

TMDA Series (Rev. 1.0)



Features

- * RoHS compliant
- * Low profile type
- * Shielded construction
- * Ultra low buzz noise due to molding construction

Product Identification

<u>TMDA</u>	<u>6030</u>	-	<u>100</u>	<u>M</u>
1	2		3	4

1. Product Code
2. Size Code
3. Inductance: 10uH
4. Tolerance: M=±20%, N=±30%

Designed for low profile type with low RDC & ultra large current. Molded magnetic shielded type is suitable for high -density mounting and ultra low buzz noise. Soldering could be easily confirmed when mounting onto board.

Applications

- * High density DC/DC converters
- * POL converters
- * High current VRM/VRD for notebook/ Server/ desktop CPUs
- * High speed charger/ Ultra thin NB/ TV/ Tablet

Operating & Storage Condition

- * Operating Temp. : -55 to +125°C
- * Storage Temp. : -25 to +35°C
- * Storage Life Time : 12 Months @25°C , RH 70%

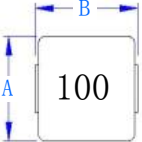
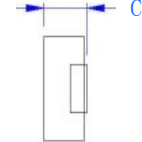
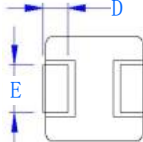
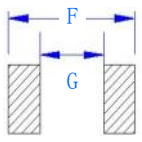
Test Equipment

- * Wayne kerr 3260B/G LCR Meter
- * Wayne kerr 3265B Bias Current Source

Standard Atmospheric Conditions

- * Ambient Temp : 20+/-15°C
- * Relative Humidity : 65+/-20%

Dimension & Recommended PAD Layout: [mm]

Top View		Side View		Bottom View		Pad Layout		
								
Size Code	A(±0.2)	B(±0.5)	C(max.)	D(±0.5)	E(±0.3)	F(ref.)	G(ref.)	H(ref.)
4020	4.1	4.4	2.0	1.1±0.3	2.0	5.0	2.2	2.3
5015	5.2	5.6	1.5	1.1±0.3	2.2	7.0	3.0	2.5
5018	5.2	5.6	1.8	1.1±0.3	2.2	7.0	3.0	2.5
5020	5.2	5.6	2.0	1.1±0.3	2.2	7.0	3.0	2.5
5030	5.2	5.6	3.0	1.1±0.3	2.2	7.0	3.0	2.5
5040	5.2	5.6	4.0	1.1±0.3	2.2	7.0	3.0	2.5
6018	6.6	7.1	1.8	1.6	3.0	7.6	3.7	3.4
6020	6.6	7.1	2.0	1.6	3.0	7.6	3.7	3.4
6024	6.6	7.1	2.4	1.6	3.0	7.6	3.7	3.4
6030	6.6	7.1	3.0	1.6	3.0	7.6	3.7	3.4
6040	6.6	7.1	4.0	1.6	3.0	7.6	3.7	3.4
6050	6.6	7.1	5.0	1.6	3.0	7.8	3.7	3.4
8050	8.0	8.5	5.0	1.8	3.0	9.2	4.5	3.5
1030	10.2	11.0	3.0	2.0	3.0	13.6	5.4	4.1
1040	10.2	11.0	4.0	2.0	3.0	13.6	5.4	4.1
1045	10.2	11.0	4.5	2.0	3.0	13.6	5.4	4.1
1050	10.2	11.0	5.0	2.0	3.0	13.6	5.4	4.1
1235	12.8	14.0	3.5	2.5	3.8	14.5	6.0	4.5
1240	12.8	14.0	4.0	2.5	3.8	14.5	6.0	4.5
1250	12.8	14.0	5.0	2.5	3.8	14.5	6.0	4.5
1260	12.8	14.0	6.0	2.5	3.8	14.5	6.0	4.5
1265	12.8	14.0	6.5	2.5	3.8	14.5	6.0	4.5
1770	17.1	17.3	7.0	3.0	11.8	19.5	11.2	13.0

TMDA Series (Rev. 1.0)

Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (± %)	DCR (mΩ) max.	I _{rms} (A) typ.	I _{sat} (A) typ.
TMDA4020-R22M	0.22	20	6.4	8.0	14.0
TMDA4020-R33M	0.33	20	12.0	7.0	12.0
TMDA4020-R47M	0.47	20	16.0	6.0	10.0
TMDA4020-R68M	0.68	20	28.0	5.0	9.0
TMDA4020-1R0M	1.00	20	40.0	4.0	8.0
TMDA4020-1R5M	1.50	20	50.0	3.5	7.0
TMDA4020-2R2M	2.20	20	75.0	3.0	6.0
TMDA4020-3R3M	3.30	20	95.0	2.5	4.0
TMDA4020-4R7M	4.70	20	130.0	2.0	3.5
TMDA4020-6R8M	6.80	20	170.0	1.8	3.0
TMDA4020-100M	10.0	20	290.0	1.5	2.5
TMDA5015-1R0M	1.0	20	45.0	5.0	9.0
TMDA5015-1R5M	1.5	20	65.0	4.0	8.0
TMDA5015-2R2M	2.2	20	85.0	2.5	5.0
TMDA5015-3R3M	3.3	20	135.0	1.8	3.5
TMDA5018-1R0M	1.0	20	30.0	5.0	9.0
TMDA5018-3R3M	3.3	20	105.0	2.5	5.0
TMDA5018-4R7M	4.7	20	160.0	2.0	4.5
TMDA5018-6R8M	6.8	20	200.0	1.8	3.0
TMDA5020-R47M	0.47	20	15.0	7.0	15.0
TMDA5020-R68M	0.68	20	21.0	6.0	11.0
TMDA5020-1R0M	1.00	20	25.0	5.0	10.0
TMDA5020-1R5M	1.50	20	40.0	4.5	8.0
TMDA5020-2R2M	2.20	20	60.0	4.0	7.0
TMDA5020-3R3M	3.30	20	90.0	3.5	5.5
TMDA5020-4R7M	4.70	20	100.0	2.8	5.0
TMDA5020-6R8M	6.80	20	160.0	2.2	4.0
TMDA5020-100M	10.0	20	225.0	1.8	3.0
TMDA5030-R47M	0.47	20	9.5	8.0	16.0
TMDA5030-R68M	0.68	20	13.0	7.0	14.0
TMDA5030-1R0M	1.00	20	15.0	6.0	12.0
TMDA5030-1R5M	1.50	20	22.5	5.0	10.0
TMDA5030-2R2M	2.20	20	35.0	4.5	9.0
TMDA5030-3R3M	3.30	20	38.0	4.0	8.0
TMDA5030-4R7M	4.70	20	70.0	3.5	7.0
TMDA5030-6R8M	6.80	20	100.0	3.0	5.0
TMDA5030-8R2M	8.20	20	130.0	2.5	4.0
TMDA5030-100M	10.00	20	145.0	2.0	3.5
TMDA5030-150M	15.00	20	215.0	1.8	3.0
TMDA5030-220M	22.0	20	275.0	1.5	2.5
TMDA5030-330M	33.0	20	435.0	0.8	1.5

* Test Condition @100KHz / 1.0Vrms, 25°C Ambient

* I_{rms} DC current (A) that will cause an approximate ΔT of 40°C* I_{sat} DC current (A) that will cause L to drop approximately 35%

TMDA Series (Rev. 1.0)

Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (± %)	DCR (mΩ) max.	Irms (A) typ.	Isat (A) typ.
TMDA5040-150M	15.0	20	140.0	1.5	3.0
TMDA5040-220M	22.0	20	260.0	1.5	2.5
TMDA6018-R47M	0.47	20	12.0	10.0	22.0
TMDA6018-1R0M	1.00	20	30.0	7.0	12.0
TMDA6018-2R2M	2.20	20	50.0	5.0	9.0
TMDA6018-3R3M	3.30	20	65.0	4.0	7.0
TMDA6018-4R7M	4.70	20	95.0	3.0	5.5
TMDA6020-R47M	0.47	20	10.0	10.0	22.0
TMDA6020-R68M	0.68	20	15.0	9.0	18.0
TMDA6020-1R0M	1.00	20	24.0	7.0	14.0
TMDA6020-1R5M	1.50	20	36.0	6.0	12.0
TMDA6020-2R2M	2.20	20	45.0	5.0	9.0
TMDA6020-3R3M	3.30	20	95.0	4.0	7.0
TMDA6020-4R7M	4.70	20	105.0	3.5	6.0
TMDA6020-6R8M	6.80	20	140.0	2.5	5.0
TMDA6020-100M	10.0	20	200.0	2.0	4.0
TMDA6024-R47M	0.47	20	7.5	12.0	25.0
TMDA6024-R68M	0.68	20	10.0	9.0	18.0
TMDA6024-1R0M	1.00	20	13.0	8.0	16.0
TMDA6024-1R5M	1.50	20	24.0	7.0	14.0
TMDA6024-2R2M	2.20	20	40.0	6.0	11.0
TMDA6024-3R3M	3.30	20	50.0	5.0	9.0
TMDA6024-4R7M	4.70	20	60.0	4.0	7.5
TMDA6024-6R8M	6.80	20	95.0	3.0	6.0
TMDA6024-100M	10.0	20	120.0	2.5	4.5
TMDA6030-R22M	0.22	20	4.0	18.0	35.0
TMDA6030-R33M	0.33	20	5.0	16.0	28.0
TMDA6030-R47M	0.47	20	5.5	15.0	24.0
TMDA6030-R68M	0.68	20	7.0	12.0	20.0
TMDA6030-1R0M	1.00	20	12.5	10.0	18.0
TMDA6030-1R5M	1.50	20	18.0	8.0	14.0
TMDA6030-2R2M	2.20	20	20.0	7.0	12.0
TMDA6030-3R3M	3.30	20	36.0	6.0	10.0
TMDA6030-4R7M	4.70	20	48.0	5.0	9.0
TMDA6030-6R8M	6.80	20	84.0	4.5	8.0
TMDA6030-8R2M	8.20	20	100.0	3.5	6.0
TMDA6030-100M	10.00	20	110.0	3.0	5.5
TMDA6030-150M	15.00	20	130.0	2.5	4.5
TMDA6030-220M	22.00	20	160.0	2.0	3.5
TMDA6030-330M	33.00	20	250.0	1.5	2.5
TMDA6030-470M	47.00	20	412.0	1.0	2.0

* Test Condition @100KHz / 1.0Vrms, 25°C Ambient

* Irms DC current (A) that will cause an approximate ΔT of 40°C

* Isat DC current (A) that will cause L to drop approximately 35%

TMDA Series (Rev. 1.0)

Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (± %)	DCR (mΩ) max.	Irms (A) typ.	Isat (A) typ.
TMDA6040-R36M	0.36	20	5.0	15.0	28.0
TMDA6040-1R0M	1.00	20	7.8	10.0	14.0
TMDA6040-1R5M	1.50	20	10.0	9.0	14.0
TMDA6040-2R2M	2.20	20	14.0	8.0	10.0
TMDA6040-3R3M	3.30	20	22.0	7.0	12.0
TMDA6040-4R7M	4.70	20	30.0	6.0	9.0
TMDA6040-6R8M	6.80	20	58.0	5.0	8.0
TMDA6040-100M	10.00	20	67.0	4.0	5.5
TMDA6040-330M	33.00	20	250.0	1.5	2.5
TMDA6040-470M	47.00	20	310.0	1.5	2.2
TMDA6050-1R0M	1.00	20	7.2	12.0	16.0
TMDA6050-1R5M	1.50	20	10.0	10.0	15.0
TMDA6050-2R2M	2.20	20	14.0	8.0	12.0
TMDA6050-3R3M	3.30	20	18.0	6.0	10.0
TMDA6050-4R7M	4.70	20	23.0	5.0	9.0
TMDA6050-6R8M	6.80	20	33.0	4.5	8.0
TMDA6050-8R2M	8.20	20	50.0	4.0	7.5
TMDA6050-100M	10.00	20	60.0	4.0	7.0
TMDA6050-150M	15.00	20	90.0	3.5	6.0
TMDA6050-220M	22.00	20	130.0	2.5	4.0
TMDA6050-330M	33.00	20	195.0	2.0	3.5
TMDA6050-470M	47.00	20	245.0	1.8	3.0
TMDA6050-680M	68.00	20	390.0	1.5	2.5
TMDA6050-101M	100.00	20	698.0	1.2	2.0
TMDA8050-R22M	0.22	20	1.0	33.0	60.0
TMDA8050-R47M	0.47	20	4.5	20.0	35.0
TMDA8050-R56M	0.56	20	4.5	20.0	30.0
TMDA8050-R68M	0.68	20	6.0	16.0	25.0
TMDA8050-1R0M	1.00	20	8.0	14.0	20.0
TMDA8050-1R5M	1.50	20	8.0	12.0	18.0
TMDA8050-2R2M	2.20	20	12.0	8.0	16.0
TMDA8050-3R3M	3.30	20	15.0	8.0	13.0
TMDA8050-4R7M	4.70	20	20.0	8.0	12.0
TMDA8050-5R6M	5.60	20	28.0	7.0	11.0
TMDA8050-6R8M	6.80	20	32.0	6.0	10.0
TMDA8050-100M	10.00	20	45.0	5.5	8.5
TMDA8050-150M	15.00	20	55.0	5.0	7.0
TMDA8050-220M	22.00	20	88.0	4.0	5.5
TMDA8050-330M	33.00	20	140.0	3.0	5.0
TMDA8050-470M	47.00	20	200.0	2.5	4.0
TMDA1030-1R0M	1.00	20	9.6	13.0	20.0
TMDA1030-2R2M	2.20	20	16.0	10.0	16.0
TMDA1030-3R3M	3.30	20	25.0	7.0	13.0
TMDA1030-4R7M	4.70	20	38.0	6.0	11.0
TMDA1030-6R8M	6.80	20	62.0	5.0	10.0
TMDA1030-8R2M	8.20	20	75.0	4.5	9.0
TMDA1030-100M	10.00	20	80.0	4.0	8.0

