Mulitilayer Power Inductors-JHI-M Series

Features

The monolithic construction performs high reliability and ensures a closed magnetic flux in a component avoids magnetic leakage and interference .

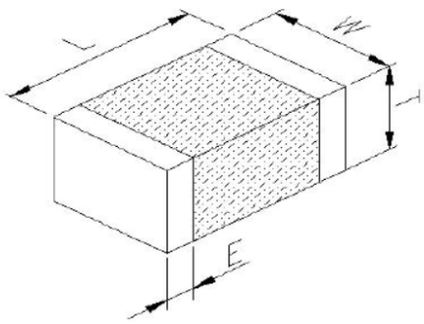
□Allow for higher mounting density.

□Low DC resista

Applications

Suitable for DVD , DSC , PND , PC , NB , Power Line

Dimensions (mm)



Product Identification

JHI 2012 W- 2R2 M 05 B E - JB

Thin type : 05 = 0.5mm； Null=standard

JHI: SERIES NAME

2012:DIMENSION Size Code

W: Material code

2R2: INDUCTANCE Code

M: TOLERANCE, M=20%.

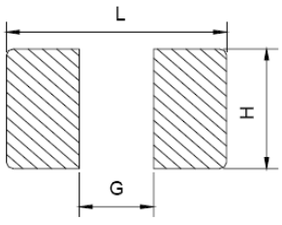
B:Lead-Free for whole Chip

E: Packaging

JB: SID Code

SERIES	L	W	T	E
JHI1608	1.6±0.15	0.8±0.15	0.8±0.15	0.3±0.2
JHI2012	2.0±0.15	1.25±0.15	0.9±0.1	0.5±0.2
JHI2016	2.0±0.15	1.6±0.2	0.9±0.1	0.5±0.2
JHI2520	2.5±0.15	2.0±0.2	0.9±0.1	0.5±0.2
JHI2012-05	2.0±0.15	1.25±0.15	0.5±0.1	0.5±0.2

RECOMMENDER P.C.B LAYOUT



SERIES	L	G	H
JHI1608	2.0	0.8	0.8
JHI2012	3.0	1.0	1.0
JHI2016	3.0	1.0	1.5
JHI2520	3.5	1.2	2.0

Mulitilayer Power Inductors-JHI-M Series

Electrical Characteristics

Part Number	Inductance	DC Resistance	Isat	SRF
	(uH)±20%	(Ω) ±25%	(A)	
1608 SERIES				
JHI608P-R24MBP-JB	0.24	0.1	1.2	90
JHI608P-R47MBP-JB	0.47	0.1	1.2	70
JHI608P-1R0MBP-JB	1.00	0.2	0.95	60
JHI608P-2R2MBP-JB	2.20	0.3	0.75	50
2012 SERIES				
JHI2012P-R47MBP-JB	0.47	0.075	1.3	100
JHI2012P-1R0MBP-JB	1.00	0.1	0.9	50
JHI2012P-2R2MBP-JB	2.20	0.23	0.8	40
JHI2012P-4R7MBP-JB	4.70	0.28	0.6	30
2012-05 SERIES				
JHI2012P-R47M05BP-JB	0.47	0.12	1.1	100
JHI2012P-1R0M05BP-JB	1.00	0.19	0.8	90
JHI2012P-1R5M05BP-JB	1.50	0.26	0.7	70
JHI2012P-2R2M05BP-JB	2.20	0.33	0.6	40
2016 SERIES				
JHI2016P-R47MBE-JB	0.47	0.06	1.6	80
JHI2016P-1R0MBE-JB	1.00	0.085	1.4	70
JHI2016P-1R5MBE-JB	1.50	0.11	1.2	50
JHI2016P-2R2MBE-JB	2.20	0.12	1.1	40
JHI2016P-4R7MBE-JB	4.70	0.14	1.0	20

