	8.2±20%	0.220	0.175	2.90	3.80	2.10	2.40	8R2
TMAI4020S-100MT	10±20%	0.220	0.190	2.80	3.50	2.00	2.35	100
TMAI4020S-150MT	15±20%	0.400	0.305	2.10	2.80	1.00	1.20	150
TMAI4020S-220MT	22±20%	0.545	0.415	1.30	1.50	0.95	1.10	220

Note:※1: Rated current: Isat(max.)or Irms(max.),whichever is smaller;

※2: Saturation Current: Max. Value, DC current at which the inductance drops less than 30% from its value without current; Typ. Value, DC current at which the inductance drops 30% from its value without current;

※3: Irms: DC current that causes the temperature rise (△T) from 20℃ ambient.

For Max. Value, △T＜40℃; for Typ. Value, △T is approximate 40℃.

The part temperature (ambient + temp. rise) should not exceed 125℃ under worst case operating conditions. Circuit design, component placement, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

※4: Absolute maximum voltage: DC 40V