

TMDB Series (Rev. 1.0)



TMDB series provides high current in compact package size with magnetically shielded construction. This power inductor is an excellent power solution for space-limited devices.

Features

- * RoHS, Halogen Free and REACH Compliance
- * Monolithic, magnetically shielded
- * Capable for large current

Applications

- * Smartphones, tablets and wearable devices
- * HDD, SSD and PC peripheral devices
- * DSC, camcoders
- * PND
- * DC/DC converters

Product Identification

TMDB 201610 - 2R2 M L
 1 2 3 4 5

1. Product Code
2. Size Code
3. Inductance: 2.2uH
4. Tolerance: M= ±20%
5. L: low RDC

Operating & Storage Condition

- * Operating Temp. : -40 to +125°C
- * Storage Temp. : -25 to +35°C
- * Storage Life Time : 12 Months @25°C , RH 70%

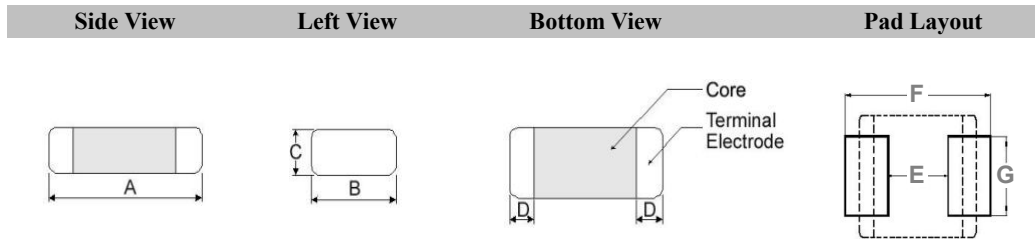
Test Equipment

- * 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]



Size Code	A(±0.2)	B(±0.2)	C(max.)	D(±0.3)	E(ref.)	F(ref.)	G(ref.)
201610	2.0	1.6	1.0	0.5	0.7	2.3	1.8
201612	2.0	1.6	1.2	0.5	0.7	2.3	1.8
252010	2.5	2.0	1.0	0.6	1.2	2.8	2.3
252012	2.5	2.0	1.2	0.6	1.2	2.8	2.3
322510	3.2±0.3	2.5	1.0	0.5	1.7	3.5	2.8
322512	3.2±0.3	2.5	1.2	0.5	1.7	3.5	2.8



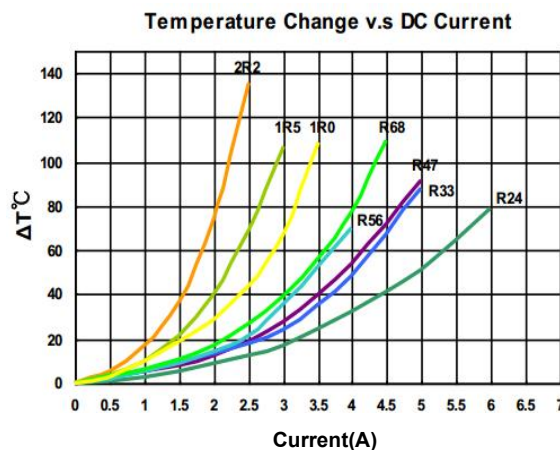
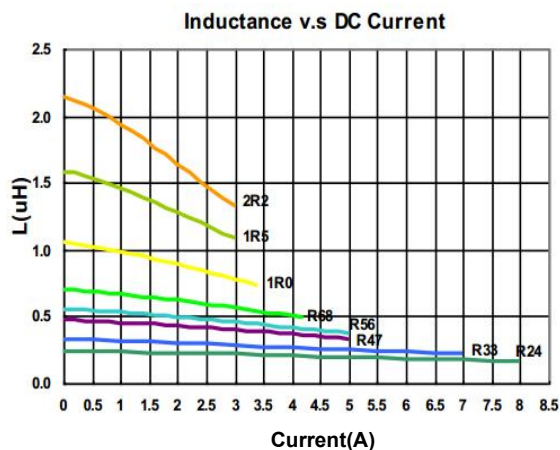
TMDB Series (Rev. 1.0)