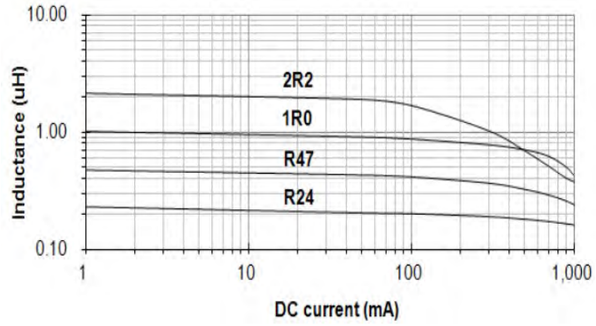
Note 1:Test Instruments and Conditions
HP4291B-RF Impedance / Material Analyzer
HP4338A/B Milliohm meter
Test Frequency : 1 MHz / OSC Level : 100mV

Note 2:For special part number which is not shown in the above table, please refer to appendix
Apply DC 0.4 ~ 0.6A to chip for 1 ~ 3 sec. before to measure inductance

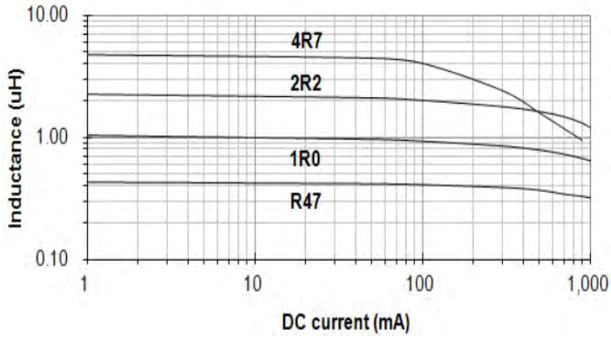
Mulitilayer Power Inductors-JHI-M Series

