

Wire Wound SMD Power Inductors-TRMR-SA Series

The TRMR series of wirewound chip inductors are surface-mount devices that use magnetic adhesive to encapsulate the wound coil and magnetic core. They combine the high inductance and high current-carrying capacity of traditional wire wound inductors with the compactness of SMT technology, while their magnetic adhesive structure effectively reduces electromagnetic interference.



Features

- Alloy magnetic core design with increased current.
- High impact resistance metallized magnetic core with strong impact resistance.
- Closed magnetic circuit design reduces leakage flux and strong anti-EMI capability.
- Halogen free, RoHS compliant

Applications

- Smartphones, set-top boxes, VR/AR
- Notebooks, desktops, servers
- Gaming devices, navigation systems, multimedia devices

Operating Temp

- -40°C~+125°C

Product Identification

1 TRMR	2 201610	3 SA	4 XXX	5 X	6 T	7 A
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1	Product Symbol
TRMR	SMD Power Inductor

2	External Dimensions(mm)
201610	2.0*1.7*1.05
252010	2.5*2.2*1.05
252012	2.5*2.0*1.25
303010	3.0*3.0*1.0
303012	3.0*3.0*1.35
404012	4.0*4.0*1.35
404020	4.0*4.0*2.0

3	Internal Code
SA	Alloy Powder

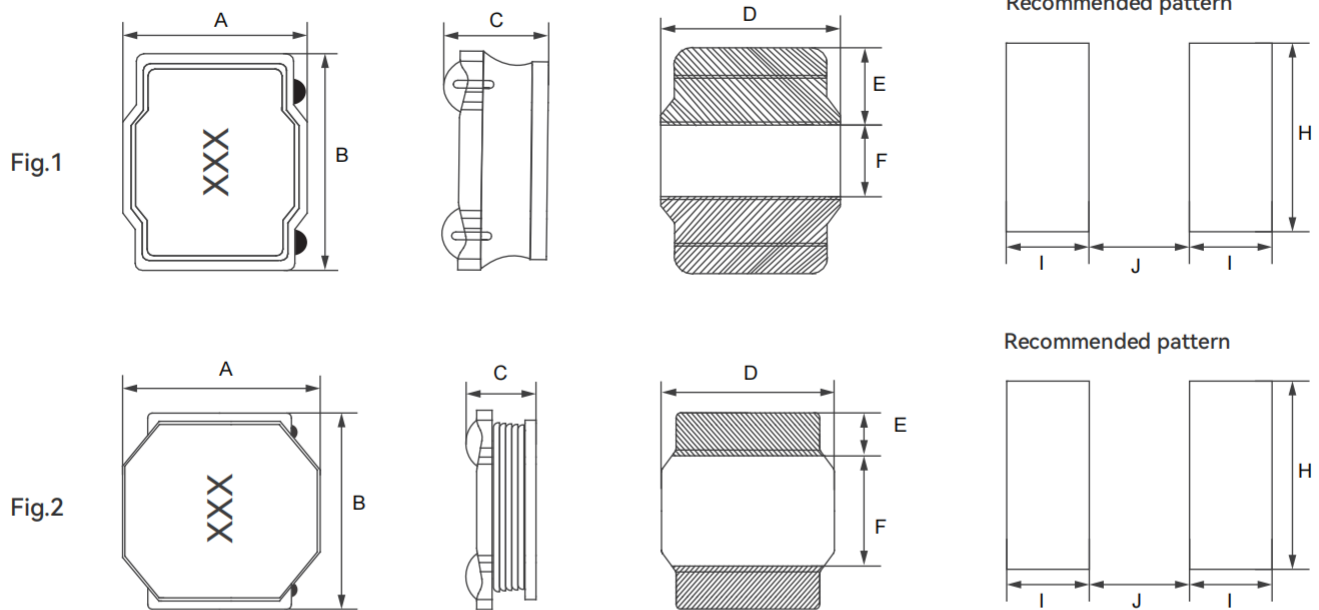
4	Nominal Inductance
R47	0.47μH
1R0	1.0μH