Electrical Characteristics

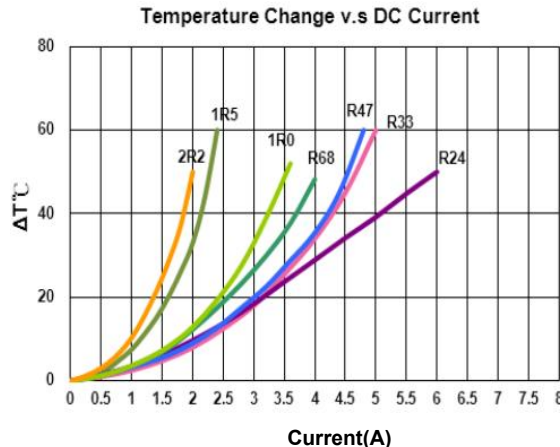
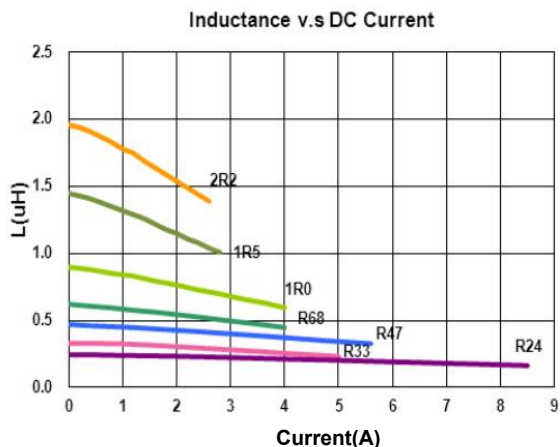
Part Number	Inductance (uH) @2MHz	Tolerance (± %)	DCR (mΩ) max.	Irms (A) max.	Isat (A) max.
TMDB201610-R24M	0.24	20	40.0	4.0	4.2
TMDB201610-R33M	0.33	20	48.0	3.5	4.0
TMDB201610-R47M	0.47	20	54.0	3.0	3.2
TMDB201610-R56M	0.56	20	59.0	2.8	2.8
TMDB201610-R68M	0.68	20	72.0	2.4	2.7
TMDB201610-1R0M	1.00	20	96.0	2.0	2.2
TMDB201610-1R5M	1.50	20	150.0	1.6	2.1
TMDB201610-2R2M	2.20	20	204.0	1.3	2.0
TMDB201610-R24ML	0.24	20	30.0	3.8	5.0
TMDB201610-R33ML	0.33	20	35.0	3.4	4.5
TMDB201610-R47ML	0.47	20	41.0	2.9	4.0
TMDB201610-R68ML	0.68	20	53.0	2.5	3.3
TMDB201610-1R0ML	1.00	20	72.0	2.2	2.8
TMDB201610-1R5ML	1.50	20	110.0	1.8	2.2
TMDB201610-2R2ML	2.20	20	170.0	1.5	1.8

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

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



(Normal Type)



(Low RDC Type)



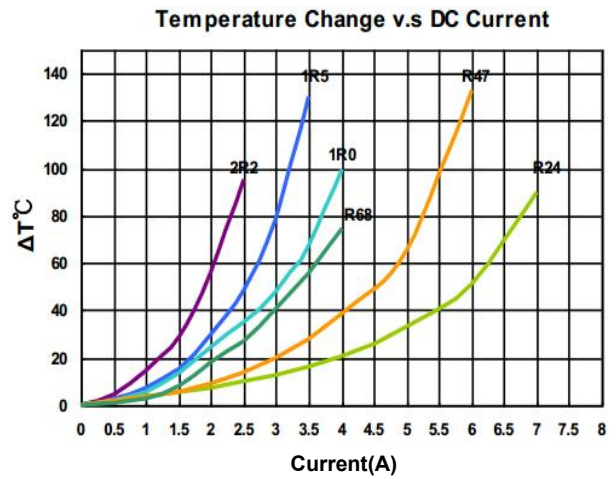
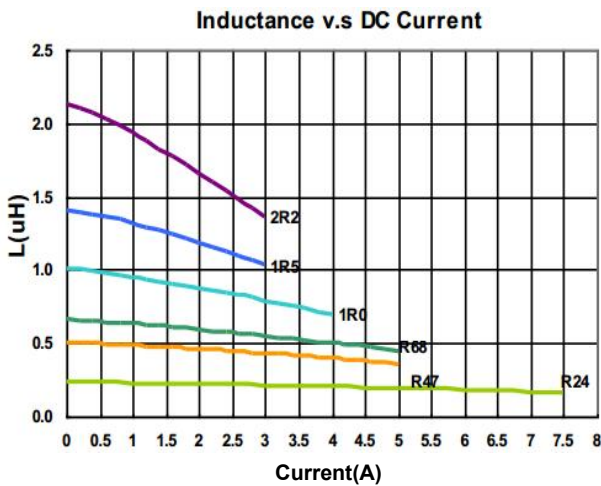
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Part Number	Inductance (uH) @2MHz	Tolerance (± %)	DCR (mΩ) max.	I _{rms} (A) max.	I _{sat} (A) max.
TMDB201612-R24M	0.24	20	35.0	4.2	5.5
TMDB201612-R47M	0.47	20	52.0	3.2	3.8
TMDB201612-R68M	0.68	20	70.0	2.6	3.3
TMDB201612-1R0M	1.00	20	82.0	2.3	3.1
TMDB201612-1R5M	1.50	20	120.0	2.2	2.6
TMDB201612-2R2M	2.20	20	195.0	1.3	2.0

