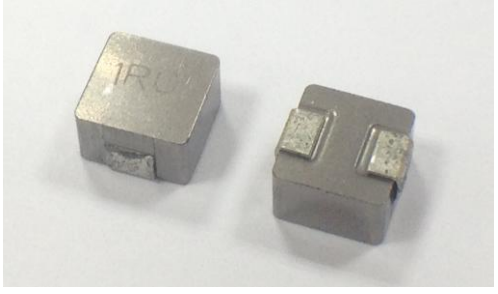
SMD Power Inductor / MPB Type

.Features:

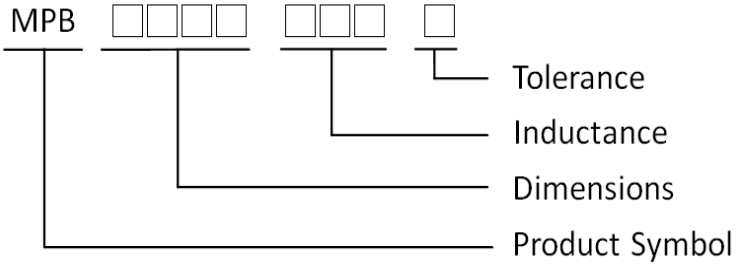
1. Lowest DCR/μH, in this package size
2. Handles high transient current spikes without saturation
3. Encapsulated body offers im proved environm ental protection and m oisture resistance.
4. Higher dielectric withstanding voltage vs. IHLP
5. Flame retardant encaps ulant (UL 94 V-0)
6. Corrosion resistant package



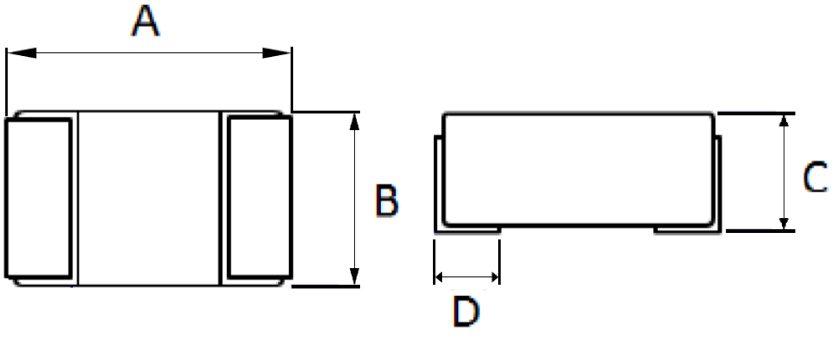
.Applications:

1. desktop applications
2. High Freq. Commnication Products.
3. Battery powered devices.
4. DC/DC converters in distributed power systems.

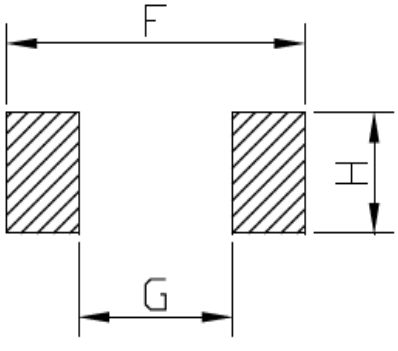
.Product Identification



.Shape and Dimension



.Recommended PCB Pattern

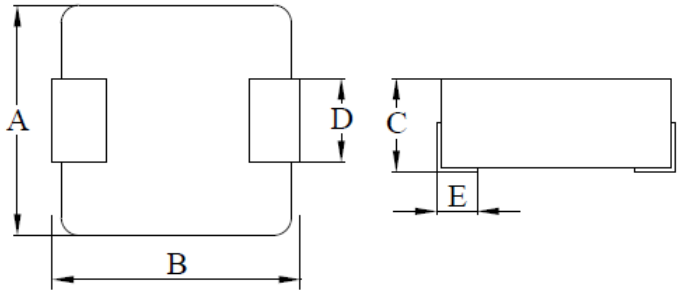


Dimensions(mm)

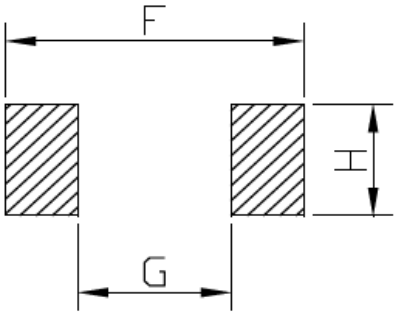
Type	A	B	C	D	E	F	G	H
MPB252010	2.5 ± 0.2	2.0 ± 0.2	1.0 MAX	0.6 ± 0.2	-	2.8 Typ	1.2 Typ	2 Typ
MPB252012	2.5 ± 0.2	2.05 ± 0.2	1.2 MAX	0.6 ± 0.2	-	2.8 Typ	1.2 Typ	2 Typ

SMD Power Inductor / MPB Type

.Shape and Dimension



.Recommended PCB Pattern

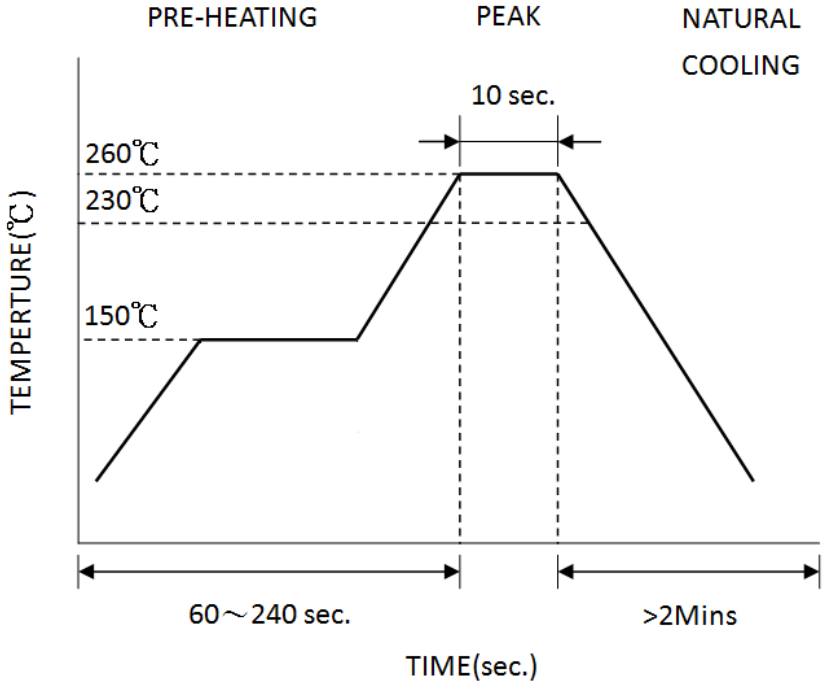


Dimensions(mm)