Inductance vs. DC-bias

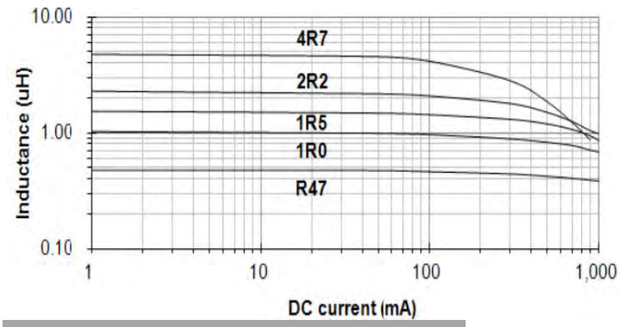
1608 SERIES



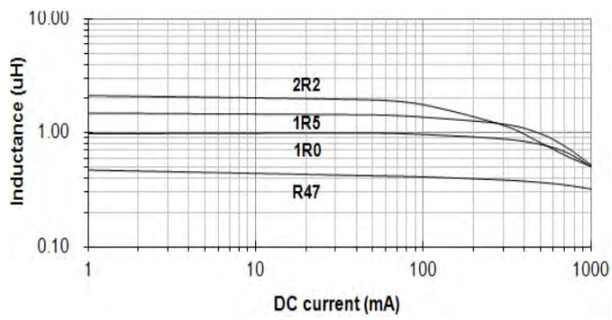
2012 SERIES



2016 SERIES

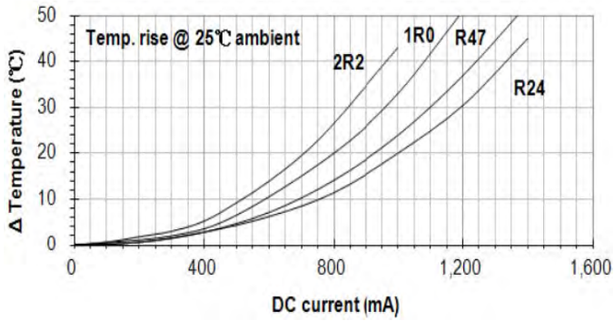


2012-T05 SERIES

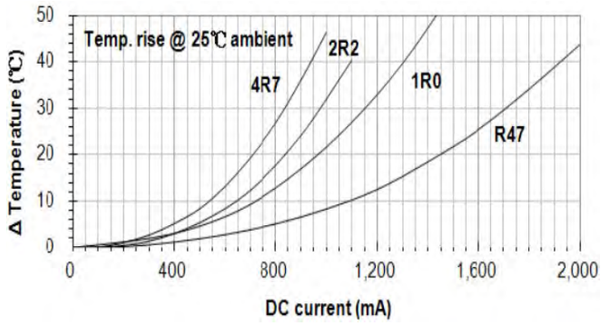


Temperature rise vs. DC-bias

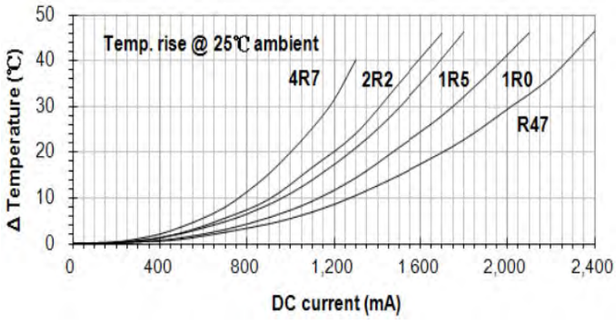
1608 SERIES



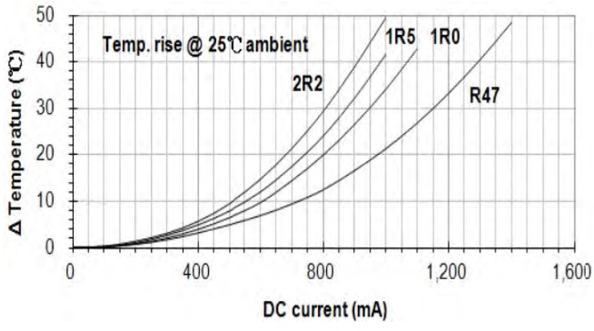
2012 SERIES



2016 SERIES



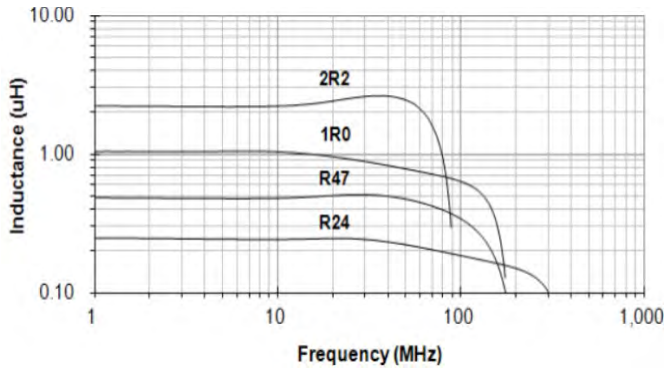
2012-T05 SERIES



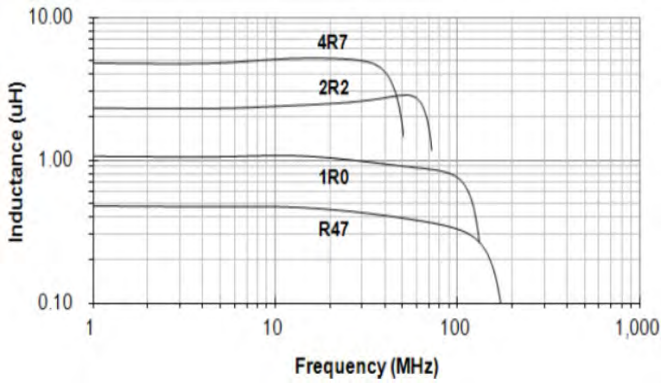
Mulitilayer Power Inductors-JHI-M Series