5	Inductance Tolerance
K	±10%
M	±20%
N	±30%

6	Packing
T	Tape Carrier Package

7	Internal Code
A	Standard

Shape and Dimensions



Dimensions

Unit:mm

Series	A	B	C	D	E	F	H	I	J	Shape
TRMR201610SA	2.0±0.2	1.7±0.2	1.05Max.	1.5Ref.	0.6Ref.	0.8Ref.	1.7Ref.	0.7Ref.	0.7Ref.	Fig.1
TRMR252010SA	2.5±0.2	2.2±0.2	1.05Max.	1.65Ref.	0.8Ref.	0.9Ref.	2.0Ref.	0.8Ref.	0.85Ref.	Fig.1
TRMR252012SA	2.5±0.2	2.2±0.2	1.25Max.	1.65Ref.	0.8Ref.	0.9Ref.	2.0Ref.	0.8Ref.	0.85Ref.	Fig.1
TRMR303010SA	3.0±0.2	3.0±0.2	1.0Max.	2.7Ref.	0.9Ref.	/	2.7Typ.	0.95Typ.	1.4Typ.	Fig.1
TRMR303012SA	3.0±0.2	3.0±0.2	1.35Max.	2.55Ref.	1.13Ref.	0.82Ref.	2.85Typ.	0.52Typ.	1.43Typ.	Fig.2
TRMR404012SA	4.0±0.2	4.0±0.2	1.35Max.	3.5Ref.	1.3Ref.	1.4Ref.	3.8Ref.	1.6Ref.	1.1Ref.	Fig.2
TRMR404020SA	4.0±0.2	4.0±0.2	2.0Max.	3.5Ref.	1.0Ref.	2.0Ref.	3.8Ref.	1.3Ref.	1.7Ref.	Fig.2

Specification

TRMR201610SA Series

Part Number	Inductance	DC Resistance		Saturation Current	Heat Rating Current	L Test Condition
		RDC(mΩ)				
	L (μH)	Max.	Typ.	Isat(A)	Irms(A)	/
TRMR201610SAR24□TA	0.24	40.00	34.00	4.50	3.15	@1MHz/1V
TRMR201610SAR33□TA	0.33	50.00	41.00	4.20	3.10	@1MHz/1V
TRMR201610SAR47□TA	0.47	55.00	48.00	4.00	3.00	@1MHz/1V
TRMR201610SAR68□TA	0.68	65.00	56.00	3.50	2.80	@1MHz/1V
TRMR201610SA1R0□TA	1.0	96.00	84.00	3.35	2.20	@1MHz/1V
TRMR201610SA1R5□TA	1.5	130.00	105.00	1.95	1.80	@1MHz/1V
TRMR201610SA2R2□TA	2.2	195.00	165.00	1.90	1.50	@1MHz/1V
TRMR201610SA3R3□TA	3.3	310.00	263.00	1.40	1.20	@1MHz/1V
TRMR201610SA4R7□TA	4.7	440.00	385.00	1.20	1.00	@1MHz/1V
TRMR201610SA6R8□TA	6.8	540.00	460.00	0.90	0.85	@1MHz/1V
TRMR201610SA100□TA	10	826.00	725.00	0.80	0.70	@1MHz/1V

