

Ferrite Cores

For Audio-Visual, TV, & Radio Equipment

DR, THP P, TH Series

MATERIAL CHARACTERISTICS

Material	Practical frequency (MHz)	Initial permeability μ_i	Relative loss factor $\tan\delta/\mu_i$	Temperature factor of initial permeability $\alpha_{\mu ir}$	Curie temperature T_c	Saturation magnetic flux density B_s	Remanent flux density B_r	Coercive force H_c	Electrical resistivity ρ_v	Density ρ_b
			$\times 10^{-6}$	$\times 10^{-6}/^{\circ}\text{C}$ [20 to 60°C]	(°C)	(mT)	(mT)	(A/m)	($\Omega\cdot\text{m}$)	(kg/m^3)
L6	0.01 to 0.5	1500±25%	<10[0.01MHz] <60[0.5MHz]	1 to 3	>100	280[1.6kA/m]	105	16	10 ⁵	5×10 ³
L6E	0.01 to 0.5	1200±25%	<10[0.01MHz] <60[0.5MHz]	6 to 10	>100	290[1.6kA/m]	140	16	10 ⁵	5×10 ³
L5	0.1 to 1.5	750±25%	<15[0.1MHz] <280[1.5MHz]	1 to 3	>120	310[1.6kA/m]	105	40	10 ⁵	5×10 ³
L9	0.1 to 1.5	210±25%	<40[0.1MHz] <140[1.5MHz]	0 to 2	>150	250[1.6kA/m]	140	278	10 ⁵	4.9×10 ³
L7H	0.05 to 1	800±25%	<12[0.05MHz] <80[1MHz]	7 to 15	>180	390[4kA/m]	220	16	10 ⁵	5.1×10 ³
M8N	0.5 to 20	70±25%	<130[0.5MHz] <350[20MHz]	-3 to 3	>300	360[4kA/m]	275	716	10 ⁵	5×10 ³
M10N	0.5 to 15	50±25%	<100[0.5MHz] <300[15MHz]	-8 to -2	>300	310[4kA/m]	160	720	10 ⁵	5×10 ³
M9N	0.5 to 30	45±25%	<200[0.5MHz] <350[30MHz]	-5 to 5	>300	320[4kA/m]	245	955	10 ⁵	5×10 ³
M2N	10 to 120	12±25%	<1500[100MHz]	-10 to 10	>330	220[8kA/m]	150	1320	10 ⁵	5×10 ³
Q1C	0.1 to 2	250±25%	<35[0.1MHz] <110[2MHz]	9 to 15	>125	290[1.6kA/m]	140	119	10 ⁵	5×10 ³
Q2	0.1 to 5	200±25%	<25[0.1MHz] <100[5MHz]	25 to 65	>150	360[1.6kA/m]	240	48	10 ⁵	5×10 ³
D3B	0.1 to 2	300±25%	<20[0.1MHz] <65[2MHz]	10 to 30	>150	330[1.6kA/m]	95	56	10 ⁵	5×10 ³
D8	0.3 to 7	200±25%	<160[0.3MHz] <350[7MHz]	20 to 50	>250	370[1.6kA/m]	165	48	10 ⁵	5×10 ³
M8C	0.5 to 15	70±25%	<90[0.5MHz] <250[15MHz]	5 to 15	>300	360[4kA/m]	225	557	10 ⁵	5×10 ³
M8B	0.5 to 20	50±25%	<140[0.5MHz] <400[20MHz]	4 to 12	>300	300[4kA/m]	200	875	10 ⁵	5.1×10 ³
M9	0.5 to 30	50±25%	<90[0.5MHz] <280[30MHz]	25 to 65	>300	350[4kA/m]	215	597	10 ⁵	5×10 ³
M9M	0.5 to 30	45±25%	<130[0.5MHz] <420[30MHz]	5 to 15	>300	320[4kA/m]	220	800	10 ⁵	4.9×10 ³
M9E	0.5 to 60	40±25%	<150[0.5MHz] <450[60MHz]	35 to 100	>300	350[4kA/m]	230	597	10 ⁵	5×10 ³
M11	3 to 80	25±25%	<220[3MHz] <470[80MHz]	30 to 70	>300	290[4kA/m]	190	1195	10 ⁵	5×10 ³
M11M	3 to 80	25±25%	<200[3MHz] <1000[80MHz]	10 to 30	>300	280[4kA/m]	180	1430	10 ⁵	5×10 ³
M5E	10 to 120	17±25%	<450[10MHz] <1000[120MHz]	40 to 120	>300	300[8kA/m]	185	1670	10 ⁵	5.1×10 ³
M5M	10 to 120	12±25%	<500[10MHz] <1200[120MHz]	30 to 90	>300	240[8kA/m]	165	2230	10 ⁵	5×10 ³
M5N	10 to 120	12±25%	<550[10MHz] <1500[120MHz]	-10 to 10	>300	230[8kA/m]	160	2625	10 ⁵	5×10 ³
V3F	10 to 80	10±25%	<500[10MHz] <1000[80MHz]	-40 to -10	>300	210[16kA/m]	135	2945	10 ⁵	4.8×10 ³
V5F	10 to 250	9±25%	<550[10MHz] <1500[250MHz]	25 to 65	>300	180[16kA/m]	110	2865	10 ⁵	4.9×10 ³
T5F	0.1 to 20	55±25%	<150[0.1MHz] <300[20MHz]	-5 to 0	>250	280[4kA/m]	150	860	10 ⁵	5×10 ³

• 1 (mT): 10 (gauss), 1(A/m): 0.012566 (Oersted)

