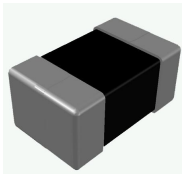
High Chip Ferrite Bead

MHC 1005-4532 S Series

FEATURE

- The current rating up to 6 Amps with low DCR
- Combination of high frequency noise suppression with capability of handing high current
- High current DC power lines
- Circuits where a stable ground in unavailable



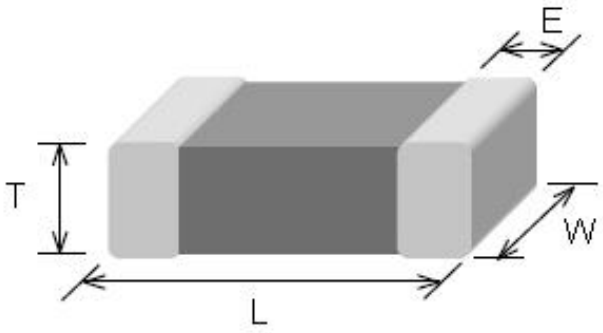
APPLICATIONS

Filtering between analog and digital circuitry,clock generation circuitry,I/O interconnects,isolation between RF noisy circuits and logic devices susceptible to functional degradation,power supply filtering to prevent conducted RF energy from corrupting the power generation circuitry,high frequency EMI prevention of computer, printers, VCRs, TVs and portable telephones

MECHANICAL DATA

- Operating temperature range : - 55℃ ~ +125℃
- Storage Condition : Less than 40℃ and 70% RH
- Storage Time: 6 months(Size:1005)
- 12 months(Size:1608 above)
- Soldering method: Reflow or Wave Soldering

SHAPES AND DIMENSIONS



Unit：mm

Type	1005 (EIA 0402)	1608 (EIA 0603)	2012 (EIA 0805)	3216 (EIA 1206)	3225 (EIA 1210)	4516 (EIA 1806)	4532 (EIA 1812)
L	1.00±0.10	1.60±0.15	2.00±0.20	3.20±0.20	3.20±0.20	4.50±0.25	4.50±0.25
W	0.50±0.10	0.80±0.15	1.25±0.20	1.60±0.20	2.50±0.20	1.60±0.20	3.20±0.25
T	0.50±0.10	0.80±0.15	0.90±0.20	1.10±0.20	1.30±0.20	1.60±0.20	1.50±0.25
E	0.25±0.10	0.30±0.20	0.50±0.30	0.50±030	0.50±030	0.60±0.40	0.60±0.40

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PART NUMBER CODE

MHC	1608	S	12	1	P	B	P
1	2	3	4	5	6	7	8

1 Series Name
2 Size Code: the first two digitals : length(mm), the last two digitals : width(mm)
3 Product Characteristics : S = For Standard
4 Impedance(Ω) ± 25%
5 Fixed Decimal Point
(ex : 600=60Ω ; 121=120Ω)
6 Rated Current Code

L=1000mA	M=1500mA	N=2000mA	P=2500mA
Q=3000mA	R=4000mA	U=5000mA	W=6000mA

7 Soldering: Green Parts: A— Soldering Lead-Free B— Lead-Free for whole chip
8 Packaging: P - Embossed paper tape, 7" reel.
E - Embossed plastic tape, 7" reel.

PART NUMBER AND CHARACTERISTICS TABLE

Part No.	Impedance(Ω) +/-25%	Test Freq.(MHz)	DCR(Ω) (Max.)	Rated Current (mA)
MHC1005 Series				
MHC1005S100NBP	10	100	0.09	2000
MHC1005S300NBP	30	100	0.09	2000
MHC1005S600LBP	60	100	0.20	1000
MHC1005S121MBP	120	100	0.15	1500
MHC1608 Series				
MHC1608S300QBP	30	100	0.04	3000
MHC1608S600QBP	60	100	0.04	3000
MHC1608S800QBP	80	100	0.04	3000
MHC1608S121PBP	120	100	0.07	2500
MHC1608S221NBP	220	100	0.09	2000
MHC1608S301NBP	300	100	0.09	2000
MHC1608S451MBP	450	100	0.15	1500
MHC1608S471LBP	470	100	0.20	1000
MHC1608S601LBP	600	100	0.20	1000