TRMR252010SA Series

Part Number	Inductance	DC Resistance		Saturation Current	Heat Rating Current	L Test Condition
		RDC(mΩ)				
	L (μH)	Max.	Typ.	Isat(A)	Irms(A)	/
TRMR252010SAR24□TA	0.24	26.00	21.00	5.00	4.40	@1MHz/1V
TRMR252010SAR33□TA	0.33	35.00	25.00	4.80	4.00	@1MHz/1V
TRMR252010SAR47□TA	0.47	45.00	33.00	4.40	3.40	@1MHz/1V
TRMR252010SAR56□TA	0.56	48.00	39.00	3.80	3.10	@1MHz/1V
TRMR252010SAR68□TA	0.68	59.00	46.00	3.20	3.00	@1MHz/1V
TRMR252010SA1R0□TA	1.0	76.00	60.00	3.10	2.60	@1MHz/1V
TRMR252010SA1R5□TA	1.5	106.00	82.00	2.60	2.00	@1MHz/1V
TRMR252010SA2R2□TA	2.2	155.00	112.00	1.90	1.80	@1MHz/1V
TRMR252010SA3R3□TA	3.3	235.00	175.00	1.60	1.50	@1MHz/1V
TRMR252010SA4R7□TA	4.7	276.00	230.00	1.30	1.20	@1MHz/1V
TRMR252010SA6R8□TA	6.8	430.00	360.00	1.10	1.00	@1MHz/1V
TRMR252010SA100□TA	10	520.00	465.00	0.90	0.85	@1MHz/1V

TRMR252012SA Series

Part Number	Inductance	DC Resistance		Saturation Current	Heat Rating Current	L Test Condition
		RDC(mΩ)				
	L (μH)	Max.	Typ.	Isat(A)	Irms(A)	/
TRMR252012SAR24□TA	0.24	26.00	21.00	5.00	4.40	@1MHz/1V
TRMR252012SAR33□TA	0.33	35.00	25.00	4.80	4.00	@1MHz/1V
TRMR252012SAR47□TA	0.47	45.00	33.00	4.40	3.40	@1MHz/1V
TRMR252012SAR56□TA	0.56	48.00	39.00	3.80	3.10	@1MHz/1V
TRMR252012SAR68□TA	0.68	59.00	46.00	3.20	3.00	@1MHz/1V
TRMR252012SA1R0□TA	1.0	76.00	60.00	3.10	2.60	@1MHz/1V
TRMR252012SA1R5□TA	1.5	106.00	82.00	2.60	2.00	@1MHz/1V
TRMR252012SA2R2□TA	2.2	155.00	112.00	1.90	1.80	@1MHz/1V
TRMR252012SA3R3□TA	3.3	235.00	175.00	1.60	1.50	@1MHz/1V
TRMR252012SA4R7□TA	4.7	276.00	230.00	1.30	1.20	@1MHz/1V
TRMR252012SA6R8□TA	6.8	430.00	360.00	1.10	1.00	@1MHz/1V
TRMR252012SA100□TA	10	520.00	465.00	0.90	0.85	@1MHz/1V

TRMR303010SA Series

Part Number	Inductance	DC Resistance		Saturation Current	Heat Rating Current	L Test Condition
		RDC(mΩ)				
	L (μH)	Max.	Typ.	Isat(A)	Irms(A)	/
TRMR303010SAR47MTA	0.47±20%	44.00	38.00	7.30	4.20	@1MHZ/1V
TRMR303010SA1R0MTA	1.0±20%	65.00	56.00	5.20	3.20	@1MHZ/1V
TRMR303010SA1R5MTA	1.5±20%	85.00	73.00	4.00	2.60	@1MHZ/1V
TRMR303010SA2R2MTA	2.2±20%	95.00	82.00	3.00	2.50	@1MHZ/1V
TRMR303010SA3R3MTA	3.3±20%	133.00	115.00	2.55	2.05	@1MHZ/1V
TRMR303010SA4R7MTA	4.7±20%	181.00	156.00	2.10	1.80	@1MHZ/1V
TRMR303010SA6R8MTA	6.8±20%	270.00	233.00	1.75	1.50	@1MHZ/1V
TRMR303010SA100MTA	10±20%	390.00	336.00	1.35	1.20	@1MHZ/1V

