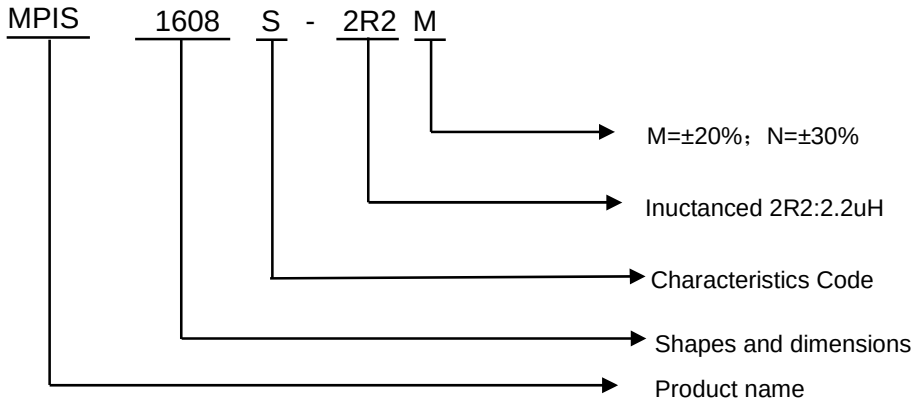
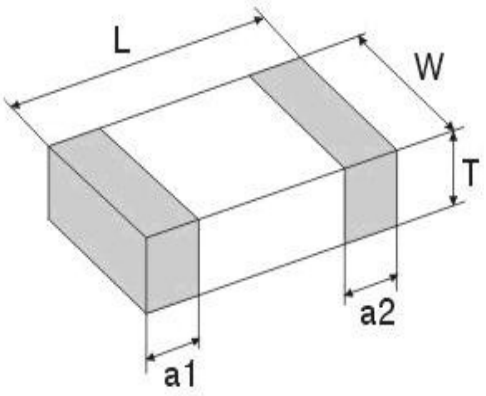
1 Scope

This specification applies to Multilayer power inductors

2 Part Numbering:



3 Appearance, Dimensions and Material



Type	L	W	T	a1,a2
1608 [0603]	1.6±0.15 [.063±.006]	0.8±0.15 [.031±.006]	0.8±0.15 [.031±.006]	0.3±0.2 [.012±.008]
2012 [0805]	2.0(+0.3,-0.1) [.079(+.012,-.004)]	1.25±0.2 [.049±.008]	0.9±0.2 [.035±.008]	0.5±0.3 [.020±.012]
			1.25±0.2 [.049±.008]	
2016 [0806]	2.0(+0.3,-0.1) [.079(+.012,-.004)]	1.6±0.15 [.063±.006]	0.9±0.2 [.035±.008]	0.5±0.3 [.020±.012]
2520 [1008]	2.5±0.2 [.098±.008]	2.0(+0.3,-0.1) [.079(+.012,-.004)]	0.9±0.2 [.035±.008]	0.5±0.3 [.020±.012]
			1.1±0.2 [.043±.008]	
3216 [1206]	3.2±0.2 [.126±.008]	1.6±0.2 [.063±.008]	0.9±0.2 [.035±.008]	0.5±0.3 [.020±.012]

4. Electrical Characteristics

MPIS1608S系列

Part Number	Inductance	L test frequency	Mini.self resonant frequency	Max.DC resistance	Max.rated Current	Thichness
Unit	μH	MHz	MHz	Ω	mA	Mm[inch]
Symbol	L	Freq.	S.R.F	DCR	Ir	T
MPIS1608S-R47M	0.47	5	105	0.12±25%	1200	0.8±0.15 [.031±.006]
MPIS1608S-R68M	0.68	5	90	0.16±25%	1000	0.8±0.15 [.031±.006]
MPIS1608S-1R0M	1.0	1	75	0.20±25%	950	0.8±0.15 [.031±.006]
MPIS1608S-1R5M	1.5	1	50	0.25±25%	800	0.8±0.15 [.031±.006]
MPIS1608S-1R8M	1.8	1	50	0.20±25%	600	0.8±0.15 [.031±.006]
MPIS1608S-2R2M	2.2	1	40	0.30±25%	750	0.8±0.15 [.031±.006]
MPIS1608S-4R7M	4.7	1	40	0.30±25%	750	0.8±0.15 [.031±.006]
MPIS1608S-100M	10	1	40	0.30±25%	750	0.8±0.15 [.031±.006]

NOTE:（M=±20%； N=±30%）Please specify the inductance tolerance code(M=±20%;N=±30%).

