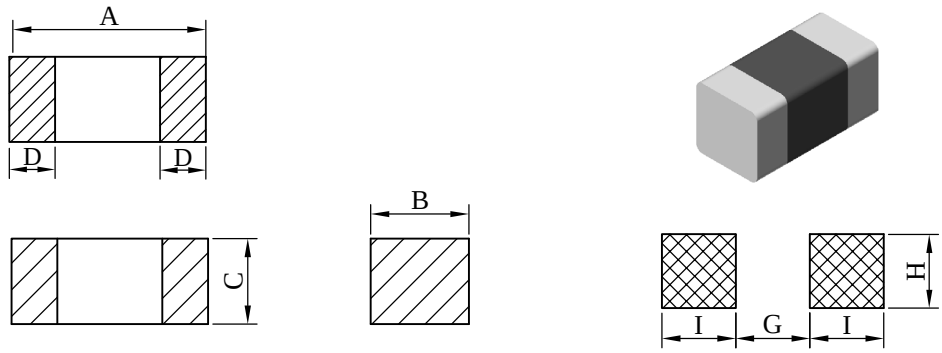
SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	Multilayer Chip Inductor	ABC'S DWG NO.	MS1608□□□□L□-□□□		
		REV.	20150424-C	PAGE	1

Ⅰ．Configuration and dimensions：



(PCB Pattern)

Unit：m/m

A	B	C	D	G	H	I
1.60 ± 0.20	0.80 ± 0.20	0.80 ± 0.20	0.30 ± 0.20	0.7	0.7	0.7

Ⅱ．Materials：

a．Body：Ferrite
b．Internal conductor：Silver
c．Terminal electrode：Ag / Ni / Sn
d．Product weight：5.4 mg（ref.）
e．Products comply with RoHS' requirements
f．Halogen free available.

Ⅲ．General specification：

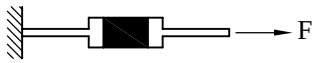
a．Storage Conditions：

Electrical Performance temp：-55℃ ---- +125℃

Terminal Solderability & Packages Material temp：-10℃ ---- +40℃ and RH 70% max.

b．Operating temp.：-55℃ ---- +125℃

c．Terminal strength：



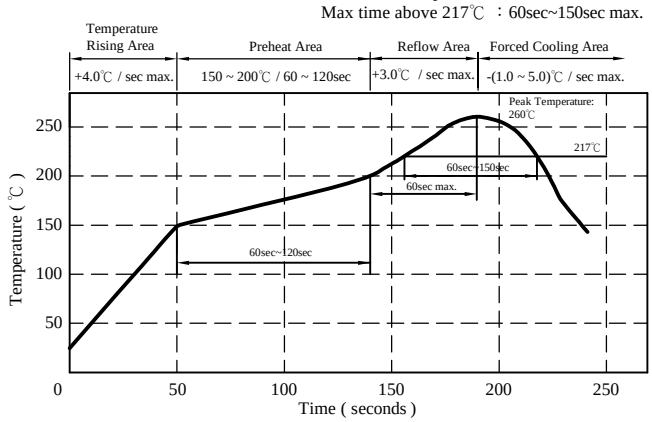
Type	F (kgf)	Time (sec)
MS1608	0.5	30±5

d．Resistance to soldering heat：

Solder temp. : 260℃

Dip time :10 sec max.

Peak Temp：260℃ max.
Max. Peak Temp - 5℃：30sec max.
Max time above 217℃ ：60sec~150sec max.