TRMR303012SA Series

Part Number	Inductance	DC Resistance		Saturation Current	Heat Rating Current	L Test Condition
		RDC(mΩ)				
	L (μH)	Max.	Typ.	Isat(A)	Irms(A)	/
TRMR303012SAR68□TA	0.68	40.00	32.00	5.80	3.80	@1MHz/1V
TRMR303012SA1R0□TA	1.0	54.00	48.00	4.00	2.80	@1MHz/1V
TRMR303012SA1R5□TA	1.5	74.00	64.00	3.20	2.00	@1MHz/1V
TRMR303012SA2R2□TA	2.2	108.00	90.00	2.20	1.90	@1MHz/1V
TRMR303012SA3R3□TA	3.3	150.00	126.00	1.70	1.60	@1MHz/1V
TRMR303012SA4R7□TA	4.7	230.00	185.00	1.50	1.40	@1MHz/1V
TRMR303012SA6R8□TA	6.8	340.00	280.00	1.40	1.10	@1MHz/1V
TRMR303012SA100□TA	10	460.00	380.00	1.00	0.90	@1MHz/1V

TRMR404012SA Series

Part Number	Inductance	DC Resistance		Saturation Current	Heat Rating Current	L Test Condition
		RDC(mΩ)				
	L (μH)	Max.	Typ.	Isat(A)	Irms(A)	/
TRMR404012SAR68□TA	0.68	40.00	32.00	5.00	4.10	@100KHz/0.25V
TRMR404012SA1R0□TA	1.0	58.00	48.00	4.50	3.50	@100KHz/0.25V
TRMR404012SA1R2□TA	1.2	64.00	56.00	4.00	3.20	@100KHz/0.25V
TRMR404012SA1R5□TA	1.5	70.00	60.00	3.90	2.60	@100KHz/0.25V
TRMR404012SA2R2□TA	2.2	79.00	70.00	2.80	2.50	@100KHz/0.25V
TRMR404012SA3R3□TA	3.3	125.00	110.00	2.00	1.90	@100KHz/0.25V
TRMR404012SA4R7□TA	4.7	166.00	150.00	1.80	1.70	@100KHz/0.25V
TRMR404012SA6R8□TA	6.8	226.00	200.00	1.60	1.50	@100KHz/0.25V
TRMR404012SA100□TA	10	335.00	300.00	1.50	1.30	@100KHz/0.25V
TRMR404012SA220□TA	22	679.00	620.00	0.90	0.85	@100KHz/0.25V

TRMR404020SA Series

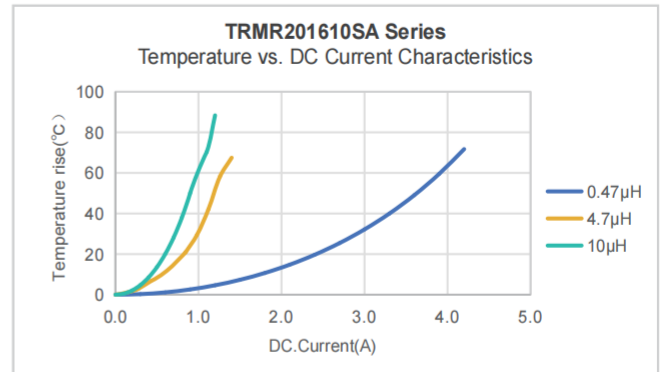
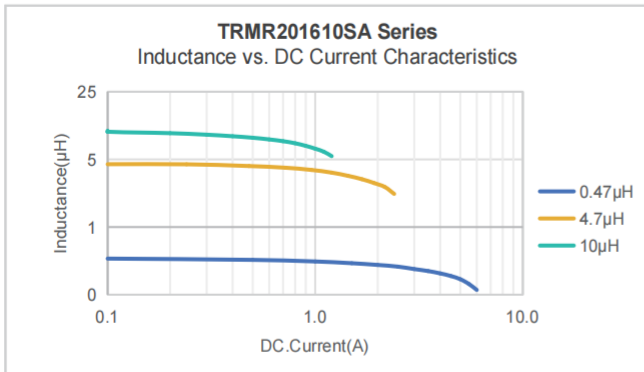
Part Number	Inductance	DC Resistance		Saturation Current	Heat Rating Current	L Test Condition
		RDC(mΩ)				
	L (μH)	Max.	Typ.	Isat(A)	Irms(A)	I
TRMR404020SA1R0□TA	1.0	26.00	22.00	8.50	5.10	@1MHz/1V
TRMR404020SA1R5□TA	1.5	36.00	32.00	7.20	4.50	@1MHz/1V
TRMR404020SA2R2□TA	2.2	48.00	44.00	6.10	4.20	@1MHz/1V
TRMR404020SA3R3□TA	3.3	72.00	64.00	4.20	3.50	@1MHz/1V
TRMR404020SA4R7□TA	4.7	108.00	95.00	4.00	2.50	@1MHz/1V
TRMR404020SA6R8□TA	6.8	156.00	135.00	3.00	2.10	@1MHz/1V
TRMR404020SA100□TA	10	216.00	180.00	2.80	1.70	@1MHz/1V
TRMR404020SA150□TA	15	360.00	300.00	2.00	1.50	@1MHz/1V
TRMR404020SA220□TA	22	480.00	400.00	1.50	1.30	@1MHz/1V
TRMR404020SA330□TA	33	900.00	750.00	1.40	0.80	@1MHz/1V