* 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 30%.



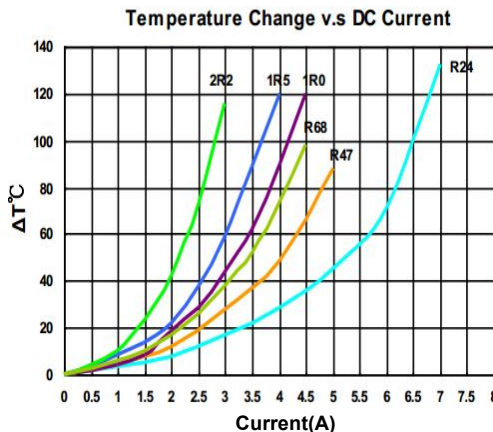
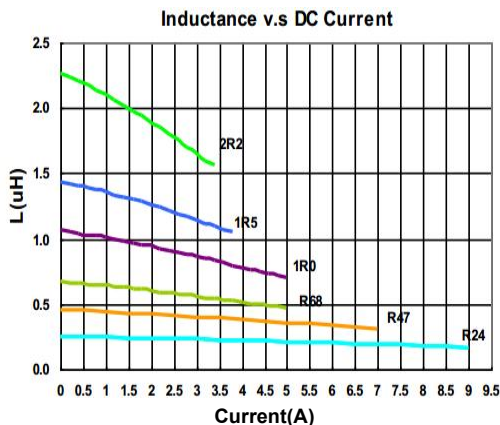
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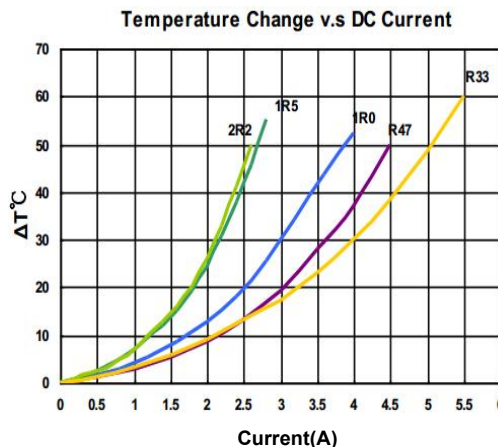
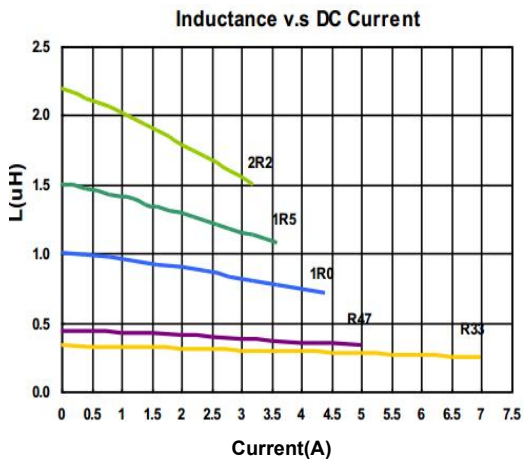
Part Number	Inductance (uH) @2MHz	Tolerance (± %)	DCR (mΩ) max.	Irms (A) max.	Isat (A) max.
TMDB252010-R24M	0.24	20	40.0	4.5	7.5
TMDB252010-R47M	0.47	20	46.0	3.1	5.2
TMDB252010-R68M	0.68	20	65.0	2.9	3.8
TMDB252010-1R0M	1.00	20	78.0	2.5	3.4
TMDB252010-1R5M	1.50	20	105.0	2.2	3.2
TMDB252010-2R2M	2.20	20	156.0	1.4	2.6
TMDB252010-3R3M	3.30	20	228.0	1.2	1.5
TMDB252010-4R7M	4.70	20	300.0	1.0	1.3
TMDB252010-R33ML	0.33	20	31.0	3.8	5.0
TMDB252010-R47ML	0.47	20	35.0	3.4	4.2
TMDB252010-R68ML	0.68	20	48.0	3.0	3.7
TMDB252010-1R0ML	1.00	20	65.0	2.6	3.2
TMDB252010-1R5ML	1.50	20	94.0	2.1	2.9
TMDB252010-2R2ML	2.20	20	120.0	1.8	2.3

