

TMBL Series (Rev. 1.0)



Features

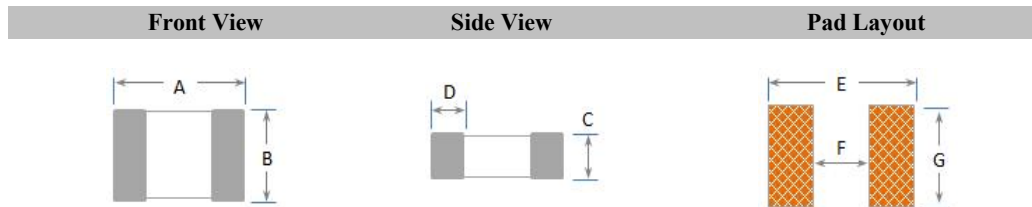
- * RoHS compliant
- * Bead inductor for power energy storage or noise suppressor
- * Fit for power line & signal line circuit.
- * To help you go pass the CE/ FCC standard.

Product Identification

TMBL **201209** **4R7** **K** **H**
 1 2 3 4 5

1. Product Code
2. Size Code
3. Inductance: 4.7uH
4. Tolerance: K=±10%, M=±20%
5. H: High current

Dimension & Recommended PAD Layout: [mm]



Size Code	A(±0.20)	B(±0.20)	C(±0.20)	D(±0.30)	E(ref.)	F(ref.)	G(ref.)	Type
100505	1.00±0.15	0.50±0.15	0.50±0.15	0.25±0.15	1.10	0.40	0.60	Normal
160808	1.60	0.80	0.80	0.40	1.80	0.60	1.00	
201209	2.00	1.25	0.90	0.50	2.40	0.80	1.45	
201212	2.00	1.25	1.25	0.50	2.40	0.80	1.45	
321609	3.20	1.60	0.90	0.50	3.40	2.00	1.80	
321611	3.20	1.60	1.10	0.50	3.40	2.00	1.80	
322513	3.20	2.50	1.30	0.50	3.40	2.00	2.80	
453215	4.50	3.20	1.50	0.50	4.80	3.00	3.60	High
160808	1.60±0.15	0.80±0.15	0.80±0.15	0.30±0.20	1.70	0.60	1.00	
201209	2.00	1.25	0.90	0.50	2.40	0.80	1.45	
201610	2.00	1.60	1.00	0.50	2.40	0.80	1.45	
252010	2.50	2.00	1.00	0.50	2.80	1.00	2.20	
321609	3.20	1.60	0.90	0.50	3.40	2.00	1.80	

Applications

- * Tablet, notebook, PC and peripheral equipment
- * DSC/ DVC/ LCD television/ set top box
- * Mobile / handheld device/ low profile device/ panel...
- * Various electronic equipment

Operating & Storage Condition

- * Operating Temp. : -40 to +85°C
- * Storage Temp. : -40 to +85°C
- * Storage Life Time : 12 Months @25°C , RH 65%