Notes

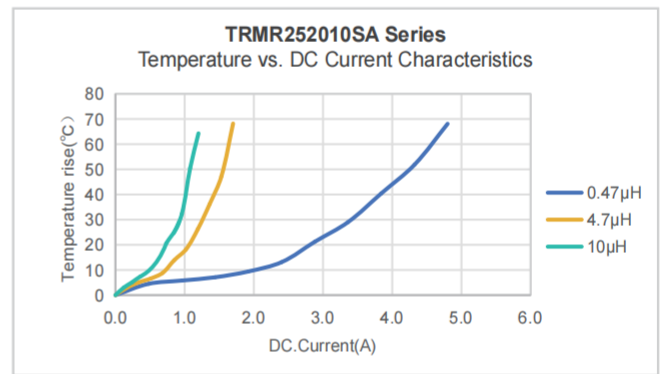
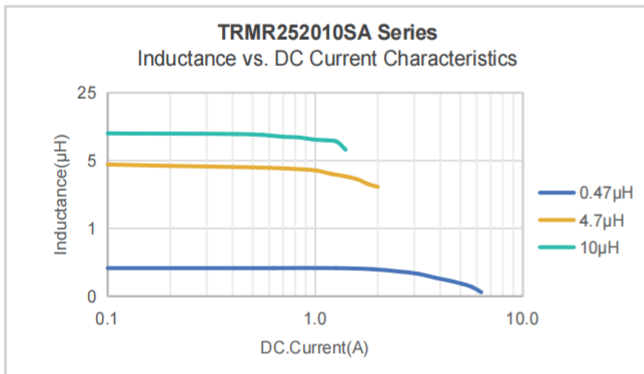
- All test data is referenced to 25 °C ambient.
- Isat: DC current at which the inductance drops approximate 30% from its value without current.
- Irms :DC current that will cause an approximate ΔT of 40 °C(reference ambient temperature is 25 °C).
- absolute maximum voltage: DC 25V.

Typical Characteristics Curves

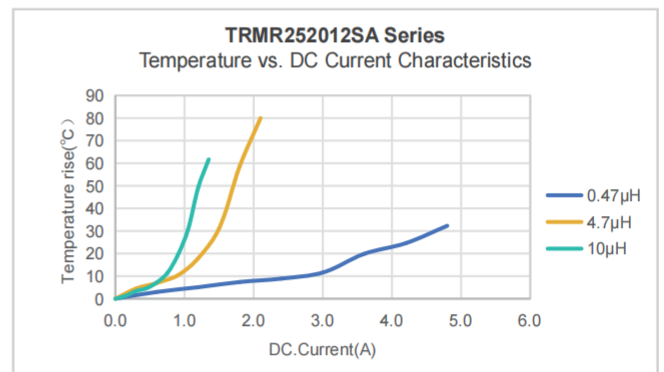
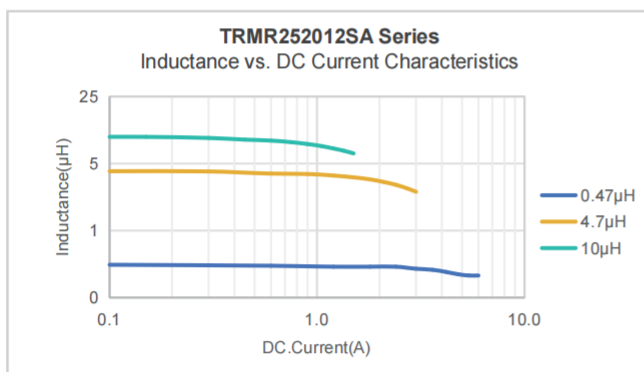
TRMR201610SA Series