MPIS2012S系列

Part Number	Inductance	L test frequency	Mini.self resonant frequency	Max.DC resistance	Max.rated Current	Thichness
Unit	μH	MHz	MHz	Ω	mA	Mm[inch]
Symbol	L	Freq.	S.R.F	DCR	Ir	T
MPIS201209S-R47M	0.47	1	100	0.09±25%	1200	0.9±0.1 [.035±.004]
MPIS201209S-1R0M	1.0	1	60	0.11±25%	1000	0.9±0.1 [.035±.004]
MPIS201209S-1R5M	1.5	1	50	0.16±25%	900	0.9±0.1 [.035±.004]
MPIS201209S-2R2M	2.2	1	40	0.25±25%	800	0.9±0.1 [.035±.004]
MPIS201209S-3R3M	3.3	1	30	0.19±25%	900	0.9±0.1 [.035±.004]
MPIS201209S-4R7M	4.7	1	30	0.25±25%	800	0.9±0.1 [.035±.004]
MPIS201212S-2R2M	2.2	1	40	0.33±30%	640	1.25±0.2 [.049±.008]
MPIS201212S-4R7M	4.7	1	25	0.50±30%	600	1.25±0.2 [.049±.008]

NOTE:（M=±20%；N=±30%）Please specify the inductance tolerance code(M=±20%;N=±30%).

MPIS2016S系列

Part Number	Inductance	L test frequency	Mini.self resonant frequency	Max.DC resistance	Max.rated Current	Thichness
Unit	μH	MHz	MHz	Ω	mA	Mm[inch]
Symbol	L	Freq.	S.R.F	DCR	Ir	T
MPIS201609S-R47M	0.47	1	100	0.06±25%	1600	0.9±0.1 [.035±.004]
MPIS201609S-1R0M	1.0	1	70	0.09±25%	1400	0.9±0.1 [.035±.004]
MPIS201609S-1R5M	1.5	1	60	0.11±25%	1200	0.9±0.1 [.035±.004]
MPIS201609S-2R2M	2.2	1	50	0.11±25%	1200	0.9±0.1 [.035±.004]
MPIS201609S-3R3M	3.3	1	40	0.12±25%	1200	0.9±0.1 [.035±.004]
MPIS201609S-4R7M	4.7	1	30	0.14±25%	1100	0.9±0.1 [.035±.004]

NOTE:（M=±20%； N=±30%）Please specify the inductance tolerance code(M=±20%;N=±30%).

MPIS2520S系列

Part Number	Inductance	L test frequency	Mini.self resonant frequency	Max.DC resistance	Max.rated Current	Thichness
Unit	μH	MHz	MHz	Ω	mA	Mm[inch]
Symbol	L	Freq.	S.R.F	DCR	Ir	T
MPIS252009S-R47M	0.47	1	100	0.04±25%	1800	0.9±0.1 [.035±.004]
MPIS252009S-1R0M	1.0	1	60	0.06±25%	1600	0.9±0.1 [.035±.004]
MPIS252009S-1R5M	1.5	1	50	0.07±25%	1500	0.9±0.1 [.035±.004]
MPIS252009S-2R2M	2.2	1	40	0.08±25%	1300	0.9±0.1 [.035±.004]
MPIS252009S-3R3M	3.3	1	30	0.10±25%	1200	0.9±0.1 [.035±.004]
MPIS252009S-4R7M	4.7	1	25	0.11±25%	1100	0.9±0.1 [.035±.004]
MPIS252012S-1R0M	1.0	1	70	0.09±25%	1500	1.1±0.1 [.043±.004]
MPIS252012S-2R2M	2.2	1	40	0.12±25%	1000	1.1±0.1 [.043±.004]
MPIS252012S-3R3M	3.3	1	30	0.12±25%	1000	1.1±0.1 [.043±.004]
MPIS252012S-4R7M	4.7	1	25	0.14±25%	900	1.1±0.1 [.043±.004]
MPIS252012S-100M	10	1	15	0.30±30%	800	1.1±0.1 [.043±.004]

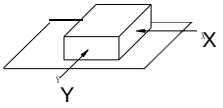
NOTE:（M=±20%；N=±30%）Please specify the inductance tolerance code(M=±20%;N=±30%).