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

* Isat DC current (A) that will cause L to drop approximately 30%.



(Normal Type)



(Low RDC Type)



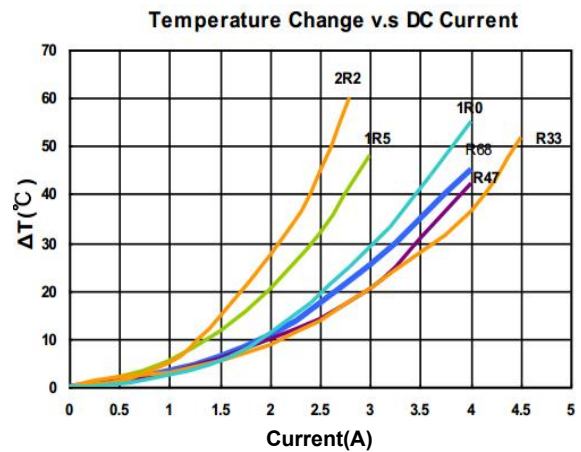
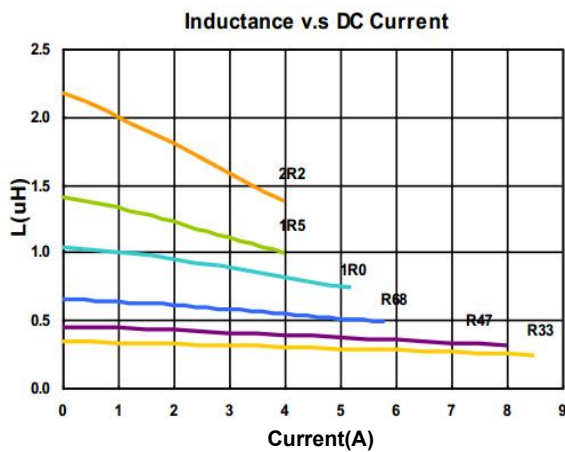
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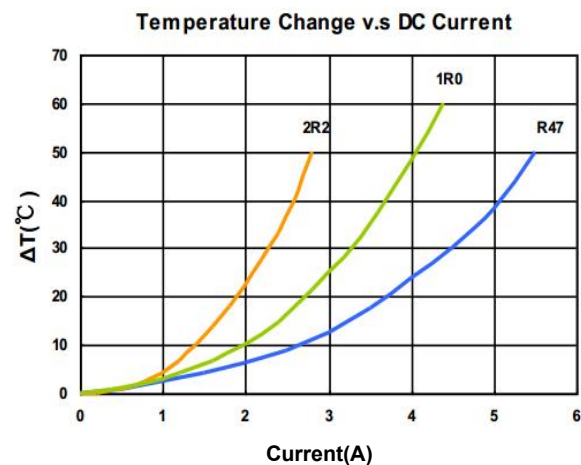
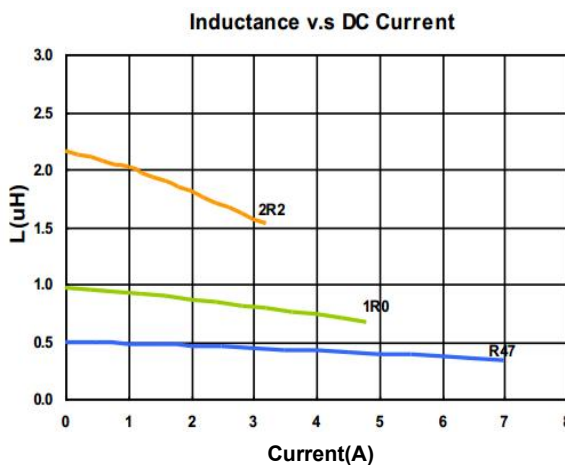
Part Number	Inductance (uH) @2MHz	Tolerance (± %)	DCR (mΩ) max.	I _{rms} (A) max.	I _{sat} (A) max.
TMDB252012-R33M	0.33	20	35.0	4.0	6.8
TMDB252012-R47M	0.47	20	39.0	3.7	6.2
TMDB252012-R68M	0.68	20	46.0	3.3	5.5
TMDB252012-1R0M	1.00	20	59.0	3.0	4.0
TMDB252012-1R5M	1.50	20	70.0	2.5	3.4
TMDB252012-2R2M	2.20	20	115.0	2.0	3.3
TMDB252012-R47ML	0.47	20	34.0	4.1	5.2
TMDB252012-1R0ML	1.00	20	56.0	3.2	3.6
TMDB252012-2R2ML	2.20	20	102.0	2.2	2.5