Test Equipment

- * HP4284A, HP42841A- L, IDC, Q, RDC
- * HP8753D NETWORK ANALYZER- SRF

Standard Atmospheric Conditions

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



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Electrical Characteristics

Part Number	Inductance (μ H)	Q min.	L&Q Test Freq. (MHz)	SRF (MHz) min.	DCR (Ω) max.	IDC (mA) max.
TMBL100505-47NK	0.047	10	50	220	0.45	25
TMBL100505-56NK	0.056	10	50	210	0.45	25
TMBL100505-68NK	0.068	10	50	210	0.45	25
TMBL100505-82NK	0.082	10	50	200	0.45	25
TMBL100505-R10K	0.100	15	25	200	0.70	25
TMBL100505-R12K	0.120	15	25	165	0.70	25
TMBL100505-R15K	0.150	15	25	140	0.80	25
TMBL100505-R18K	0.180	15	25	120	0.80	25
TMBL100505-R22K	0.220	15	25	110	1.00	25
TMBL100505-R27K	0.270	15	25	95	1.20	25
TMBL100505-R33K	0.330	15	25	85	1.20	25
TMBL100505-R39K	0.390	15	10	70	1.30	20
TMBL100505-R47K	0.470	15	10	68	1.50	20
TMBL100505-R56K	0.560	15	10	55	2.00	20
TMBL100505-R68K	0.680	15	10	50	2.30	20
TMBL100505-R82K	0.820	15	10	45	3.00	18
TMBL100505-1R0K	1.000	20	10	40	3.50	25
TMBL100505-1R2K	1.200	20	10	35	4.00	25
TMBL160808-47NK	0.047	15	50	260	0.20	50
TMBL160808-56NK	0.056	15	50	260	0.20	50
TMBL160808-68NK	0.068	15	50	250	0.20	50
TMBL160808-82NK	0.082	15	50	245	0.20	50
TMBL160808-R10K	0.100	20	25	240	0.25	50
TMBL160808-R12K	0.120	20	25	205	0.30	50
TMBL160808-R15K	0.150	20	25	180	0.30	50
TMBL160808-R18K	0.180	20	25	165	0.30	50
TMBL160808-R22K	0.220	20	25	150	0.40	50
TMBL160808-R27K	0.270	20	25	136	0.45	50
TMBL160808-R33K	0.330	20	25	125	0.50	50
TMBL160808-R39K	0.390	20	25	110	0.60	50
TMBL160808-R47K	0.470	20	25	105	0.70	50
TMBL160808-R56K	0.560	20	25	95	0.70	50
TMBL160808-R68K	0.680	20	25	90	0.90	50
TMBL160808-R82K	0.820	20	25	85	1.00	50
TMBL160808-1R0K	1.000	25	10	75	0.50	25
TMBL160808-1R2K	1.200	25	10	65	0.55	25
TMBL160808-1R5K	1.500	25	10	60	0.70	25
TMBL160808-1R8K	1.800	25	10	55	0.75	25
TMBL160808-2R2K	2.200	25	10	50	0.80	25
TMBL160808-2R7K	2.700	25	10	45	0.90	15
TMBL160808-3R3K	3.300	25	10	40	1.00	15
TMBL160808-3R9K	3.900	25	10	35	1.30	15
TMBL160808-4R7K	4.700	25	10	33	1.50	15
TMBL160808-5R6K	5.600	12	4	22	1.55	5
TMBL160808-6R8K	6.800	12	4	20	1.55	5
TMBL160808-8R2K	8.200	12	4	18	1.65	5
TMBL160808-100K	10.000	20	2	17	1.75	3
TMBL160808-120K	12.000	20	2	15	1.85	3
TMBL160808-150M	15.000	20	1	14	2.50	1
TMBL160808-180M	18.000	20	1	13	2.70	1
TMBL160808-220M	22.000	20	1	12	3.00	1

* Inductance tolerance: K=±10%, M=±20%



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Part Number	Inductance (μ H)	Q min.	L&Q Test Freq. (MHz)	SRF (MHz) min.	DCR (Ω) max.	IDC (mA) max.
TMBL201209-47NK	0.047	25	50	320	0.15	300
TMBL201209-56NK	0.056	25	50	320	0.15	300
TMBL201209-68NK	0.068	25	50	280	0.20	300
TMBL201209-82NK	0.082	25	50	280	0.20	300
TMBL201209-R10K	0.100	20	25	235	0.20	250
TMBL201209-R12K	0.120	20	25	220	0.25	250
TMBL201209-R15K	0.150	20	25	200	0.25	250
TMBL201209-R18K	0.180	20	25	185	0.30	250
TMBL201209-R22K	0.220	20	25	170	0.30	250
TMBL201209-R27K	0.270	20	25	150	0.40	250
TMBL201209-R33K	0.330	20	25	145	0.40	250
TMBL201209-R39K	0.390	25	25	135	0.50	200
TMBL201209-R47K	0.470	25	25	125	0.50	200
TMBL201209-R56K	0.560	25	25	115	0.60	150
TMBL201209-R68K	0.680	25	25	105	0.65	150
TMBL201209-R82K	0.820	25	25	100	0.70	150
TMBL201209-1R0K	1.000	35	10	75	0.40	50
TMBL201209-1R2K	1.200	35	10	65	0.40	50
TMBL201209-1R5K	1.500	35	10	60	0.40	50
TMBL201209-1R8K	1.800	35	10	55	0.40	50
TMBL201209-2R2K	2.200	35	10	50	0.60	50
TMBL201209-2R7K	2.700	35	10	45	0.60	50
TMBL201209-3R3K	3.300	35	10	41	0.60	50
TMBL201209-3R9K	3.900	35	10	38	0.80	50
TMBL201209-4R7K	4.700	35	10	35	0.90	30
TMBL201209-5R6K	5.600	30	4	32	1.00	15
TMBL201209-6R8K	6.800	30	4	29	1.05	15
TMBL201209-8R2K	8.200	30	4	26	1.05	15
TMBL201209-100K	10.000	30	2	24	1.15	15
TMBL201209-120K	12.000	30	2	22	1.15	15
TMBL201209-150K	15.000	25	1	19	1.15	5
TMBL201209-180K	18.000	25	1	18	1.20	5
TMBL201209-220K	22.000	25	1	16	1.20	5
TMBL201209-270K	27.000	25	1	16	1.50	5
TMBL201209-330M	33.000	25	1	16	1.50	5
TMBL201212-390M	39.000	25	1	16	1.50	5
TMBL201212-470M	47.000	25	1	15	1.70	5