Type	A	B	C	D	E	F	G	H
MPB0402	4.05 ± 0.25	4.45 ± 0.25	2.0 MAX	1.5 ± 0.3	0.8 ± 0.3	4.95 Tpy	2.15 Typ	2.3 Typ
MPB0402A	4.05 ± 0.25	4.45 ± 0.25	2.0 MAX	1.5 ± 0.3	0.8 ± 0.3	4.95 Tpy	2.15 Typ	2.3 Typ
MPB0412	4.2 ± 0.25	4.4 ± 0.35	1.2 MAX	2.0 ± 0.3	0.8 ± 0.2	4.95 Tpy	2.15 Typ	2.3 Typ
MPB0503	5.2 ± 0.3	5.4 ± 0.3	3.0 MAX	2.2 ± 0.3	1.2 ± 0.2	5.99 Typ	2.2 Typ	2.5 Typ
MPB0518	5.2 ± 0.3	5.4 ± 0.3	1.8 MAX	2.2 ± 0.3	1.2 ± 0.2	5.99 Typ	2.2 Typ	2.5 Typ
MPB0618	6.6 ± 0.3	7.1 ± 0.3	1.8 MAX	3.0 ± 0.3	1.6 ± 0.5	7.4 Typ	3.7 Typ	3.5 Typ
MPB0618T	6.6 ± 0.3	7.1 ± 0.3	1.8 MAX	3.0 ± 0.3	1.6 ± 0.5	7.4 Typ	3.7 Typ	3.5 Typ
MPB0624	6.6 ± 0.3	7.1 ± 0.3	2.4 MAX	3.0 ± 0.3	1.6 ± 0.5	7.4 Typ	3.7 Typ	3.5 Typ
MPB0603	6.6 ± 0.3	7.1 ± 0.3	3.0 MAX	3.0 ± 0.3	1.6 ± 0.5	7.4 Typ	3.7 Typ	3.5 Typ
MPB0603A	6.6 ± 0.3	7.1 ± 0.3	3.0 MAX	3.0 ± 0.3	1.6 ± 0.5	7.4 Typ	3.7 Typ	3.5 Typ
MPB0603T	6.6 ± 0.3	7.1 ± 0.3	3.0 MAX	3.0 ± 0.3	1.6 ± 0.5	7.4 Typ	3.7 Typ	3.5 Typ
MPB0603S	6.6 ± 0.3	7.1 ± 0.3	3.0 MAX	3.0 ± 0.3	1.6 ± 0.5	7.4 Typ	3.7 Typ	3.5 Typ
MPB0603FD	6.6 ± 0.3	7.1 ± 0.3	3.0 MAX	3.0 ± 0.3	1.6 ± 0.5	7.4 Typ	3.7 Typ	3.5 Typ
MPB1040	10.5 ± 0.5	11.5 ± 1.0	4.0 MAX	3.0 ± 0.5	2.5 ± 0.5	13 Typ	6 Typ	4 Typ
MPB1040A	10.5 ± 0.5	11.5 ± 1.0	4.0 MAX	3.0 ± 0.5	2.5 ± 0.5	13 Typ	6 Typ	4 Typ
MPB1040B	10.5 ± 0.5	11.5 ± 1.0	4.0 MAX	3.0 ± 0.5	2.5 ± 0.5	13 Typ	6 Typ	4 Typ
MPB1040C	10.5 ± 0.5	11.5 ± 1.0	4.0 MAX	3.0 ± 0.5	2.5 ± 0.5	13 Typ	6 Typ	4 Typ
MPB1040CT	10.0 ± 0.3	11.5 MAX	4.0 MAX	3.0 ± 0.5	2.5 ± 0.5	13 Typ	6 Typ	4 Typ
MPB1040DT	10.0 ± 0.3	11.5 MAX	4.0 MAX	3.0 ± 0.5	2.5 ± 0.5	13 Typ	6 Typ	4 Typ
MPB1040ET	10.0 ± 0.3	11.5 MAX	4.5 MAX	3.0 ± 0.5	2.5 ± 0.5	13 Typ	6 Typ	4 Typ
MPB1235	12.8 ± 0.5	13.5 ± 1.0	3.5 ± 0.5	3.8 REF	2.5 REF	15 Typ	6 Typ	5 Typ
MPB1250	12.8 ± 0.5	13.5 ± 1.0	5.0 MAX	3.8 REF	2.5 REF	15 Typ	6 Typ	5 Typ
MPB1265	12.8 ± 0.5	13.5 ± 1.0	6.5 MAX	3.8 REF	2.5 REF	15 Typ	6 Typ	5 Typ
MPB1770	17.15 MAX	18.0 ± 0.3	7.0 MAX	11.94±0.3	2.11 ± 0.3	18.03 Typ	11.68 Typ	12.09 Typ

SMD Power Inductor / MPB Type

. Reflow Soldering Heat Endurance



SMD Power Inductor / MPB Type

. Electrical Characteristics MPB 252010 Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ) MAX.	Test Frequency (Hz / V)
MPB252010-R33□	0.33	20%	5.3	4.4	26	1 M / 1
MPB252010-R47□	0.47	20%	4.5	3.5	41	1 M / 1
MPB252010-R68□	0.68	20%	4.3	3.3	45	1 M / 1
MPB252010-1R0□	1	20%	3.5	2.8	65	1 M / 1
MPB252010-1R5□	1.5	20%	3.0	2.2	95	1 M / 1
MPB252010-2R2□	2.2	20%	2.6	1.8	113	1 M / 1