MPIS3216系列

Part Number	Inductance	L test frequency	Mini.self resonant frequency	Max.DC resistance	Max.rated Current	Thichness
Unit	μH	MHz	MHz	Ω	mA	Mm[inch]
Symbol	L	Freq.	S.R.F	DCR	Ir	T
MPIS321609S-1R0M	1.0	1	60	0.15	1200	0.9±0.2 [.035±.008]
MPIS321609S-1R2M	1.2	1	65	0.15	1200	0.9±0.2 [.035±.008]
MPIS321609S-1R5M	1.5	1	60	0.17	1000	0.9±0.2 [.035±.008]
MPIS321609S-1R8M	1.8	1	55	0.24	900	0.9±0.2 [.035±.008]
MPIS321609S-2R2M	2.2	1	50	0.24	900	0.9±0.2 [.035±.008]
MPIS321609S-2R7M	2.7	1	45	0.30	800	0.9±0.2 [.035±.008]
MPIS321609S-3R3M	3.3	1	41	0.30	800	0.9±0.2 [.035±.008]
MPIS321609S-3R9M	3.9	1	38	0.38	700	0.9±0.2 [.035±.008]
MPIS321609S-4R7M	4.7	1	35	0.38	700	0.9±0.2 [.035±.008]
MPIS321609S-5R6M	5.6	1	32	0.45	500	0.9±0.2 [.035±.008]
MPIS321609S-6R8M	6.8	1	29	0.45	500	0.9±0.2 [.035±.008]
MPIS321609S-8R2M	8.2	1	26	0.55	300	0.9±0.2 [.035±.008]
MPIS321609S-100M	10	1	24	0.55	300	0.9±0.2 [.035±.008]
MPIS321609S-120M	12	1	22	0.55	300	0.9±0.2 [.035±.008]
MPIS321609S-150M	15	1	19	0.65	100	0.9±0.2 [.035±.008]
MPIS321609S-180M	18	1	18	0.65	100	0.9±0.2 [.035±.008]

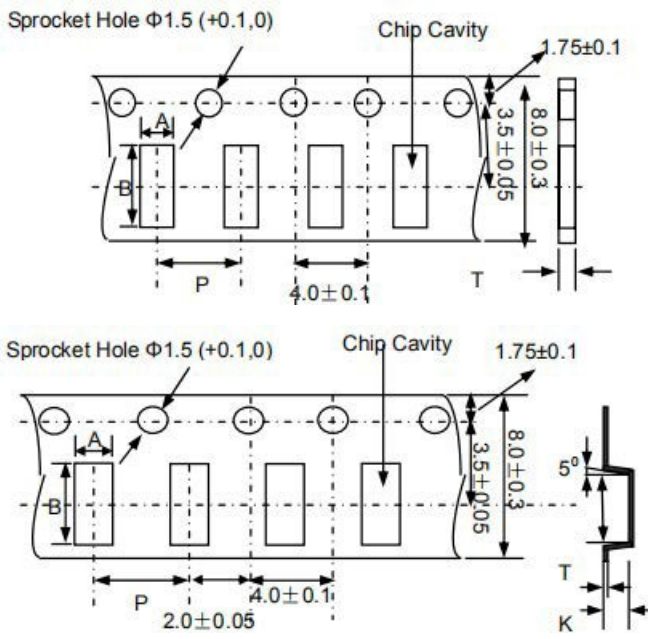
NOTE;（M=±20%；N=±30%）Please specify the inductance tolerance code(M=±20%;N=±30%).

5. Reliability Test

No.	ITEM	REQUEST	CONDITIONS
1	TERMINAL STRENGTH	A STATIC PULLING FORCE OF 10N IN A DIRECTION PARALLEL TO THE TERMINALS FOR 5 SECONDS	NO TERMINAL BREAKAGE OR LOOSENING 
2	RESISTANCE TO SOLDERING HEAT TEST	FIX THE SAMPLES ON A 1.6mm THICKNESS PCB,THEN DIP THE SAMPLE LEADS INTO A SOLDERING BATH OF 260±5℃ UP TO THE PCB FOR 5±1 SECONDS.	NO MECHANICAL BREAKAGE. DEVIATION RELATIVE TO INITIAL VALUE: L:WITHIN ±10.0%
3	SOLDER ABILITY TEST	IMMERSE THE TERMINAL IN FLUX FOR 5 SECONDS.THEN DIP THE TERMINAL INTO A SOLDERING BATH OF 245±5℃ FOR 2±0.5 SECONDS.	OVER 90% OF THE SURFACE BEING IMMERSED SHALL BE COVERED WITH NEW SOLDER UNIFORMITY.
4	HUMIDITY TEST	TEMPERATURE :40±2℃ HUMIDITY :90%～95%RH DURATION:96±4 Hours	DEVIATION RELATIVE TO INITIAL VALUE: L:WITHIN ±10.0%
5	HIGH TEMPERATURE TEST	TEMPERATURE：125±2℃ TIME：96±4 Hours ROOM CONDITION：1～2 hours	DEVIATION RELATIVE TO INITIAL VALUE: L:WITHIN ±10.0%
6	LOW TEMPERATURE TEST	TEMPERATURE：-25±2℃ TIME：96 Hours ROOM CONDITION：1～2 hours	DEVIATION RELATIVE TO INITIAL VALUE: L:WITHIN ±10.0%
7	THERMAL SHOCK TEST	FIRST -25±5℃ FOR 30±2 MINUTES，LAST 125℃ 30±2 MINUTES AS 1 CYCLE. TOTAL 10 CYCLES.	DEVIATION RELATIVE TO INITIAL VALUE: L:WITHIN ±10.0%
8	VIBRATION TEST	APPLY FREQUENCY 10~55Hz 1.55mm AMPLITUDE IN EACH OF PERPENDICULAR DIRECTION FOR 2 HOURS.(TOTAL6H)	DEVIATION RELATIVE TO INITIAL VALUE: L:WITHIN ±10.0%