* Inductance tolerance: K=±10%, M=±20%



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Part Number	Inductance (μ H)	Q min.	L&Q Test Freq. (MHz)	SRF (MHz) min.	DCR (Ω) max.	IDC (mA) max.
TMBL321609-47NK	0.047	30	50	320	0.15	300
TMBL321609-56NK	0.056	30	50	320	0.20	300
TMBL321609-68NK	0.068	30	50	280	0.25	300
TMBL321609-82NK	0.082	30	50	280	0.25	300
TMBL321609-R10K	0.100	25	25	235	0.25	250
TMBL321609-R12K	0.120	25	25	220	0.25	250
TMBL321609-R15K	0.150	25	25	200	0.25	250
TMBL321609-R18K	0.180	25	25	185	0.30	250
TMBL321609-R22K	0.220	25	25	170	0.30	250
TMBL321609-R27K	0.270	25	25	150	0.30	250
TMBL321609-R33K	0.330	25	25	145	0.30	250
TMBL321609-R39K	0.390	30	25	135	0.50	200
TMBL321609-R47K	0.470	30	25	125	0.50	200
TMBL321609-R56K	0.560	30	25	115	0.50	150
TMBL321609-R68K	0.680	30	25	105	0.50	150
TMBL321609-R82K	0.820	30	25	100	0.60	150
TMBL321609-1R0K	1.000	35	10	75	0.30	100
TMBL321609-1R2K	1.200	35	10	65	0.40	100
TMBL321609-1R5K	1.500	35	10	60	0.40	50
TMBL321609-1R8K	1.800	35	10	55	0.40	50
TMBL321609-2R2K	2.200	35	10	50	0.50	50
TMBL321609-2R7K	2.700	35	10	45	0.50	50
TMBL321609-3R3K	3.300	35	10	41	0.50	50
TMBL321609-3R9K	3.900	35	10	38	0.60	50
TMBL321609-4R7K	4.700	35	10	35	0.65	25
TMBL321609-5R6K	5.600	35	4	32	0.80	25
TMBL321609-6R8K	6.800	35	4	29	0.80	25
TMBL321609-8R2K	8.200	35	4	26	0.80	25
TMBL321609-100K	10.000	35	2	24	0.80	25
TMBL321609-120K	12.000	35	2	22	0.90	15
TMBL321609-150K	15.000	30	1	19	1.00	5
TMBL321609-180K	18.000	30	1	18	1.00	5
TMBL321609-220K	22.000	30	1	16	1.20	5
TMBL321609-270K	27.000	30	1	14	1.20	5
TMBL321609-330K	33.000	30	1	13	1.30	5
TMBL321609-390K	39.000	30	1	13	1.30	5
TMBL321611-470K	47.000	30	1	12	1.60	5
TMBL321611-560M	56.000	30	1	12	1.80	5
TMBL321611-680M	68.000	30	1	11	2.00	5
TMBL321611-820M	82.000	30	1	11	2.40	5
TMBL321611-101M	100.000	30	1	8	3.00	5

* Inductance tolerance: K=±10%, M=±20%



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Part Number	Inductance (uH)	Q min.	L&Q Test Freq. (MHz)	SRF (MHz) min.	DCR (Ω) max.	IDC (mA) max.
TMBL322513-1R0K	1.0	40	10	70	0.20	500
TMBL322513-1R2K	1.2	40	10	70	0.20	500
TMBL322513-1R5K	1.5	40	10	70	0.30	500
TMBL322513-1R8K	1.8	40	10	70	0.30	500
TMBL322513-2R2K	2.2	40	10	50	0.30	500
TMBL322513-2R7K	2.7	40	10	50	0.30	500
TMBL322513-3R3K	3.3	40	10	50	0.40	500
TMBL322513-3R9K	3.9	40	10	30	0.40	500
TMBL322513-4R7K	4.7	40	10	30	0.50	500
TMBL322513-5R6K	5.6	35	4	30	0.60	450
TMBL322513-6R8K	6.8	35	4	20	0.60	450
TMBL322513-8R2K	8.2	35	4	20	0.70	400
TMBL322513-100K	10.0	35	2	20	0.70	300
TMBL322513-120K	12.0	35	2	20	0.70	300
TMBL322513-150K	15.0	35	1	20	0.70	200
TMBL322513-180K	18.0	35	1	10	0.70	200
TMBL322513-220K	22.0	35	1	10	0.70	150
TMBL322513-270K	27.0	35	1	10	0.80	150
TMBL322513-330K	33.0	35	1	10	1.10	100
TMBL322513-390K	39.0	35	1	10	1.30	100
TMBL322513-470K	47.0	35	1	10	1.50	50
TMBL322513-560M	56.0	35	1	5	1.60	50
TMBL322513-680M	68.0	35	1	5	1.80	30
TMBL322513-820M	82.0	35	1	5	2.00	30
TMBL322513-101M	100.0	35	1	5	2.00	20
TMBL322513-121M	120.0	35	1	5	2.20	20