. Electrical Characteristics MPB 252012 Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB252012-R33□	0.33	20%	5.5	5.8	14	17	100K / 1
MPB252012-R47□	0.47	20%	4.5	5.0	23	28	100K / 1
MPB252012-R68□	0.68	20%	4.0	4.5	37	43	100K / 1
MPB252012-1R0□	1	20%	3.1	3.8	45	55	100K / 1
MPB252012-2R2□	2.2	20%	2.3	2.5	86	105	100K / 1
MPB252012-3R3□	3.3	20%	1.75	2.0	120	144	100K / 1
MPB252012-4R7□	4.7	20%	1.55	1.7	200	240	100K / 1

. Electrical Characteristics MPB 0402 Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB0402-R10□	0.10	20%	12.0	22	3.5	4	100K / 1
MPB0402-R22□	0.22	20%	9.0	12.5	6	7	100K / 1
MPB0402-R47□	0.47	20%	7.0	9.5	12.5	14	100K / 1
MPB0402-R56□	0.56	20%	6.5	10	14	16	100K / 1
MPB0402-R68□	0.68	20%	6.0	9	16	18	100K / 1
MPB0402-1R0□	1.0	20%	4.5	7	24	27	100K / 1
MPB0402-1R2□	1.2	20%	4.5	7	24	27	100K / 1
MPB0402-1R5□	1.5	20%	4.0	6	38	46	100K / 1
MPB0402-2R2□	2.2	20%	3.0	5	52	58	100K / 1
MPB0402-3R3□	3.3	20%	2.5	4	74	87	100K / 1
MPB0402-4R7□	4.7	20%	2.0	3.5	98	110	100K / 1
MPB0402-5R6□	5.6	20%	1.8	3.0	105	115	100K / 1
MPB0402-6R8□	6.8	20%	1.5	2.5	160	175	100K / 1
MPB0402-100□	10	20%	1.2	2.2	256	282	100K / 1

SMD Power Inductor / MPB Type

. Electrical Characteristics MPB 0402A Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB0402A-6R8□	6.8	20%	1.6	2.5	120	135	100K / 1

. Electrical Characteristics MPB 0412 Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB0412-R33□	0.33	20%	6.5	8.4	17.0	19.0	100K / 1
MPB0412-R47□	0.47	20%	6.0	6.8	19.0	21.0	100K / 1
MPB0412-R68□	0.68	20%	4.7	6.0	32.0	36.0	100K / 1
MPB0412-1R0□	1.0	20%	4.5	5.5	43.0	47.0	100K / 1
MPB0412-1R5□	1.5	20%	3.25	4.0	68.0	75.0	100K / 1
MPB0412-2R2□	2.2	20%	2.75	3.5	79.4	83.5	100K / 1
MPB0412-4R7□	4.7	20%	1.8	2.8	175.0	195.0	100K / 1

. Electrical Characteristics MPB 0503 Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB0503-R20□	0.2	20%	18	14.5	3.5	3.9	100K / 1
MPB0503-R47□	0.47	20%	13.5	12	7.4	8.5	100K / 1
MPB0503-R68□	0.68	20%	8.5	14	11	12	100K / 1
MPB0503-1R0□	1.0	20%	7	11	13	14	100K / 1
MPB0503-1R2□	1.2	20%	6.5	11	15	16	100K / 1
MPB0503-1R5□	1.5	20%	6	8.5	20	25	100K / 1
MPB0503-2R2□	2.2	20%	5.5	7.5	25	29	100K / 1
MPB0503-3R3□	3.3	20%	5	6	32	38	100K / 1
MPB0503-4R7□	4.7	20%	3.5	5	50	60	100K / 1
MPB0503-6R8□	6.8	20%	3	4	75	90	100K / 1
MPB0503-100□	10	20%	2.5	3.5	110	125	100K / 1

SMD Power Inductor / MPB Type

. Electrical Characteristics MPB 0518 Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB0518-R47☐	0.47	20%	11.0	16	7.6	8.5	100K / 1
MPB0518-R56☐	0.56	20%	10.0	15.5	8.0	10.0	100K / 1
MPB0518-R68☐	0.68	20%	9.0	13	12.0	14.0	100K / 1
MPB0518-1R0☐	1.0	20%	8.5	10	15.0	18.0	100K / 1
MPB0518-1R2☐	1.2	20%	7.5	9.5	17.0	20.0	100K / 1
MPB0518-1R5☐	1.5	20%	6.2	9	23.0	28.0	100K / 1
MPB0518-2R2☐	2.2	20%	5.2	7	30.0	35.0	100K / 1
MPB0518-3R3☐	3.3	20%	4.7	5.5	45.0	52.0	100K / 1
MPB0518-4R7☐	4.7	20%	3.5	4.5	70.0	81.0	100K / 1
MPB0518-6R8☐	6.8	20%	2.9	3.6	103.0	125.0	100K / 1
MPB0518-8R2☐	8.2	20%	2.6	3.5	131.0	145.0	100K / 1
MPB0518-100☐	10	20%	2.5	3.3	139.0	154.0	100K / 1

. Electrical Characteristics MPB 0618 Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB0618-R10☐	0.10	20%	18	40	3	3.5	100K / 1
MPB0618-R15☐	0.15	20%	15	38	4.7	5.2	100K / 1
MPB0618-R22☐	0.22	20%	14	26	5.3	5.7	100K / 1
MPB0618-R33☐	0.33	20%	12	18	6.6	7	100K / 1
MPB0618-R47☐	0.47	20%	11	18	8.4	9.3	100K / 1
MPB0618-R68☐	0.68	20%	9	17	12.7	13.9	100K / 1
MPB0618-R82☐	0.82	20%	8	17	13.8	15.9	100K / 1
MPB0618-1R0☐	1.0	20%	7	14	17.5	18.3	100K / 1
MPB0618-1R5☐	1.5	20%	4	11.5	32.6	34	100K / 1
MPB0618-2R2☐	2.2	20%	3.75	11	40.3	46	100K / 1
MPB0618-2R5☐	2.5	20%	3.5	10.4	49.9	52.4	100K / 1
MPB0618-3R3☐	3.3	20%	3.25	10	56.2	60.1	100K / 1
MPB0618-4R7☐	4.7	20%	3	8	76.6	78	100K / 1