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		REV.	20150424-C	PAGE	2

Ⅳ . Electrical characteristics：

DWG No.	Inductance (μH)	Q min.	Test Freq. (MHz)	SRF (MHz) min.	RDC (Ω) max.	IDC (mA) max.
MS160847NML□-□□□	0.047±20%	10	50	260	0.30	50
MS160868NML□-□□□	0.068±20%	10	50	250	0.30	50
MS160882NML□-□□□	0.082±20%	10	50	245	0.30	50
MS1608R10ML□-□□□	0.100±20%	15	25	240	0.50	50
MS1608R12ML□-□□□	0.120±20%	15	25	205	0.50	50
MS1608R15ML□-□□□	0.150±20%	15	25	180	0.60	50
MS1608R18ML□-□□□	0.180±20%	15	25	165	0.60	50
MS1608R22ML□-□□□	0.220±20%	15	25	150	0.80	50
MS1608R27ML□-□□□	0.270±20%	15	25	136	0.80	50
MS1608R33ML□-□□□	0.330±20%	15	25	125	0.85	35
MS1608R39ML□-□□□	0.390±20%	15	25	110	1.00	35
MS1608R47ML□-□□□	0.470±20%	15	25	105	1.35	35
MS1608R56ML□-□□□	0.560±20%	15	25	95	1.55	35
MS1608R68ML□-□□□	0.680±20%	15	25	90	1.70	35
MS1608R82ML□-□□□	0.820±20%	15	25	85	2.10	35
MS16081R0ML□-□□□	1.000±20%	35	10	75	0.60	25
MS16081R2ML□-□□□	1.200±20%	35	10	65	0.80	25
MS16081R5ML□-□□□	1.500±20%	35	10	60	0.80	25
MS16081R8ML□-□□□	1.800±20%	35	10	55	0.95	25
MS16082R2ML□-□□□	2.200±20%	35	10	50	1.15	15
MS16082R7ML□-□□□	2.700±20%	35	10	45	1.35	15
MS16083R3ML□-□□□	3.300±20%	35	10	40	1.55	15
MS16083R9ML□-□□□	3.900±20%	35	10	35	1.70	15
MS16084R7ML□-□□□	4.700±20%	35	10	33	2.10	15
MS16085R6ML□-□□□	5.600±20%	35	4	22	1.55	5
MS16086R8ML□-□□□	6.800±20%	35	4	20	1.70	5
MS16088R2ML□-□□□	8.200±20%	35	4	18	2.10	5
MS1608100ML□-□□□	10.000±20%	30	2	17	1.85	3

1). □：Packaging information：□ Code

2). "-□□□"：Reference code

3). Electrical specifications at 25℃

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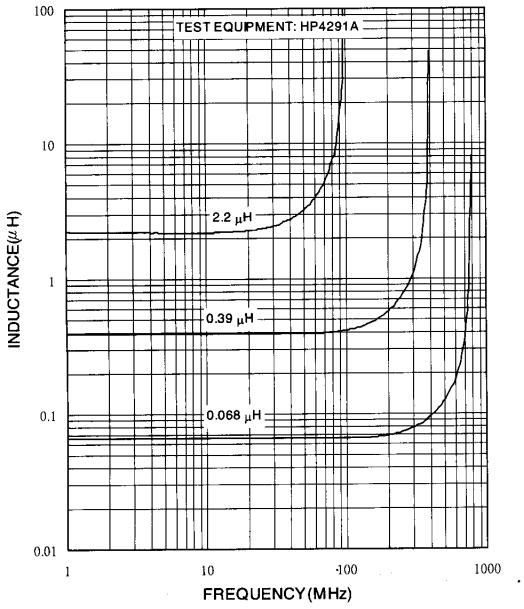
REF. :

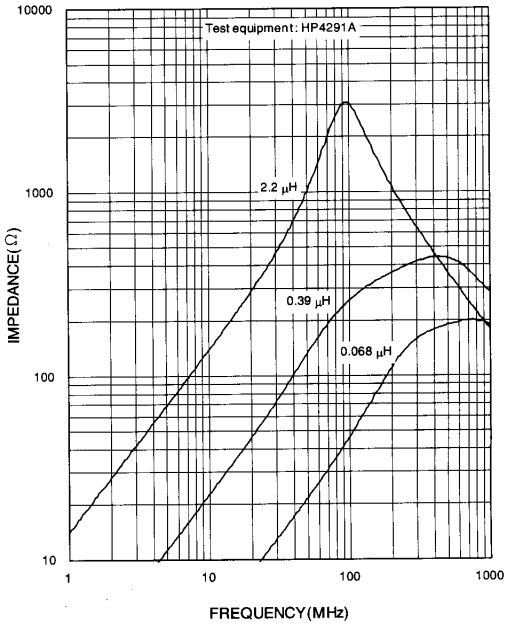
PROD. NAME	Multilayer Chip Inductor	ABC'S DWG NO.	MS1608□□□□L□-□□□		
		REV.	20150424-C	PAGE	3