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PART NUMBER AND CHARACTERISTICS TABLE

Part No.	Impedance(Ω) +/-25%	Test Freq.(MHz)	DCR(Ω) (Max.)	Rated Current (mA)
MHC2012 Series				
MHC2012S310WBP	31	100	0.015	6000
MHC2012S400RBP	40	100	0.03	4000
MHC2012S600QBP	60	100	0.04	3000
MHC2012S800UBP	80	100	0.02	5000
MHC2012S121UBP	120	100	0.02	5000
MHC2012S221QBP	220	100	0.04	3000
MHC2012S301NBP	300	100	0.09	2000
MHC2012S331NBP	330	100	0.09	2000
MHC2012S601NBP	600	100	0.09	2000
MHC3216 Series				
MHC3216S300WBE	30	100	0.015	6000
MHC3216S500WBE	50	100	0.015	6000
MHC3216S800RBE	80	100	0.03	4000
MHC3216S121WBE	120	100	0.015	6000
MHC3216S601PBE	600	100	0.07	2500
MHC3216S122LBE	1200	100	0.20	1000
MHC3225 Series				
MHC3225S600MBE	60	100	0.15	1500
MHC3225S102NBE	1000	50	0.09	2000
MHC4516 series				
MHC4516S600WBE	60	100	0.015	6000
MHC4516S851MBE	850	100	0.15	1500

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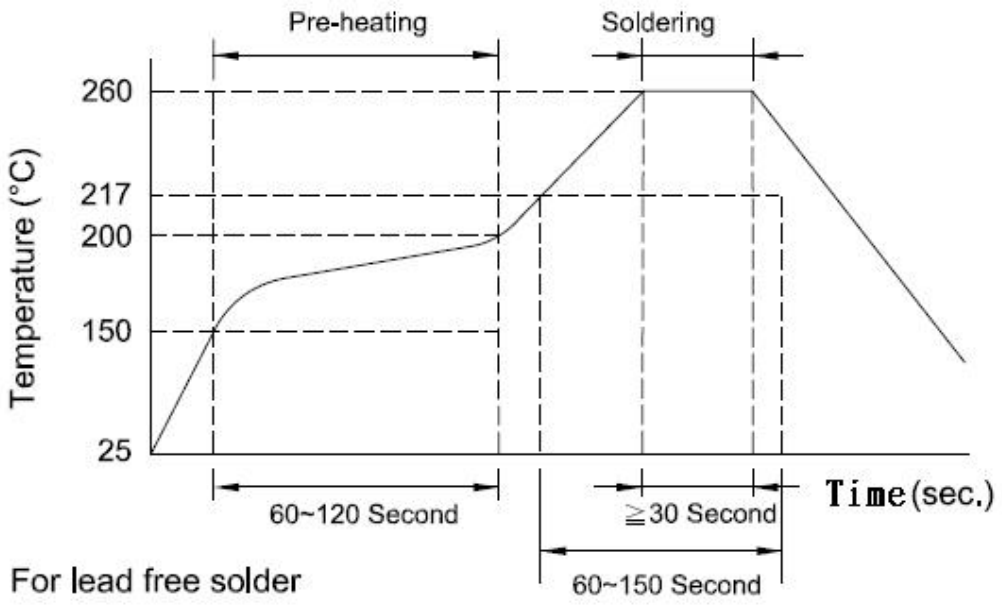
PART NUMBER AND CHARACTERISTICS TABLE

Part No.	Impedance(Ω) +/-25%	Test Freq.(MHz)	DCR(Ω) (Max.)	Rated Current (mA)
MHC4532 series				
MHC4532S121WBE	120	100	0.015	6000
MHC4532S601QBE	600	50	0.04	3000
MHC4532S132QBE	1300	600	0.04	3000
Test Instruments：	● Test Level：250 mV ● HP4291B RF IMPEDANCE / MATERIAL ANALYZER ● HP4338A/B MILLIOHMMETER ● Agilent 8720ES S-PARAMETER NETWORK ANALYZER ● HP6632B SYSTEM DC POWER SUPPLY			