SMD Power Inductor / MPB Type

. Electrical Characteristics MPB 0618T Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB0618T-R10□	0.1	20%	18	45	2.0	2.5	100K / 1
MPB0618T-R33□	0.33	20%	12	22	5.2	6.8	100K / 1
MPB0618T-R47□	0.47	20%	11	18	7.3	8.4	100K / 1
MPB0618T-R68□	0.68	20%	9	17	10.8	12.7	100K / 1
MPB0618T-1R0□	1	20%	7	14	14.5	17	100K / 1
MPB0618T-2R0□	2	20%	6	13	28	32	100K / 1
MPB0618T-2R2□	2.2	20%	6	13	31	35	100K / 1
MPB0618T-3R3□	3.3	20%	3.5	10	56	60	100K / 1
MPB0618T-4R7□	4.7	20%	3.5	5	68	72	100K / 1
MPB0618T-6R8□	6.8	20%	2.8	3.5	101	110	100K / 1

. Electrical Characteristics MPB 0624 Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB0624-R10□	0.1	20%	30	50	1.5	1.7	100K / 1
MPB0624-R22□	0.22	20%	21	34	2.9	3.2	100K / 1
MPB0624-R33□	0.33	20%	18	22	3.7	4.1	100K / 1
MPB0624-R47□	0.47	20%	13.5	21	6	6.5	100K / 1
MPB0624-R68□	0.68	20%	11	18	8.7	9.4	100K / 1
MPB0624-R82□	0.82	20%	10	17	10.6	11.8	100K / 1
MPB0624-1R0□	1.0	20%	9.0	16	13	14.2	100K / 1
MPB0624-1R5□	1.5	20%	7.5	15	18.5	21.2	100K / 1
MPB0624-2R2□	2.2	20%	6.5	14	28	34	100K / 1
MPB0624-3R3□	3.3	20%	5	13	36.5	51.6	100K / 1
MPB0624-4R7□	4.7	20%	4.5	9	45	63	100K / 1
MPB0624-5R6□	5.6	20%	4	8	66	73	100K / 1
MPB0624-6R8□	6.8	20%	3.6	7	72.5	95	100K / 1
MPB0624-8R2□	8.2	20%	3	8	84	106	100K / 1
MPB0624-100□	10	20%	2.5	5	116	129	100K / 1

SMD Power Inductor / MPB Type

. Electrical Characteristics MPB 0603 Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB0603-R10□	0.10	20%	32.5	60	1.5	1.7	100K / 1
MPB0603-R15□	0.15	20%	26	52	1.9	2.5	100K / 1
MPB0603-R20□	0.20	20%	24	41	2.4	3	100K / 1
MPB0603-R22□	0.22	20%	23	40	2.5	2.8	100K / 1
MPB0603-R33□	0.33	20%	20	30	3.5	3.9	100K / 1
MPB0603-R47□	0.47	20%	17.5	26	4	4.2	100K / 1
MPB0603-R68□	0.68	20%	15.5	25	5	5.5	100K / 1
MPB0603-R82□	0.82	20%	13	24	6.7	8	100K / 1
MPB0603-1R0□	1.0	20%	11	22	9	10	100K / 1
MPB0603-1R5□	1.5	20%	9	18	14	15	100K / 1
MPB0603-2R2□	2.2	20%	8	14	18	20	100K / 1
MPB0603-3R3□	3.3	20%	6	13.5	28	30	100K / 1
MPB0603-4R7□	4.7	20%	5.5	10	37	40	100K / 1
MPB0603-6R8□	6.8	20%	4.5	8	54	60	100K / 1
MPB0603-8R2□	8.2	20%	4	7.5	64	68	100K / 1
MPB0603-100□	10.0	20%	3	7	102	105	100K / 1

. Electrical Characteristics MPB 0603A Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB0603A-1R0□	1	20%	12.5	9.5	7.6	8	100K / 1
MPB0603A-1R5□	1.5	20%	10.5	8	11.7	12.5	100K / 1
MPB0603A-2R2□	2.2	20%	9	7	15.7	16.5	100K / 1
MPB0603A-3R3□	3.3	20%	7	6.5	24.8	26	100K / 1
MPB0603A-4R7□	4.7	20%	6	4	31.8	33.4	100K / 1
MPB0603A-6R8□	6.8	20%	5.5	4	44.6	46.8	100K / 1
MPB0603A-8R2□	8.2	20%	5	4	52.3	54.9	100K / 1
MPB0603A-100□	10	20%	4	3.5	67.8	71.2	100K / 1
MPB0603A-220□	22	20%	2.9	2.5	128.9	135	100K / 1

SMD Power Inductor / MPB Type

. Electrical Characteristics MPB 0603T Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB0603T-R10□	0.1	20%	32.5	60	1.5	1.7	100K / 1
MPB0603T-R15□	0.15	20%	30	40	1.9	2.5	100K / 1
MPB0603T-R20□	0.2	20%	24	34	2.4	3	100K / 1
MPB0603T-R22□	0.22	20%	23	34	2.5	3	100K / 1
MPB0603T-R33□	0.33	20%	21	25	3	3.5	100K / 1
MPB0603T-R36□	0.36	20%	20	24	3.3	3.9	100K / 1
MPB0603T-R47□	0.47	20%	18	20	3.5	4.1	100K / 1
MPB0603T-R56□	0.56	20%	16.5	18	3.9	4.5	100K / 1
MPB0603T-R68□	0.68	20%	16	17	4.8	5.3	100K / 1
MPB0603T-R82□	0.82	20%	14	16	5.4	6	100K / 1
MPB0603T-1R0□	1	20%	12	15	6.7	7.4	100K / 1
MPB0603T-1R2□	1.2	20%	10	14	7.8	10	100K / 1
MPB0603T-1R5□	1.5	20%	10	14	10.6	12.1	100K / 1
MPB0603T-2R2□	2.2	20%	8	10	13.5	15	100K / 1
MPB0603T-2R5□	2.5	20%	7	10	16	18	100K / 1
MPB0603T-3R3□	3.3	20%	6.5	9.5	18	22	100K / 1
MPB0603T-4R7□	4.7	20%	5.5	6.5	28	33	100K / 1
MPB0603T-5R6□	5.6	20%	5.5	6	39	42	100K / 1
MPB0603T-6R8□	6.8	20%	4.5	6	43	50	100K / 1
MPB0603T-8R2□	8.2	20%	4.5	6	54	60	100K / 1
MPB0603T-100□	10	20%	4	5.5	62	68	100K / 1