* Test Condition @100KHz / 1.0Vrms, 25°C Ambient

* Irms DC current (A) that will cause an approximate ΔT of 40°C

* Isat DC current (A) that will cause L to drop approximately 35%

TMDA Series (Rev. 1.0)

Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (± %)	DCR (mΩ) max.	Irms (A) typ.	Isat (A) typ.
TMDA1040-R22M	0.22	20	0.8	28.0	50.0
TMDA1040-R33M	0.33	20	1.5	22.0	45.0
TMDA1040-R47M	0.47	20	1.8	20.0	35.0
TMDA1040-R68M	0.68	20	2.8	18.0	32.0
TMDA1040-1R0M	1.00	20	3.5	16.0	28.0
TMDA1040-1R5M	1.50	20	6.0	15.0	23.0
TMDA1040-2R2M	2.20	20	10.0	14.0	20.0
TMDA1040-3R3M	3.30	20	13.0	12.0	17.0
TMDA1040-4R7M	4.70	20	20.0	10.0	15.0
TMDA1040-6R8M	6.80	20	25.0	9.0	12.0
TMDA1040-100M	10.00	20	45.0	6.0	9.0
TMDA1040-150M	15.00	20	75.0	5.0	8.0
TMDA1040-220M	22.00	20	90.0	4.0	7.0
TMDA1040-330M	33.00	20	120.0	3.5	6.0
TMDA1040-470M	47.00	20	170.0	3.0	5.0
TMDA1040-680M	68.00	20	250.0	2.5	4.0
TMDA1040-101M	100.00	20	360.0	1.8	3.0
TMDA1045-220M	22.00	20	70.0	4.0	8.0
TMDA1045-470M	47.00	20	155.0	3.0	5.5
TMDA1045-680M	68.00	20	180.0	2.5	4.0
TMDA1045-101M	100.00	20	350.0	2.0	3.5
TMDA1050-100M	10.00	20	44.0	7.0	12.0
TMDA1050-150M	15.00	20	54.0	6.0	10.0
TMDA1050-220M	22.00	20	85.0	4.5	8.0
TMDA1050-330M	33.00	20	90.0	4.0	6.0
TMDA1050-470M	47.00	20	145.0	3.0	5.5
TMDA1050-680M	68.00	20	195.0	2.5	4.5
TMDA1050-101M	100.00	20	285.0	2.0	3.5
TMDA1235-R47M	0.47	20	1.9	28.0	50.0
TMDA1235-R68M	0.68	20	3.0	22.0	40.0
TMDA1235-1R0M	1.00	20	4.5	17.0	30.0
TMDA1235-1R5M	1.50	20	6.5	13.0	25.0
TMDA1240-2R2M	2.20	20	7.5	12.0	22.0
TMDA1240-3R3M	3.30	20	16.0	10.0	18.0
TMDA1240-4R7M	4.70	20	21.0	8.0	15.0
TMDA1240-6R8M	6.80	20	29.0	7.0	12.0
TMDA1240-100M	10.00	20	52.0	6.0	10.0
TMDA1240-220M	22.00	20	74.0	4.0	7.0
TMDA1250-R33M	0.33	20	1.5	32.0	55.0
TMDA1250-R47M	0.47	20	1.6	30.0	50.0
TMDA1250-R68M	0.68	20	2.1	28.0	45.0
TMDA1250-1R0M	1.00	20	3.2	24.0	40.0
TMDA1250-1R5M	1.50	20	4.0	18.0	30.0
TMDA1250-2R2M	2.20	20	7.3	14.0	26.0
TMDA1250-3R3M	3.30	20	9.5	12.0	22.0