Inductance @ Frequency

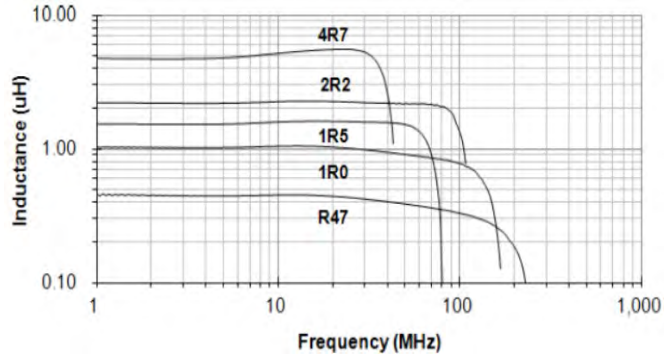
1608 SERIES



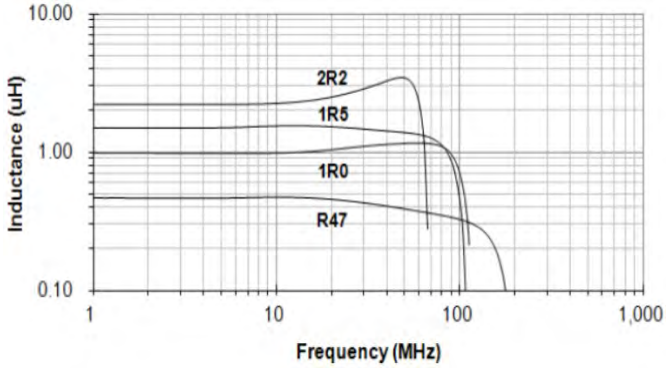
2012 SERIES



2016 SERIES



2012-T05 SERIES



Mulitilayer Power Inductors-JHI-M Series

Electrical Characteristics

Part Number	Inductance (uH)±20%	DC Resistance (Ω) ±25%	Isat (A)	SRF
2012 SERIES				
JHI2012-1R0MBE-JB	1.00	0.1	1.1	90
JHI2012-2R2MBE-JB	2.20	0.17	0.9	70
JHI2012-3R3MBE-JB	3.30	0.2	0.8	50
JHI2012-4R7MBE-JB	4.70	0.23	0.7	40
2016 SERIES				
JHI2016-2R2MBE-JB	2.20	0.12	1.1	40
JHI2016-4R7MBE-JB	4.70	0.16	0.9	20
2520 SERIES				
JHI2520-R47MBE-JB	0.47	0.04	1.8	100
JHI2520-1R0MBE-JB	1.00	0.055	1.6	60
JHI2520-1R5MBE-JB	1.50	0.07	1.5	50
JHI2520-2R2MBE-JB	2.20	0.08	1.3	40
JHI2520-3R3MBE-JB	3.30	0.1	1.2	30
JHI2520-4R7MBE-JB	4.70	0.11	1.1	25

Note 1:Test Instruments and Conditions
HP4291B-RF Impedance / Material Analyzer
HP4338A/B Milliohm meter
Test Frequency : 1 MHz / OSC Level : 100mV

Note 2:For special part number which is not shown in the above table, please refer to appendix
Apply DC 0.4 ~ 0.6A to chip for 1 ~ 3 sec. before to measure inductance

Mulitilayer Power Inductors-JHI-M Series

Electrical Characteristics

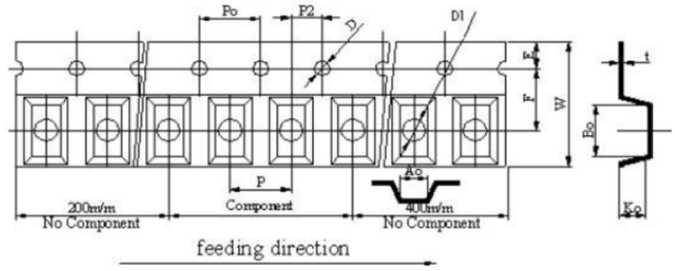
Part Number	Inductance (uH)±20%	DC Resistance (Ω) ±25%	Isat (A)	SRF
2012 SERIES				
JHI2012W-2R2MBE-JB	2.20	0.34	0.7	85
JHI2012W-4R7MBE-JB	4.70	0.46	0.5	50
JHI2012W-5R6MBE-JB	5.60	0.56	0.3	30
2520 SERIES				
JHI2520W-1R0MBE-JB	1.00	0.11	1.4	70
JHI2520W-2R2MBE-JB	2.20	0.16	1.1	50
JHI2520W-3R3MBE-JB	3.30	0.2	1	40
JHI2520W-4R7MBE-JB	4.70	0.22	0.9	30