SMD Power Inductor / MPB Type

. Electrical Characteristics MPB 0603S Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB0603S-R10□	0.1	20%	32.5	60	1.5	1.7	100K / 1
MPB0603S-R15□	0.15	20%	32.5	35	1.5	1.7	100K / 1
MPB0603S-R20□	0.2	20%	32.5	30	1.5	1.7	100K / 1
MPB0603S-R22□	0.22	20%	28	29	2.1	2.6	100K / 1
MPB0603S-R25□	0.25	20%	28	28	2.1	2.6	100K / 1
MPB0603S-R33□	0.33	20%	23	23	2.5	3	100K / 1
MPB0603S-R36□	0.36	20%	22	22	2.6	3	100K / 1
MPB0603S-R47□	0.47	20%	20	18	3.2	4	100K / 1
MPB0603S-R56□	0.56	20%	18	17	3.6	4.2	100K / 1
MPB0603S-R68□	0.68	20%	17	15	3.7	4.4	100K / 1
MPB0603S-R82□	0.82	20%	17	14	3.8	4.5	100K / 1
MPB0603S-1R0□	1	20%	14	13	5.4	6	100K / 1
MPB0603S-1R5□	1.5	20%	13	11	7.2	8	100K / 1
MPB0603S-2R2□	2.2	20%	11	10	10	12	100K / 1
MPB0603S-3R3□	3.3	20%	9	8	14.5	15.4	100K / 1
MPB0603S-4R7□	4.7	20%	7	6	24.5	26	100K / 1
MPB0603S-5R6□	5.6	20%	6	5.5	26.5	28	100K / 1
MPB0603S-6R8□	6.8	20%	5.5	5	34	38	100K / 1
MPB0603S-8R2□	8.2	20%	5	5	48	52	100K / 1
MPB0603S-100□	10	20%	5	5	56	62	100K / 1
MPB0603S-120□	12	20%	3.5	3.5	80	88	100K / 1
MPB0603S-150□	15	20%	3	3	96	106	100K / 1
MPB0603S-220□	22	20%	2.5	2.5	128.9	135	100K / 1

. Electrical Characteristics MPB 0603S Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB0603FD-1R0□	1.0	20%	11	14.5	8.4	11	100K / 1
MPB0603FD-1R5□	1.5	20%	10	11	10.3	13	100K / 1
MPB0603FD-2R2□	2.2	20%	8.3	9	14	17	100K / 1
MPB0603FD-3R3□	3.3	20%	6.6	8	25	28	100K / 1
MPB0603FD-4R7□	4.7	20%	5.5	7	29	40	100K / 1
MPB0603FD-5R6□	5.6	20%	4.9	5.8	40.5	46	100K / 1
MPB0603FD-6R8□	6.8	20%	4.3	5.5	49.5	61	100K / 1
MPB0603FD-8R2□	8.2	20%	4	4.4	50.5	70	100K / 1
MPB0603FD-100□	10	20%	3.8	4	61.5	74	100K / 1

SMD Power Inductor / MPB Type

. Electrical Characteristics MPB 1040 Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB1040-R19□	0.19	20%	44	44	0.5	0.6	100K / 1
MPB1040-R24□	0.24	20%	38	38	0.7	0.8	100K / 1
MPB1040-R36□	0.36	20%	35	35	0.85	0.95	100K / 1
MPB1040-R47□	0.47	20%	32	32	1.2	1.4	100K / 1
MPB1040-R56□	0.56	20%	30	30	1.3	1.5	100K / 1
MPB1040-R78□	0.78	20%	25	25	1.6	1.7	100K / 1
MPB1040-1R0□	1	20%	21	21	2.2	2.5	100K / 1
MPB1040-1R8□	1.8	20%	15	15	4.5	5	100K / 1
MPB1040-2R0□	2	20%	14	14	5.2	5.8	100K / 1
MPB1040-2R2□	2.2	20%	14	16	5.5	6.3	100K / 1

. Electrical Characteristics MPB 1040A Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB1040A-R19□	0.19	20%	38	60	0.7	0.8	100K / 1
MPB1040A-R22□	0.22	20%	38	50	0.6	0.8	100K / 1
MPB1040A-R36□	0.36	20%	30	50	1.1	1.2	100K / 1
MPB1040A-R47□	0.47	20%	28	45	1.5	1.7	100K / 1
MPB1040A-R56□	0.56	20%	25	40	1.6	1.8	100K / 1
MPB1040A-R68□	0.68	20%	25	30	1.6	1.8	100K / 1
MPB1040A-1R0□	1	20%	21	30	2.8	3.2	100K / 1
MPB1040A-1R2□	1.2	20%	17	25	3.2	3.7	100K / 1
MPB1040A-1R5□	1.5	20%	15	20	4.5	5	100K / 1
MPB1040A-2R5□	2.5	20%	13	18	8.5	9.5	100K / 1

SMD Power Inductor / MPB Type

. Electrical Characteristics MPB 1040B Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB1040B-R19□	0.19	20%	40	90	0.875	0.95	100K / 1
MPB1040B-R36□	0.36	20%	31.5	60	1.3	1.4	100K / 1
MPB1040B-R56□	0.56	20%	27.5	49	1.7	1.8	100K / 1
MPB1040B-1R0□	1.00	20%	17.5	36	3.7	4.1	100K / 1
MPB1040B-1R5□	1.50	20%	15	27.5	5.3	5.8	100K / 1
MPB1040B-2R2□	2.20	20%	12	25.5	8.2	9	100K / 1
MPB1040B-3R3□	3.30	20%	10	18.6	10.8	11.8	100K / 1
MPB1040B-4R7□	4.70	20%	9.5	17	15	16.5	100K / 1
MPB1040B-5R6□	5.60	20%	8.5	16	17.6	19.3	100K / 1
MPB1040B-6R8□	6.80	20%	8	13.5	21.2	23.3	100K / 1
MPB1040B-8R2□	8.20	20%	7	12.5	31	34	100K / 1
MPB1040B-100□	10.00	20%	6.8	12	33.2	36.5	100K / 1