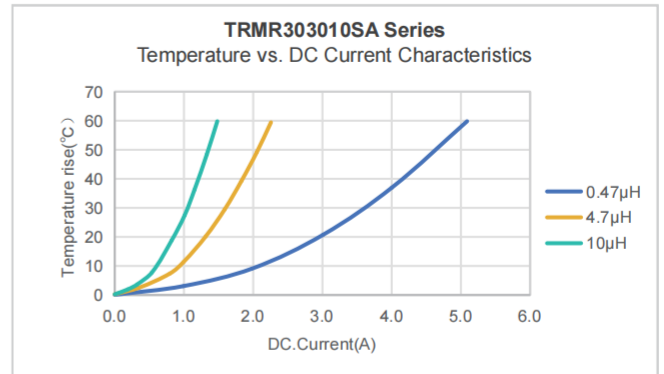
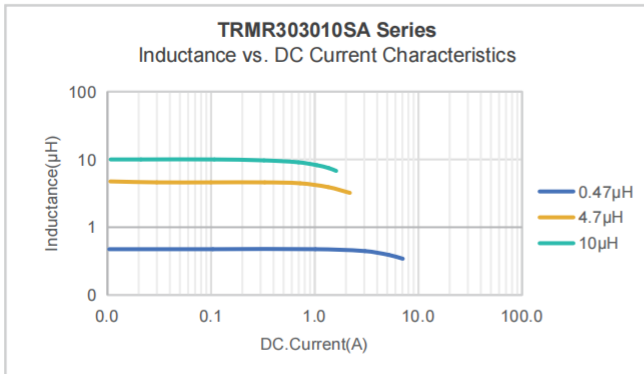
TRMR252010SA Series



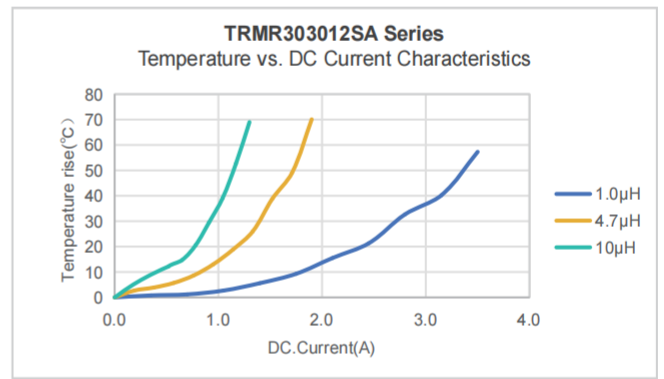
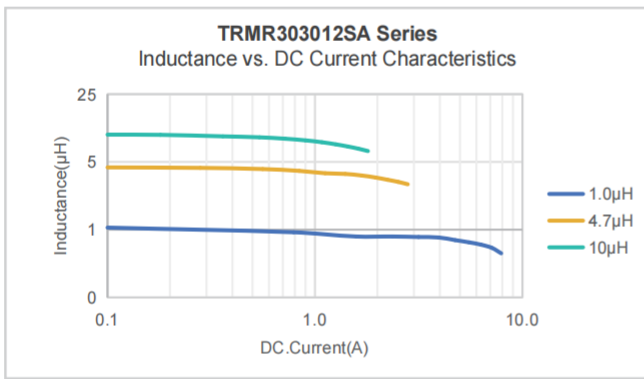
TRMR252012SA Series