* Inductance tolerance: K=±10%, M=±20%



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Part Number	Inductance (uH)	Q min.	L&Q Test Freq. (MHz)	SRF (MHz) min.	DCR (Ω) max.	IDC (mA) max.
TMBL453215-1R0K	1.0	35	10	50	0.55	650
TMBL453215-1R2K	1.2	35	10	50	0.55	650
TMBL453215-1R5K	1.5	35	10	45	0.55	600
TMBL453215-1R8K	1.8	35	10	45	0.65	600
TMBL453215-2R2K	2.2	35	10	40	0.65	500
TMBL453215-2R7K	2.7	35	10	40	0.70	500
TMBL453215-3R3K	3.3	35	10	35	0.75	500
TMBL453215-3R9K	3.9	35	10	35	0.80	500
TMBL453215-4R7K	4.7	30	10	25	0.90	500
TMBL453215-5R6K	5.6	30	4	20	0.90	500
TMBL453215-6R8K	6.8	30	4	18	1.00	500
TMBL453215-8R2K	8.2	30	4	17	1.00	450
TMBL453215-100K	10.0	30	2	16	1.00	450
TMBL453215-120K	12.0	35	2	15	1.00	450
TMBL453215-150K	15.0	35	1	14	1.00	400
TMBL453215-180K	18.0	35	1	13	1.00	400
TMBL453215-220K	22.0	35	1	12	1.30	300
TMBL453215-270K	27.0	35	1	10	1.30	300
TMBL453215-330K	33.0	40	1	10	1.50	250
TMBL453215-390K	39.0	40	1	10	1.50	250
TMBL453215-470K	47.0	40	1	8	1.65	250
TMBL453215-560K	56.0	40	1	8	1.80	250
TMBL453215-680M	68.0	40	1	6	2.00	200
TMBL453215-820M	82.0	40	1	6	2.30	200
TMBL453215-101M	100.0	40	1	6	2.30	150
TMBL453215-121M	120.0	40	1	6	2.50	150

* Inductance tolerance: K=±10%, M=±20%



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Part Number	Inductance (μ H)	Test Freq. (MHz)	SRF (MHz) min.	DCR (Ω) \pm 30%	IDC (mA) max.
TMBL160808-1R0MH	1.0	1	125	0.12	900
TMBL160808-1R5MH	1.5	1	109	0.25	650
TMBL160808-2R2MH	2.2	1	90	0.35	650
TMBL160808-3R3MH	3.3	1	70	0.38	520
TMBL160808-4R7MH	4.7	1	50	0.55	320
TMBL160808-6R8MH	6.8	1	40	0.55	250
TMBL160808-100MH	10.0	1	33	0.85	150
TMBL160808-150MH	15.0	1	20	1.00	100
TMBL160808-220MH	22.0	1	15	1.20	80
TMBL201209-1R0MH	1.0	1	75	0.12	1000
TMBL201209-1R5MH	1.5	1	60	0.16	900
TMBL201209-2R2MH	2.2	1	50	0.25	700
TMBL201209-3R3MH	3.3	1	41	0.30	650
TMBL201209-4R7MH	4.7	1	35	0.40	550
TMBL201209-6R8MH	6.8	1	29	0.45	550
TMBL201209-100MH	10.0	1	24	0.45	350
TMBL201209-150MH	15.0	1	19	0.60	300
TMBL201209-220MH	22.0	1	18	0.70	280
TMBL201610-1R0MH	1.0	1	60	0.11	1400
TMBL201610-1R5MH	1.5	1	50	0.15	1200
TMBL201610-2R2MH	2.2	1	40	0.20	1200
TMBL201610-3R3MH	3.3	1	30	0.30	1200
TMBL201610-4R7MH	4.7	1	25	0.35	1100
TMBL252010-1R0MH	1.0	1	60	0.15	1600
TMBL252010-1R5MH	1.5	1	50	0.15	1500
TMBL252010-2R2MH	2.2	1	40	0.25	1300
TMBL252010-3R3MH	3.3	1	30	0.30	1200
TMBL252010-4R7MH	4.7	1	25	0.32	1100
TMBL321609-1R0MH	1.0	1	90	0.10	1300
TMBL321609-1R5MH	1.5	1	75	0.12	1200
TMBL321609-2R2MH	2.2	1	58	0.15	1200
TMBL321609-3R3MH	3.3	1	49	0.20	1100
TMBL321609-4R7MH	4.7	1	41	0.38	1000
TMBL321609-6R8MH	6.8	1	34	0.41	830
TMBL321609-100MH	10.0	1	28	0.50	670

* Inductance tolerance: M= \pm 20%