. Electrical Characteristics MPB 1040C Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB1040C-R19□	0.19	20%	40	46	0.7	0.8	100K / 1
MPB1040C-R24□	0.24	20%	33	44	0.85	0.95	100K / 1
MPB1040C-R36□	0.36	20%	32	30	1.05	1.15	100K / 1
MPB1040C-R47□	0.47	20%	30	30	1.53	1.68	100K / 1
MPB1040C-R56□	0.56	20%	32	22	1.6	1.8	100K / 1
MPB1040C-R78□	0.78	20%	27	22	1.8	1.9	100K / 1
MPB1040C-1R0□	1	20%	25	20	2.3	2.5	100K / 1
MPB1040C-1R8□	1.8	20%	17	16	4.5	5	100K / 1
MPB1040C-2R0□	2	20%	16	14	5.2	5.8	100K / 1
MPB1040C-3R3□	3.3	20%	12	14	8.2	9	100K / 1
MPB1040C-4R7□	4.7	20%	9.5	7.6	12.9	14.2	100K / 1
MPB1040C-5R6□	5.6	20%	9.2	7.4	15.5	16.5	100K / 1
MPB1040C-6R8□	6.8	20%	9	7.5	17.5	19.3	100K / 1
MPB1040C-100□	10	20%	7.5	7.1	27.8	30.5	100K / 1
MPB1040C-150□	15	20%	6.25	6	40.9	45	100K / 1
MPB1040C-220□	22	20%	5	4.5	60.4	66	100K / 1
MPB1040C-330□	33	20%	4.4	4	87.5	94.5	100K / 1
MPB1040C-470□	47	20%	4	3	132	145	100K / 1
MPB1040C-560□	56	20%	3.8	2.8	150	170	100K / 1
MPB1040C-680□	68	20%	3.5	2.6	175	200	100K / 1
MPB1040C-820□	82	20%	3.2	2.4	210	240	100K / 1
MPB1040C-101□	100	20%	3	2.25	249	270	100K / 1

SMD Power Inductor / MPB Type

. Electrical Characteristics MPB 1040CT Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB1040CT-R15□	0.15	20%	40	75	0.5	0.65	100K / 1
MPB1040CT-R19□	0.19	20%	38	60	0.7	0.8	100K / 1
MPB1040CT-R22□	0.22	20%	35	60	0.9	1	100K / 1
MPB1040CT-R36□	0.36	20%	30	60	1.05	1.2	100K / 1
MPB1040CT-R39□	0.39	20%	30	60	1.1	1.3	100K / 1
MPB1040CT-R41□	0.41	20%	30	60	1.1	1.3	100K / 1
MPB1040CT-R45□	0.45	20%	29	45	1.1	1.3	100K / 1
MPB1040CT-R47□	0.47	20%	26	40	1.6	1.8	100K / 1
MPB1040CT-R56□	0.56	20%	25	40	1.6	1.8	100K / 1
MPB1040CT-R68□	0.68	20%	22	39	2.4	2.7	100K / 1
MPB1040CT-R88□	0.88	20%	20	38	2.7	3	100K / 1
MPB1040CT-1R0□	1.0	20%	18	36	3	3.3	100K / 1
MPB1040CT-1R5□	1.5	20%	16	28	3.8	4.2	100K / 1
MPB1040CT-2R2□	2.2	20%	12	24	6.7	7	100K / 1
MPB1040CT-3R3□	3.3	20%	10	18.7	10.8	11.8	100K / 1
MPB1040CT-4R7□	4.7	20%	10	17	15	16.5	100K / 1

. Electrical Characteristics MPB 1040DT Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB1040DT-R22□	0.22	20%	35	65	0.8	0.9	100K / 1
MPB1040DT-R36□	0.36	20%	30	50	1.05	1.2	100K / 1
MPB1040DT-R39□	0.39	20%	30	45	1.1	1.2	100K / 1
MPB1040DT-R45□	0.45	20%	25	27	1.1	1.3	100K / 1
MPB1040DT-R56□	0.56	20%	25	33	1.6	1.8	100K / 1
MPB1040DT-1R0□	1.0	20%	18	28	3	3.3	100K / 1
MPB1040DT-1R8□	1.8	20%	15	15	4.5	5	100K / 1
MPB1040DT-2R0□	2.0	20%	14	14	5.2	5.8	100K / 1
MPB1040DT-2R2□	2.2	20%	12	18	6	7	100K / 1
MPB1040DT-3R3□	3.3	20%	10	16	10.8	11.8	100K / 1
MPB1040DT-4R7□	4.7	20%	8.5	15	17	20	100K / 1
MPB1040DT-5R6□	5.6	20%	7.5	14	20	23	100K / 1
MPB1040DT-6R8□	6.8	20%	6.5	9	22.5	25	100K / 1
MPB1040DT-100□	10	20%	7.5	8.5	27.0	30	100K / 1
MPB1040DT-150□	15	20%	6.25	7	40.0	45	100K / 1
MPB1040DT-220□	22	20%	5	5.5	60.0	66	100K / 1
MPB1040DT-330□	33	20%	4.4	5	85	92	100K / 1
MPB1040DT-470□	47	20%	3.3	3.5	130	145	100K / 1

SMD Power Inductor / MPB Type

. Electrical Characteristics MPB 1040ET Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB1040ET-1R0□	1.0	20%	22	34	2.7	3.2	100K / 1
MPB1040ET-2R2□	2.2	20%	12	25.5	5.8	7	100K / 1
MPB1040ET-3R3□	3.3	20%	11	14.5	11	13.2	100K / 1
MPB1040ET-4R7□	4.7	20%	10	13	13.2	15	100K / 1
MPB1040ET-5R6□	5.6	20%	8.5	11	16	18.5	100K / 1
MPB1040ET-6R8□	6.8	20%	7.5	9.5	21.5	24	100K / 1