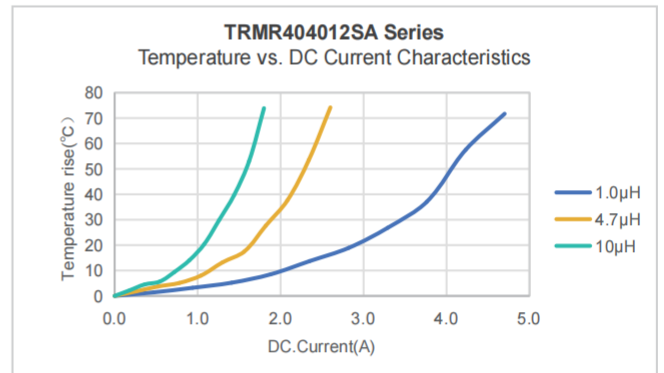
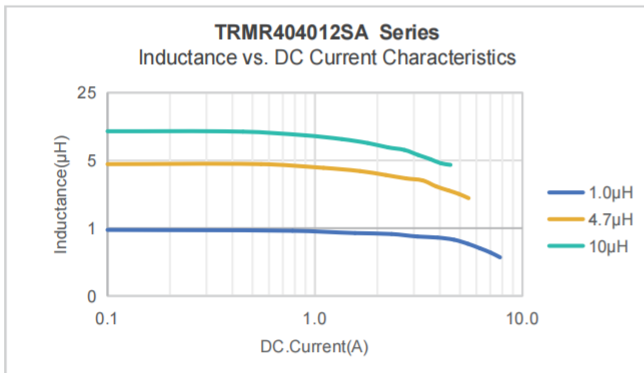
TRMR303010SA Series



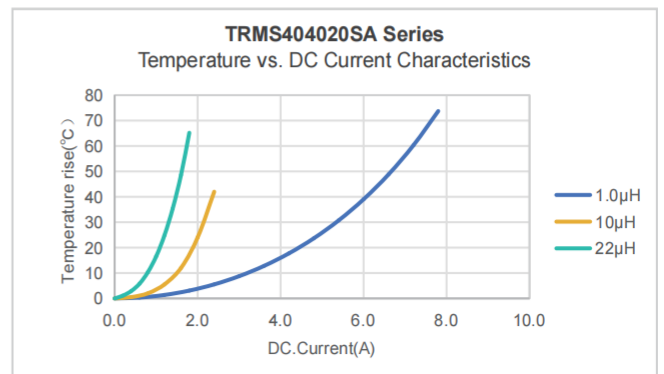
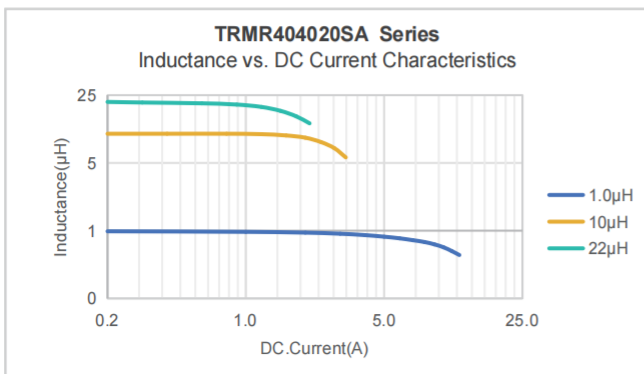
TRMR303012SA Series