V . Curve：

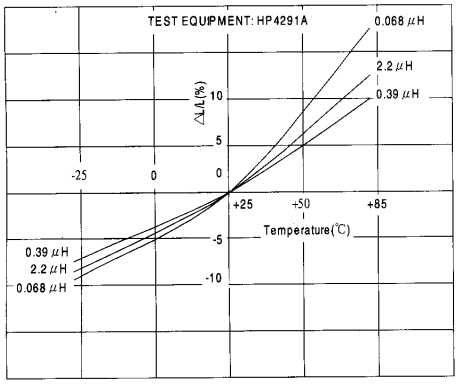
INDUCTANCE vs. FREQUENCY CHARACTERISTICS



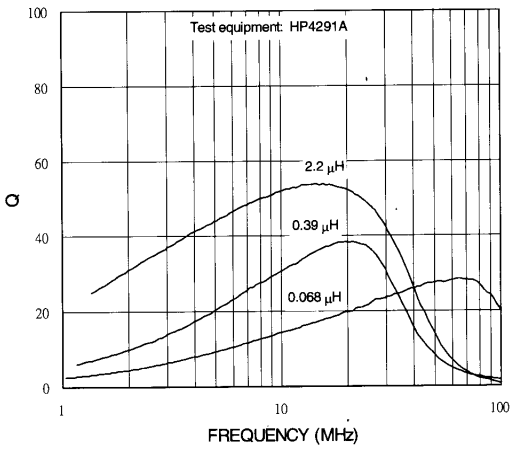
IMPEDANCE vs. FREQUENCY CHARACTERISTICS



INDUCTANCE vs. TEMPERATURE CHARACTERISTICS



Q vs. FREQUENCY CHARACTERISTICS



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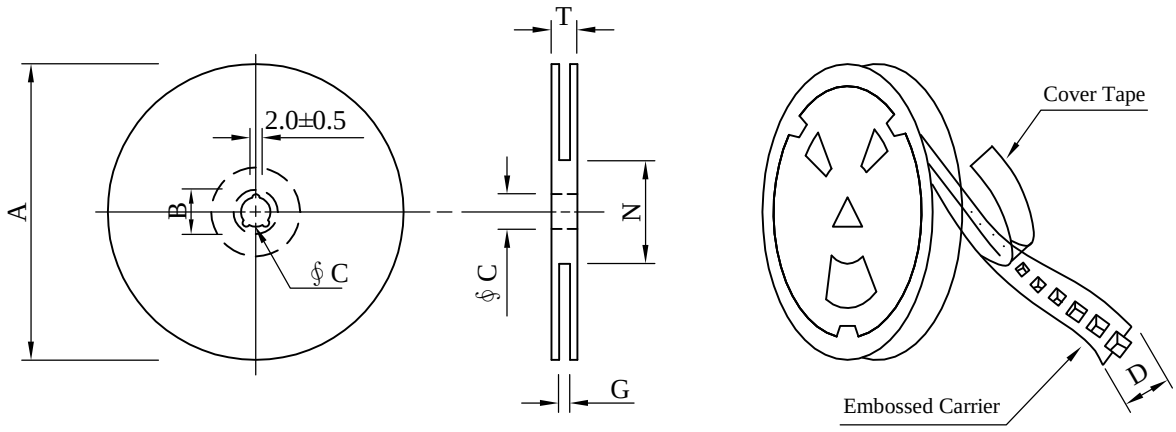
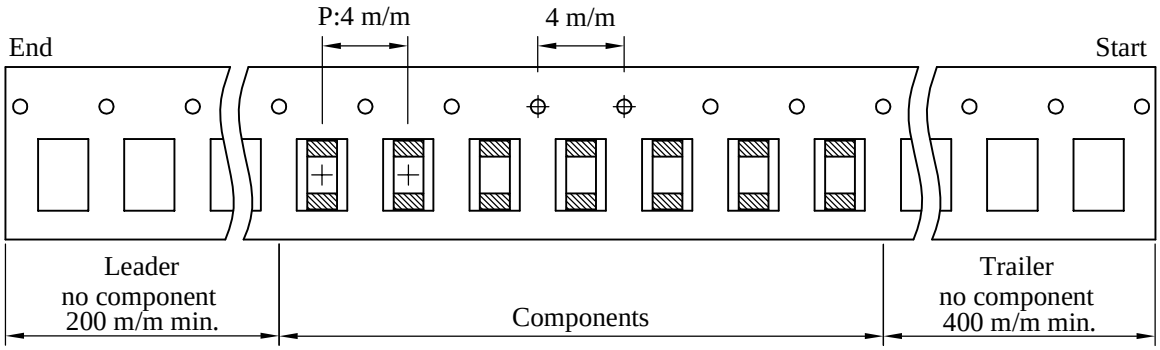
		REV.	20150424-C	PAGE	4