. Electrical Characteristics MPB 1235 Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB1235-R10□	0.1	20%	43	84	0.8	0.96	100K / 1
MPB1235-R15□	0.15	20%	41	75	1	1.2	100K / 1
MPB1235-R22□	0.22	20%	38.5	65	1.1	1.3	100K / 1
MPB1235-R33□	0.33	20%	36.5	62	1.3	1.5	100K / 1
MPB1235-R47□	0.47	20%	32	55	1.6	2	100K / 1
MPB1235-R60□	0.6	20%	29	51	1.8	2.2	100K / 1
MPB1235-R68□	0.68	20%	28	49	2.3	2.5	100K / 1
MPB1235-R82□	0.82	20%	25	44	2.6	3	100K / 1
MPB1235-1R0□	1	20%	24	40	3.3	3.5	100K / 1
MPB1235-1R5□	1.5	20%	19	35	5.1	5.5	100K / 1
MPB1235-1R8□	1.8	20%	16.5	30	6.5	7	100K / 1
MPB1235-2R2□	2.2	20%	16	29	7.2	8	100K / 1
MPB1235-3R3□	3.3	20%	12	27	11	12	100K / 1
MPB1235-4R7□	4.7	20%	10	24	14.3	15	100K / 1
MPB1235-5R6□	5.6	20%	9.5	19	17.1	18	100K / 1
MPB1235-6R8□	6.8	20%	9	18	19.8	22	100K / 1
MPB1235-8R2□	8.2	20%	8.5	16	24.8	28	100K / 1
MPB1235-100□	10	20%	7	14	30.4	34	100K / 1

SMD Power Inductor / MPB Type

. Electrical Characteristics MPB 1250 Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB1250-R10□	0.1	20%	55	118	0.53	0.6	100K / 1
MPB1250-R22□	0.22	20%	51	110	0.64	0.8	100K / 1
MPB1250-R33□	0.33	20%	42	80	0.85	1.1	100K / 1
MPB1250-R47□	0.47	20%	38	65	1.1	1.3	100K / 1
MPB1250-R56□	0.56	20%	36	55	1.3	1.5	100K / 1
MPB1250-R68□	0.68	20%	34	54	1.5	1.7	100K / 1
MPB1250-R82□	0.82	20%	31	53	2	2.3	100K / 1
MPB1250-1R0□	1	20%	29	50	2.1	2.5	100K / 1
MPB1250-1R2□	1.2	20%	25	49	2.8	3.5	100K / 1
MPB1250-1R5□	1.5	20%	23	48	3.4	4.1	100K / 1
MPB1250-1R8□	1.8	20%	19	40	4.2	4.9	100K / 1
MPB1250-2R2□	2.2	20%	20	32	4.6	5.5	100K / 1
MPB1250-3R3□	3.3	20%	15	32	7.7	9.2	100K / 1
MPB1250-4R7□	4.7	20%	12	27	12.8	15	100K / 1
MPB1250-5R6□	5.6	20%	11.5	22	14	16.5	100K / 1
MPB1250-6R8□	6.8	20%	11	21	15.4	18.5	100K / 1
MPB1250-7R8□	7.8	20%	10	18	17.2	20.5	100K / 1
MPB1250-8R2□	8.2	20%	9.5	18	18.9	22.5	100K / 1
MPB1250-100□	10	20%	9.0	16	21.4	25.5	100K / 1

SMD Power Inductor / MPB Type

. Electrical Characteristics MPB 1265 Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB1265-R10☐	0.1	20%	60	120	0.47	0.5	100K / 1
MPB1265-R15☐	0.15	20%	55.0	118	0.53	0.6	100K / 1
MPB1265-R22☐	0.22	20%	53.0	112	0.63	0.7	100K / 1
MPB1265-R30☐	0.3	20%	48.0	72	0.7	0.8	100K / 1
MPB1265-R33☐	0.33	20%	46.0	65	0.83	0.9	100K / 1
MPB1265-R40☐	0.4	20%	44.0	64	0.9	1	100K / 1
MPB1265-R47☐	0.47	20%	41.0	63	1	1.2	100K / 1
MPB1265-R56☐	0.56	20%	37.0	62	2	1.4	100K / 1
MPB1265-R68☐	0.68	20%	35.0	60	1.4	1.6	100K / 1
MPB1265-R82☐	0.82	20%	33.0	50	1.6	1.9	100K / 1
MPB1265-1R0☐	1	20%	32.0	49	1.7	2	100K / 1
MPB1265-1R2☐	1.2	20%	30.0	48	2.1	2.5	100K / 1
MPB1265-1R5☐	1.5	20%	27.0	45	2.5	3	100K / 1
MPB1265-1R8☐	1.8	20%	24.0	41	2.8	3.2	100K / 1
MPB1265-2R2☐	2.2	20%	22.0	40	3.5	4.2	100K / 1
MPB1265-3R3☐	3.3	20%	18.0	35	5.7	6.8	100K / 1
MPB1265-4R7☐	4.7	20%	13.5	30	9.3	11.2	100K / 1
MPB1265-5R6☐	5.6	20%	12.0	26.5	11.8	12.8	100K / 1
MPB1265-6R8☐	6.8	20%	11	16.5	13.1	14	100K / 1
MPB1265-8R2☐	8.2	20%	10.5	16	14.5	15.5	100K / 1
MPB1265-100☐	10	20%	10.0	15.5	15.8	16.8	100K / 1
MPB1265-150☐	15	20%	6	9	25	29	100K / 1
MPB1265-220☐	22	20%	5	7.5	34	39.5	100K / 1
MPB1265-330☐	33	20%	4	6	55	65	100K / 1
MPB1265-470☐	47	20%	3	5	80	92	100K / 1

SMD Power Inductor / MPB Type

. Electrical Characteristics MPB 1770 Type

Part No.	Inductance (μH)	Tolerance (±%)	Idc (A)	Isat (A)	DCR (mΩ)		Test Frequency (Hz / V)
					Typ.	Max.	
MPB1770-R82□	0.82	20%	56.5	45	0.98	1.08	100K / 1
MPB1770-1R0□	1	20%	55.5	32	1.21	1.27	100K / 1
MPB1770-1R5□	1.5	20%	48	31	1.54	1.62	100K / 1
MPB1770-2R2□	2.2	20%	43.5	28	1.85	1.98	100K / 1
MPB1770-3R3□	3.3	20%	35	27	2.79	2.93	100K / 1
MPB1770-4R7□	4.7	20%	30	21	3.98	4.18	100K / 1
MPB1770-5R6□	5.6	20%	28	21	4.23	4.44	100K / 1
MPB1770-6R8□	6.8	20%	22.5	18.5	5.86	6.15	100K / 1
MPB1770-8R2□	8.2	20%	21	18	7.71	8.1	100K / 1
MPB1770-100□	10	20%	19	17	8.89	9.33	100K / 1
MPB1770-150□	15	20%	14	12	13.7	14.4	100K / 1
MPB1770-220□	22	20%	12	9.5	20	21	100K / 1
MPB1770-330□	33	20%	10.7	9	35.1	37	100K / 1
MPB1770-470□	47	20%	8.7	8.6	40.7	42.7	100K / 1
MPB1770-560□	56	20%	7.2	4.2	55	57.8	100K / 1
MPB1770-680□	68	20%	6.1	4.5	72.1	75.7	100K / 1
MPB1770-820□	82	20%	5.5	4.5	87.3	91.7	100K / 1
MPB1770-101□	100	20%	5	4	105	110	100K / 1