TRMR404012SA Series

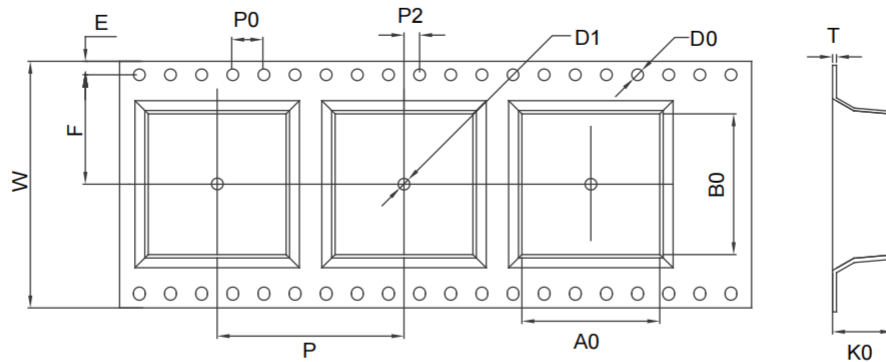


TRMR404020SA Series



Packaging Information

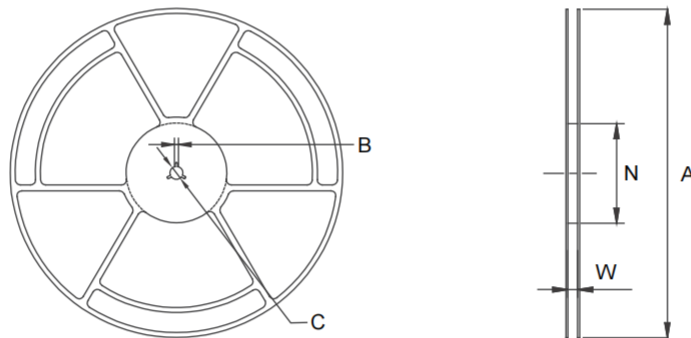
Tape Dimensions



Dimensions

Series	Tape dimensions (mm)											
	W	P	P0	P2	D0	D1	T	A0	B0	K0	E	F
TRMR201610SA	8.0±0.1	4.0±0.1	4.0±0.1	2.0±0.05	1.5+0.1/-0	/	/	1.9±0.05	2.20±0.05	1.2±0.05	1.75±0.1	3.5±0.05
TRMR252010SA	8.0±0.1	4.0±0.1	4.0±0.1	2.0±0.05	1.5+0.1/-0	/	/	2.4±0.1	2.85+0.1/-0.05	1.4±0.05	1.75±0.1	3.5±0.05
TRMR252012SA	8.0±0.1	4.0±0.1	4.0±0.1	2.0±0.05	1.5+0.1/-0	/	/	2.4±0.1	2.85+0.1/-0.05	1.4±0.05	1.75±0.1	3.5±0.05
TRMR303010SA	8.0±0.1	4.0±0.1	4.0±0.1	2.0±0.05	1.5+0.1/-0	/	/	2.4±0.1	2.85+0.1/-0.05	1.4±0.05	1.75±0.1	3.5±0.05
TRMR303012SA	8.0±0.1	4.0±0.1	4.0±0.1	2.0±0.05	1.5+0.1/-0	/	/	3.4	3.4	1.5	1.75±0.1	3.5±0.05
TRMR404012SA	12.0	8.0	4.0±0.1	2.0±0.05	1.5+0.1/-0	/	/	4.4	4.4	2.2	1.75±0.1	3.5±0.05
TRMR404020SA	12.0	8.0	4.0±0.1	2.0±0.05	1.5+0.1/-0	/	/	4.3	4.3	2.2	1.75±0.1	3.5±0.05

Reel Dimensions



Dimensions

Series	Reel Dimensions (mm)					Quantity Reel
	A	W	N	B	C	
TRMR201610SA	179±1.0	10±1.5	58.1±1.0	/	13±1.5	2000PCS
TRMR252010SA	179±1.0	10±1.5	58.1±1.0	/	13±1.5	2000PCS
TRMR252012SA	179±1.0	10±1.5	58.1±1.0	/	13±1.5	2000PCS
TRMR303010SF	178	8.4	60	/	13	2000PCS
TRMR303012SA	178	8.4	60	/	13	2000PCS
TRMR404012SA	330	12.4	100	/	13	4500PCS
TRMR404020SA	330	12.4	100	/	13	3000PCS