RECOMMENDED SOLDERING CONDITIONS

PART SIZE (EIA SIZE)		1005 (0402)	1608 (0603)	2012 (0805)	3216 (1206)	3225 (1210)	4516 (1806)	4532 (1812)
7” REEL	Qty. (pcs)	10000	4000	4000	3000	2000	2000	1000

REEL PACKAGING QUANTUTY



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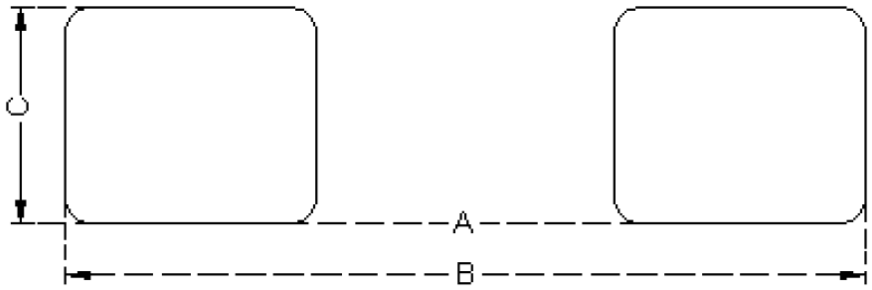
SOLDER LAND INFORMATION



Unit: mm (inches)

Size	A	B	C
1005	0.4 ~ 0.6 (0.015 ~ 0.023)	1.6 ~ 2.6 (0.063 ~ 0.102)	0.4 ~ 0.7 (0.016 ~ 0.027)
1608	0.5 ~ 0.7 (0.019 ~ 0.027)	2.1 ~ 3.1 (0.083 ~ 0.122)	0.65 ~ 0.95 (0.026 ~ 0.037)
2012	1.0 ~ 1.2 (0.039 ~ 0.047)	3.0 ~ 4.0 (0.118 ~ 0.157)	0.8 ~ 1.1 (0.031 ~ 0.043)
3216	2.0 ~ 2.4 (0.079 ~ 0.094)	4.2 ~ 5.2 (0.165 ~ 0.204)	1.0 ~ 1.4 (0.039 ~ 0.055)
3225	2.1 ~ 2.3 (0.082 ~ 0.090)	4.2 ~ 5.2 (0.165 ~ 0.204)	2.2 ~ 2.5 (0.086 ~ 0.098)
4516	3.4 ~ 3.7 (0.133 ~0.145)	6.3 ~ 7.3 (0.248 ~ 0.287)	1.3 ~ 1.7 (0.051 ~ 0.067)
4532	3.4 ~ 3.7 (0.133 ~0.145)	6.3 ~ 7.3 (0.248 ~ 0.287)	2.9 ~ 3.2 (0.144 ~ 0.126)

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RELIABILITY AND TEST CONDITION

Test item	Test condition	Criteria
Temperature Cycle	A. Temperature : -40 ~ +85℃ B. Cycle : 100 cycles C. Dwell time : 30minutes Measurement : at ambient temperature 24 hrs after test completion	A. No mechanical damage B.Impedance value should be within ± 20 % of the initial value
Operational Life	A. Temperature : 125℃ ± 5℃ B. Test time : 1000 hrs C. Apply current : full rated current Measurement : at ambient temperature 24 hrs after test completion	A. No mechanical damage B.Impedance value should be within ± 20 % of the initial value
Biased Humidity	A. Temperature : 40 ± 2℃ B. Humidity : 90 ~ 95 % RH C. Test time : 1000 hrs D. Apply current : full rated current Measurement : at ambient temperature 24 hrs after test completion	A. No mechanical damage B. Impedance value should be within ± 20 % of the initial value
Resistance to Solder Heat	A. Solder temperature : 260 ± 5℃ B. Flux : Rosin C. DIP time : 10 ± 1 sec	A. More than 95 % of terminal electrode should be covered with new solder B. No mechanical damage C.Impedance value should be within ± 20 % of the initial value
Steam Aging Test	A. Temperature : 93 ± 2℃ B. Test time : 4 hrs C. Solder temperature : 235 ± 5℃ D. Flux : Rosin E. DIP time : 5 ± 1 sec	More than 95 % of terminal electrode should be covered with new solder