Note

1. All test Data is referenced to 25℃ ambient
2. Typical Heat Rating DC Current would cause an approximately △T of 40℃
3. Typical Saturation DC Current would cause Lo to drop approximately 30%
4. Operation Temperature Range : -55℃ ~ 125℃
5. The Part temperature (ambient + △T) should not exceed 125℃ under worst case operating conditions.
6. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all effect the part temperature. Part temperature should be verified in the end application.

SMD Power Inductor / MBP Type

. Reliability and Test Conditions(可靠性測試條件)

1. MECHANICAL RELIABILITY

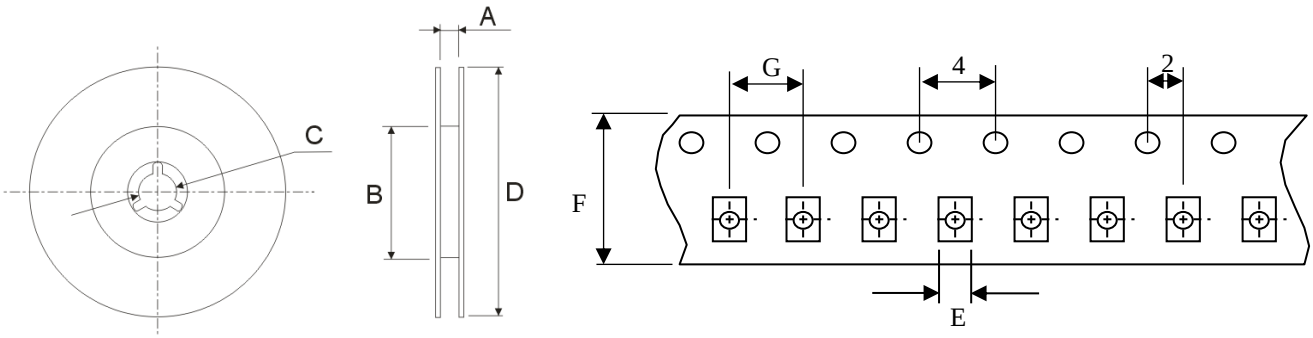
Item	Specification & Requirement	Method Used
Solderability	The surface of terminal/pin tested shall be covered with new solder by 95%.	Solder heat proof: Preheating: 180 ±10℃ 90 Soldering: 255 ±5℃ for 3 ±1 sec
Shock	Inductance change within ± 5% Withou mechanical damage.	Drop down with 981m/s2 (100G) shock Attitude upon a rubber block method shock testing machinem, 3 tests.
Vibration	Inductance change within ± 5% Without mechanical damage.	Vibration frequency: 10Hz to 55Hz to 10Hz 60 seconds cycle Vibration time: 2 hours

2. ENDURANCE RELIABILITY

Item	Specification & Requirement	Method Used
Thermal Shock	Inductance change within ± 5% Without mechanical damage	-25℃, (30 mins) -> room temp. (5 mins) ->D19 125℃, (30 mins) -> room temp. (5 mins) 100 cycles
Heat Resistance	Inductance change within ± 5% Without mechanical damage	Apply IDC current @ 85℃ ambient Duration: 1000 hrs
Humidity Resistance	Inductance change within ± 5% Without mechanical damage	Apply IDC current @ 60℃ ambient Humidity: 90~95% Duration: 1000 hrs
Low Temp. Storing	Inductance change within ± 5% Without mechanical damage	Storing Temp. -25 ±2 ℃ for total 1,000 +4/-0 hours.
High Temp. Storing	Inductance change within ± 5% Without mechanical damage	Storing Temp. 125 ±2 ℃ for total 1,000 +4/-0 hours.

SMD Power Inductor / MPB Type

.Packing Specifications



TYPE	Packaging Quantity	Dimensions in (mm)						
	Reel	A	B	C	D	E	F	G
MPB252010	3000	9	100	20	330	2.27 ± 0.2	8	4
MPB252012	3000	9	100	20	330	2.27 ± 0.2	8	4
MPB0402	2000	12	100	20	330	4.6 ± 0.2	12	8
MPB0503	2000	12.5	100	20	330	5.7 ± 0.1	12	8
MPB0618	2000	17	100	20	330	6.9 ± 0.1	16	12
MPB0624	1000	17	100	20	330	6.9 ± 0.1	16	12
MPB0603	1000	17	100	20	330	6.9 ± 0.1	16	12
MPB0603A	1000	17	100	20	330	6.9 ± 0.1	16	12
MPB0603T	1000	17	100	20	330	6.9 ± 0.1	16	12
MPB0603S	1000	17	100	20	330	6.9 ± 0.1	16	12
MPB1040	800	25	100	20	330	11.0 ± 0.1	24	16
MPB1040A	800	25	100	20	330	11.0 ± 0.1	24	16
MPB1040B	800	25	100	20	330	11.0 ± 0.1	24	16
MPB1040C	800	25	100	20	330	11.0 ± 0.1	24	16
MPB1040CT	800	25	100	20	330	11.0 ± 0.1	24	16
MPB1040DT	800	25	100	20	330	11.0 ± 0.1	24	16
MPB1040ET	800	25	100	20	330	11.0 ± 0.1	24	16
MPB1235	500	25	100	20	330	13.1 ± 0.1	24	20
MPB1250	500	25	100	20	330	13.1 ± 0.1	24	20
MPB1265	400	25	100	20	330	13.1 ± 0.1	24	20
MPB1770	300	32	100	20	330	19.4	32	24