* 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 30%.



(Normal Type)



(Low RDC Type)



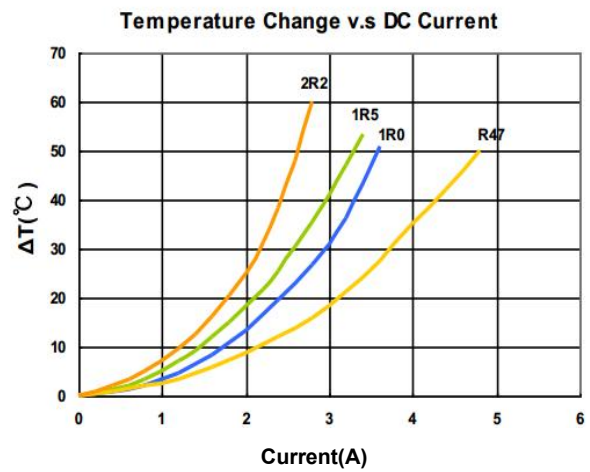
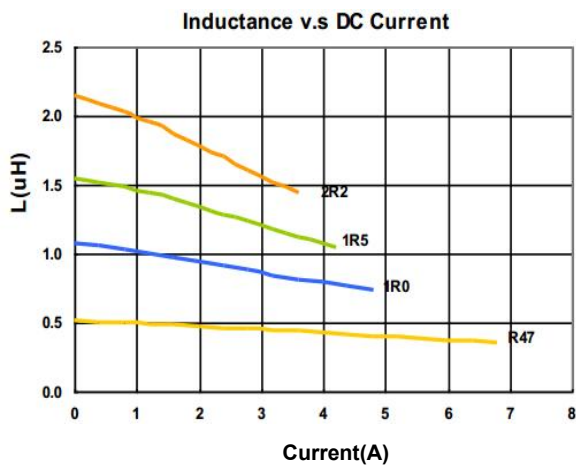
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Part Number	Inductance (uH) @2MHz	Tolerance (± %)	DCR (mΩ) max.	Irms (A) max.	Isat (A) max.
TMDB322510-R47M	0.47	20	37.0	3.6	5.8
TMDB322510-1R0M	1.00	20	56.0	3.0	4.0
TMDB322510-1R5M	1.50	20	75.0	2.6	3.4
TMDB322510-2R2M	2.20	20	108.0	2.2	2.7

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

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Part Number	Inductance (uH) @2MHz	Tolerance (± %)	DCR (mΩ) max.	Irms (A) max.	Isat (A) max.
TMDB322512-R47M	0.47	20	27.0	5.0	8.0
TMDB322512-R68M	0.68	20	34.0	4.0	6.3
TMDB322512-1R0M	1.00	20	42.0	3.8	5.8
TMDB322512-1R5M	1.50	20	68.0	2.8	4.0
TMDB322512-2R2M	2.20	20	85.0	2.4	3.6

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

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