Ⅵ． Packaging information：

(1) Configuration



※Carrier tape width : D



User direction of feed

(2) Dimensions

Unit:m/m

Style	A	B	C	D	G	N	T
07 - 08	178	21±0.8	13	8	10^{+0}	50^{-0}	12.5

(3) Q'TY & G.W. Per package

Code	Inner : Reel			Outer : Carton		
	Q'TY (pcs)	G.W. (gw)	Style	Q'TY (pcs)	G.W. (Kg)	Size (cm)
B	4,000	90	07 - 08	200,000	7.0	41 x 39 x 22

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PROD. NAME	Multilayer Chip Inductor	ABC'S DWG NO.	MS1608□□□□L□-□□□		
		REV.	20150424-C	PAGE	5

Ⅶ . Reliability test：

Item	Reference documents	Test Condition	Test Specification
1.High Temperature Exposure	MIL-STD-202 Method 108	1.Temperature: 125℃ 2.Time:1008 hours. 3.Measurement：After placing for 24 hours min.	1.Body: No damage 2.Inductance shall not change more than ±20%.
2.Low Temperature Exposure	JESD22-A 119	1.Temperature: -55℃ 2.Time:1008 hours. 3.Measurement：After placing for 24 hours min.	1.Body: No damage 2.Inductance shall not change more than ±20%.
3.Temperature Cycling	JESD22-A 104	1.Temperature: -55℃ ~ 125℃ 2.Number of cycle:100 cycle 3.Dwell time:30 minutes 4.Measurement：After placing for 24 hours min.	1.Body: No damage 2.Inductance shall not change more than ±20%.
4.Biased Humidity Test	MIL-STD-202 Method 103	1.Temperature:40±5 ℃ 2.Time:1008 Hours 3.Humidity: 95% RH. 4.Measurement：After placing for 24 hours min.	1.Bodye: No damage 2.Inductance shall not change more than ±20%.
5.Vibration Test	MIL-STD-202 Method 204	1.Frequency and Amplitued : 10-55-10 Hz, 1.5 mm. 2.Direction:X, Y, Z 3.Test duration:2 hours for each direction, 6 hours in total.	Appearance: No damage
6.Resistance To Soldering Heat Test	MIL-STD-202 Method 210	1.Solder Temp. : 265±3℃ 2.Immersion time : 6±1 sec 3.Preheating : 100℃ to 150℃, 1 minute. 4.Measurement：After placing for 24 hours min.	1.Appearance: No damage 2.Inductance shall not change more than ±20%.
7.Solderability Test	J-STD-002	1.Preheat：150℃,60 seconds 2.Solder temperature：245±5℃ 3.Flux 4.Dip time：4±1 seconds	The terminal shall be at least 90% covered with fresh solder.
8.Terminal Strength Test	IEC 60068-2-21	1.Apply push force to samples mounted on PCB. 2.Force: Refer to product specification. 3.Dwell time : >25 seconds.	The terminal electrode and the body shall not be damaged by the forces applied on the right conditions.
9.Board Flex	JIS-C-6429	1.Deflection speed：1 mm/ sec 2.Amount of deflection：2 mm 3.Span：90 mm 4.Direction for test：Bottom of PCB 5.Holding time : 60 seconds.	1.Appearance: No damage 2.The terminal electrode and the body shall not be damaged by the forces applied on the right conditions.