* Test Condition @100KHz / 1.0Vrms, 25°C Ambient

* Irms DC current (A) that will cause an approximate ΔT of 40°C

* Isat DC current (A) that will cause L to drop approximately 35%

TMDA Series (Rev. 1.0)

Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (± %)	DCR (mΩ) max.	Irms (A) typ.	Isat (A) typ.
TMDA1250-4R7M	4.70	20	11.5	10.0	18.0
TMDA1250-6R8M	6.80	20	25.0	9.0	16.0
TMDA1250-100M	10.00	20	42.0	7.0	14.0
TMDA1250-150M	15.00	20	54.0	6.0	11.0
TMDA1250-220M	22.00	20	68.0	5.0	9.0
TMDA1250-330M	33.00	20	95.0	4.0	7.0
TMDA1250-470M	47.00	20	110.0	3.0	5.5
TMDA1260-2R2M	2.20	20	4.5	16.0	28.0
TMDA1260-3R3M	3.30	20	7.5	14.0	24.0
TMDA1260-4R7M	4.70	20	11.0	12.0	20.0
TMDA1260-6R8M	6.80	20	15.0	9.0	17.0
TMDA1260-100M	10.00	20	22.0	8.0	15.0
TMDA1260-150M	15.00	20	41.0	7.0	13.0
TMDA1260-220M	22.00	20	48.0	6.0	10.0
TMDA1265-330M	33.00	20	71.0	5.0	8.0
TMDA1265-470M	47.00	20	95.0	4.0	7.0
TMDA1265-680M	68.00	20	130.0	3.0	6.0
TMDA1265-101M	100.00	20	195.0	2.5	4.5
TMDA1770-R47M	0.47	20	1.0	42.0	65.0
TMDA1770-R68M	0.68	20	1.5	40.0	60.0
TMDA1770-1R0M	1.00	20	2.0	32.0	55.0
TMDA1770-1R5M	1.50	20	2.5	32.0	40.0
TMDA1770-2R2M	2.20	20	2.7	28.0	40.0
TMDA1770-3R3M	3.30	20	4.2	25.0	40.0
TMDA1770-4R7M	4.70	20	5.5	25.0	35.0
TMDA1770-5R6M	5.60	20	7.0	25.0	30.0
TMDA1770-6R8M	6.80	20	9.2	19.0	27.0
TMDA1770-8R2M	8.20	20	10.8	16.0	22.0
TMDA1770-100M	10.00	20	13.0	14.0	18.0
TMDA1770-150M	15.00	20	20.5	12.0	13.0
TMDA1770-200M	20.00	20	23.0	9.7	12.0
TMDA1770-220M	22.00	20	26.5	9.5	12.0
TMDA1770-330M	33.00	20	44.0	9.0	10.0
TMDA1770-470M	47.00	20	55.0	6.8	9.0
TMDA1770-680M	68.00	20	80.0	5.2	7.0
TMDA1770-820M	82.00	20	95.0	4.5	7.0
TMDA1770-101M	100.00	20	120.0	4.0	6.5
TMDA1770-151M	150.00	20	172.5	3.0	5.0

* Test Condition @100KHz / 1.0Vrms, 25°C Ambient
* Irms DC current (A) that will cause an approximate ΔT of 40°C
* Isat DC current (A) that will cause L to drop approximately 35%