Note 1:Test Instruments and Conditions
HP4291B-RF Impedance / Material Analyzer
HP4338A/B Milliohm meter
Test Frequency : 1 MHz / OSC Level : 100mV
Note 2:For special part number which is not shown in the above table, please refer to appendix
Apply DC 0.4 ~ 0.6A to chip for 1 ~ 3 sec. before to measure inductance

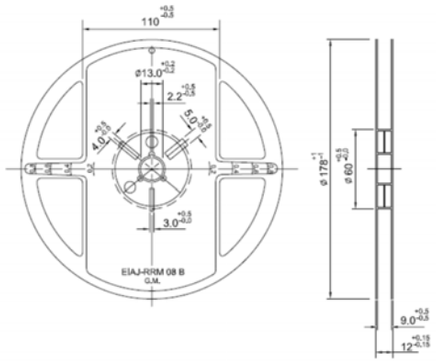
PACKAGING

Tape Dimensions (mm)

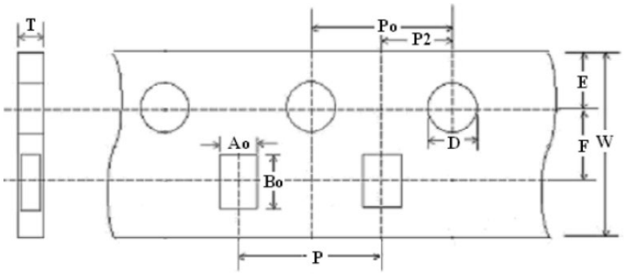
Plastic Carrier E



REEL Dimensions (mm)



Paper Carrier (P)



(mm)	1608	2012_T : 09	2012_T : 05	2016
Symbol	P	E	P	E
W	8.00 ± 0.10	8.00 ± 0.10	8.00 ± 0.10	8.00 ± 0.10
P	4.00 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	4.00 ± 0.10
E	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.05	1.75 ± 0.10
F	3.50 ± 0.10	3.50 ± 0.10	3.50 ± 0.05	3.50 ± 0.10
D	1.56 ± 0.10	1.55 ± 0.05	1.55 ± 0.05	1.55 ± 0.05
D1	NA	1.00 ± 0.05	NA	1.00 ± 0.05
Po	4.00 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	4.00 ± 0.10
10Po	40.0 ± 0.20	40.0 ± 0.20	40.0 ± 0.10	40.0 ± 0.20
P2	2.00 ± 0.10	2.00 ± 0.10	2.00 ± 0.05	2.00 ± 0.10
Ao	0.97 ± 0.05	1.40 ± 0.10	1.45 ± 0.05	1.90 ± 0.10
Bo	1.80 ± 0.05	2.30 ± 0.10	2.25 ± 0.05	2.30 ± 0.10
Ko(T)	0.75± 0.05	1.35 ± 0.10	0.60 ± 0.03	1.15 ± 0.10
t	NA	0.22 ± 0.05	NA	0.22 ± 0.05

TAPE DIMENSIONS AND PACKAGING QUANTITIES

TYPE	A0	B0	K0	t	Pcs/ Reel	Reels/Box
1608 P	0.97±0.1	1.80±0.1	0.75±0.05	N/A	4000	5 reels
2012-05 P	1.45±0.1	2.25±0.1	0.6±0.03	N/A	4000	5 reels
2012-09 E	1.40±0.1	2.30±0.1	1.35±0.1	0.22±0.05	3000	5 reels
2016 E	1.90±0.1	2.30±0.1	1.15±0.1	0.22±0.05	3000	5 reels
2520 E	2.25±0.1	2.80±0.1	1.35±0.1	0.22±0.05	3000	5 reels

Operating temperature range : - 40℃ ~ +85℃
Storage Condition : Less than 40℃ and 70% RH
Storage Time : 12 months Max.
Soldering method : Reflow