6 Packaging

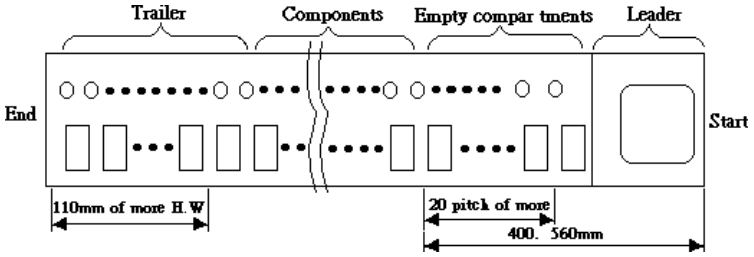
(1) Dimensions of Tape:



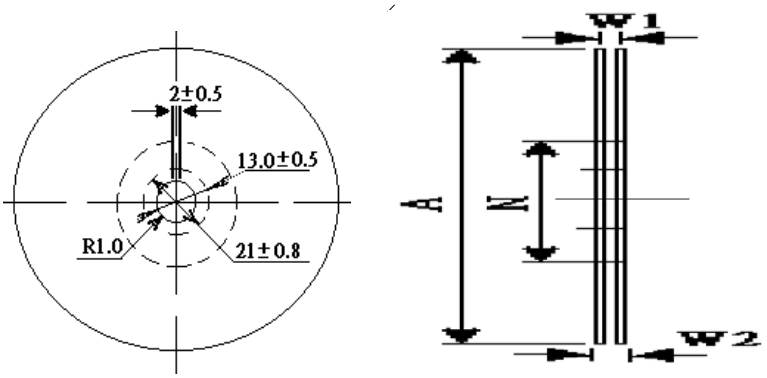
Paper Tape				
Type	A	B	P	Tmax
160805[060302]1	1.0±0.2	1.8±0.2	4.0±0.1	0.8
160808[060303]	1.0±0.2	1.8±0.2	4.0±0.1	1.1
201205[080502]	1.5±0.2	2.3±0.2	4.0±0.1	0.8

EMbossed Tape					
Type	A	B	P	Kmax	Tmax
201209[080503]	1.55±0.2	2.25±0.2	4.0±0.1	1.45	0.3
201212[080505]	1.55±0.2	2.25±0.2	4.0±0.1	1.75	0.3
201609[080603]	1.9±0.2	2.25±0.2	4.0±0.1	1.45	0.3
252009[100803]	2.3±0.2	2.8±0.2	4.0±0.1	1.45	0.3
252011[100805]	2.3±0.2	2.8±0.2	4.0±0.1	1.75	0.3
321609[120603]	1.88±0.2	3.5±0.2	4.0±0.1	1.45	0.3

（2） Tape



（3）Reel



UNIT:mm

A	178 ±2.0
N	50 MIN
W1	10 ±1.5
W2	20 MAX

Type	T(mm)	Tape	Quantity
1608[0603]	0.5±0.15	Paper Tape	5K
	0.8±0.15	Paper Tape	4K
2012[0805]	0.5±0.15	Paper Tape	5K
	0.9±0.2	Embossed Tape	3K
	1.25±0.2	Embossed Tape	3K
2016[0806]	0.9±0.2	Embossed Tape	3K
2520[1008]	0.9±0.2	Embossed Tape	3K
	1.1±0.2	Embossed Tape	3K