

Shield and Toroidal Ferrite Cores (RH&T Series)

Description :

Shield cores (RH series) and Toroidal cores (T series) are the EMI suppression cores with ring shape. RH cores are usually used for the cable assembly with plastic injection molding. The smaller RH cores are usually used to pass through beads of other elements or to be inductors by passing through wire. The T cores are mainly used for common mode or differential mode filter to suppression EMI. If the design need higher impedance, increase the wire turns through the core is a fast and easy solution.



Applications :

- Suppress high frequency noise from cables to compliance with FCC, VDE and VCCI.
- Suitable for various power / signal cables inside or outside the equipments.
- Widespread use for electric equipments like NBs, PCs, monitors, printers, digital cameras, power supplies, DVD players, fax machines, medical equipments, internet wire, and etc.

RoHS 2.0
2011/65/EU

Core Dimension List :

Part Number		OD x ID x HT (mm)	
RH 1.8x0.8x2	T 4x2x2	RH 9.5x4.8x20	T 16x9x28
RH 1.8x0.8x4	T 4x2x3	RH 10.5x5.5x15	T 17.5x9.5x7
RH 1.93x1.09x3.81	RH 4x2x7	RH 10.5x5.5x20	RH 17.5x9.5x28.5
RH 3x1x3	RH 4x2x10	T 12x5.5x3	RH 17.5x10.7x28.5
RH 3.5x0.8x9	T 4.4x2.8x1.2	RH 12x5.6x20	T 18x10x6
T 3.5x1.2x3	T 4.4x2.8x2.5	RH 12x5.6x25	T 20x10x10
RH 3.5x1.2x4	RH 6x3x25.4	RH 12x7.3x15	T 21x13.2x6.4
RH 3.5x1.2x5	T 6x4x2	T 12.7x7.9x6.3	RH 22x13.8x28
RH 3.5x1.2x6	RH 6x4x6.5	RH 14x8x28.5	T 25x15x8
RH 3.5x1.2x9.6	T 8x4x2	RH 14x9x15	T 25x15x12
RH 3.5x1.5x5	T 9.5x4.8x3	RH 14.2x6.35x28.5	T 28x15.6x7.5
T 3.5x1.7x1.5	RH 9.5x4.8x10	T 15.2x10.5x5	T 31x19x7.5
T 4x1.5x3	RH 9.5x4.8x12.7	T 15.2x10.5x8	T 36x23x15
RH 4x1.5x4	RH 9.5x4.8x15	RH 16x9x17	T 61.4x36x12.8

Note 1 : We're welcome your inquiry if your dimension is not listed.

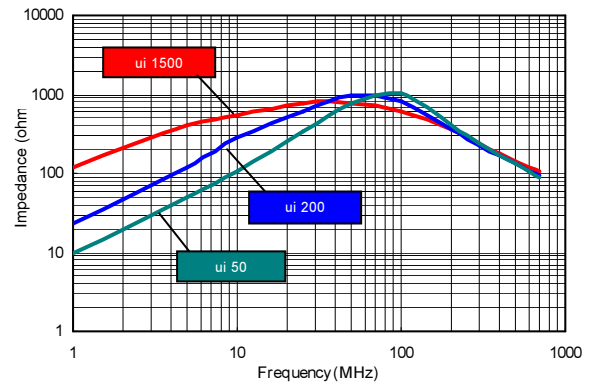
Note 2 : Part Number with red color means in stock anytime.

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Reference Information :

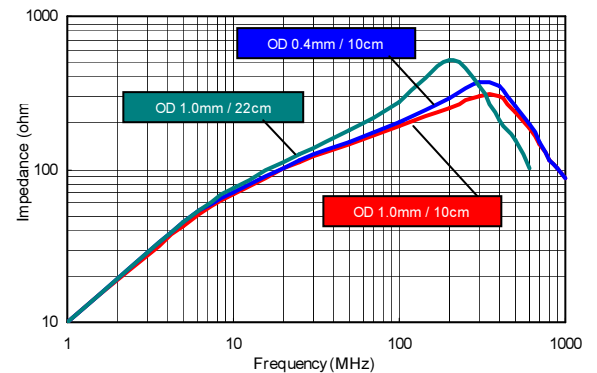
1. Material & Impedance

We have many different materials can be choose but the most popular material is L92 (ui 1500) and L52 (ui 650). High ui core can get higher impedance in lower frequency but will not increase nonstop. For example, ui 1500 core (the red line) is higher than other two cores at 10MHz, but ui 50 core (the green line) get the highest impedance at 100MHz. As the figure, higher ui core with more average impedance in wide frequency range but not as high as the lower ui core at 100MHz. You can choose the material depends on your application.



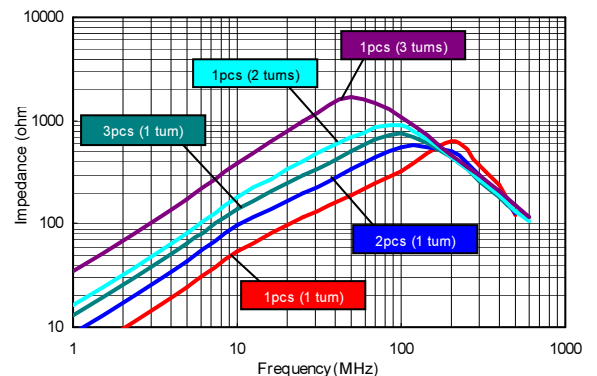
2. Test wire condition & Impedance

As the figure, the same core will get different impedance reading with different test wire. Our standard test wire is a diameter 1.0mm with 10cm length wire through the core to compare the impedance for reference. For actually application, the wire length and diameter is different and impedance reading will not the same.



3. Wire Turns & Impedance

If the impedance is not enough, consider to increase the wire turns, change a longer core or increase the core quantity is the solution. As the figure, increase wire turns is much better than increase the core length and more economical. But sometime it difficult to increase turns because the wire diameter is too big or the appearance problem. In such a case, increase the core length or change a bigger core is another solution.



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Reference Impedance :

Part Number	OD (mm)	ID (mm)	HT (mm)	Typical Impedance (ohm)		
				25MHz	100MHz	200MHz
L52 RH 14.2x6.35x28.5	14.2	6.35	28.5	144	239	295
LIY RH 14.2x6.35x28.5				94	251	399
L52 T 17.5x9.5x13	17.5	9.5	13.0	52	103	178
LIY T 17.5x9.5x13				44	123	244
L52 RH 17.5x9.5x28.5	17.5	9.5	28.5	117	191	267
LIY RH 17.5x9.5x28.5				83	205	337
L52 RH 17.5x10.7x28.5	17.5	10.7	28.5	92	167	247
LIY RH 17.5x10.7x28.5				66	180	324
L52 RH 22x13.8x28	22.0	13.8	28.0	85	149	241
LIY RH 22x13.8x28				70	181	313
L52 T 28x15.6x7.5	28.0	15.6	7.5	31	75	150
LIY T 28x15.6x7.5				29	84	175
L52 T 31x19x7.5	31.0	19.0	7.5	31	77	159
LIY T 31x19x7.5				27	80	168