Ferrite Cores

DR, THP P, TH Series

For Audio-Visual, TV, & Radio Equipment

DR SERIES

CORE SHAPES AND DIMENSIONS

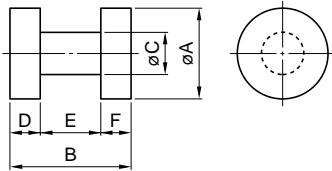


Fig.1

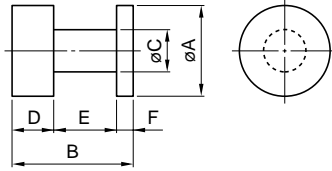


Fig.2

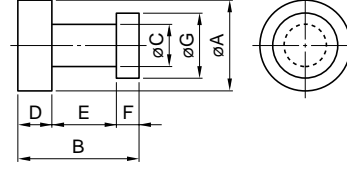


Fig.3

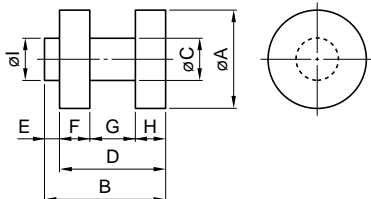


Fig.4

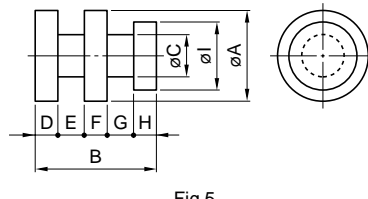


Fig.5



Dimensions in mm

Part No.	Fig.	øA	B	øC	D	E	F	G	H	øI
T5FDR1.6X1.7D29	1	1.6±0.06	1.7±0.1	0.8±0.06	0.45±0.07	0.8±0.07	0.45±0.07			
M10NDR1.8X2D29	1	1.8±0.08	2±0.1	1±0.07	0.6±0.07	0.8±0.07	0.6±0.07			
M9MDR2X1.7	1	2+0, -0.15	1.7±0.15	0.9±0.1	0.5	0.7±0.1	0.5±0.1			
M8BDR3X1.9D3	3	3+0, -0.15	1.9±0.15	1.5±0.1	0.5	0.9±0.1	0.5±0.1	2.6±0.1		
Q2DR3X2.1	1	3+0, -0.15	2.1±0.15	1±0.1	0.5	1.1±0.1	0.5±0.1			
D3BDR3X3.8D1	2	3+0.05, -0.15	3.85±0.2	1.25±0.1	1.1	2±0.15	0.75±0.1			
M8BDR3X3.8D3	3	3+0.05, -0.15	3.85±0.2	1.4±0.1	1.3	2+0.2, -0.1	0.5±0.1	2.2±0.1		
M8BDR3X3.8MD13	5	3+0.05, -0.15	3.85±0.2	1.4±0.1	1.2	0.3±0.05	0.35±0.05	1.45+0.2, -0.1	0.5±0.1	2.2±0.1
D3BDR3X4	1	3+0.05, -0.15	4±0.2	1.5±0.1	0.9	2.2±0.15	0.9±0.15			
M8BDR3X4	1	3+0.05, -0.15	4±0.2	1.5±0.1	0.9	2.2±0.15	0.9±0.15			
L9DR4X2.2	1	4+0, -0.15	2.2±0.15	1.8+0, -0.15	0.6	1±0.1	0.6±0.1			
M8BDR4X2.2	1	4+0, -0.2	2.2±0.15	2.2±0.15	0.6	1±0.1	0.6±0.1			
Q2DR3.6X1.7	1	3.6+0, -0.15	1.7±0.15	1.4±0.1	0.45	0.8±0.1	0.45±0.1			
D8DR4X4D1	2	4+0, -0.2	4±0.2	2±0.15	1.3	2±0.15	0.7±0.1			
M8BDR4X4D3	3	4+0, -0.2	4±0.2	2.2±0.15	1.3	2±0.1	0.7±0.1	3±0.15		
M8BDR4X4.5	1	4+0, -0.2	4.5±0.2	2±0.15	1.1	2.3±0.15	1.1±0.15			
D3BDR4X4.5D1	2	4+0.05, -0.15	4.5±0.2	1.8±0.15	1.5	2.3+0.2, -0.1	0.7±0.15			
M8BDR4X4.5D3	3	4+0.05, -0.15	4.5±0.2	2±0.15	1.5	2.3+0.2, -0.1	0.7±0.15	3.4±0.15		
L6EDR4.5X5.8	1	4.5+0.05, -0.15	5.8±0.2	1.6±0.1	0.9	4±0.2	0.9±0.1			
L6DR4.6X6.4D23	4	4.6+0.05, -0.15	6.4±0.25	2±0.15	5.8	0.6	1±0.1	3.8±0.15	1±0.1	2±0.15
L6DR5.8X7D1	2	5.8+0.15	7±0.3	2.2±0.15	1.3	4.8±0.2	0.9±0.15			
L5DR9X3.4H	1	9+0, -0.2	3.35±0.15	3.5±0.2	0.9	1.6±0.1	0.9±0.1			
L7HDRK14X15	1	14±0.2	15±0.4	6.5±0.2	2.5±0.2	10±0.2	2.5±0.2			
L7HDRK16X18	1	16±0.3	18±0.4	7.5±0.2	3±0.2	12±0.2	3±0.2			

Ferrite Cores

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THP SERIES

SHAPES AND DIMENSIONS

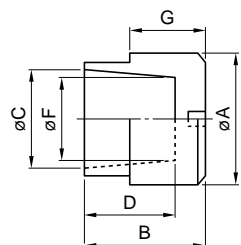


Fig.1

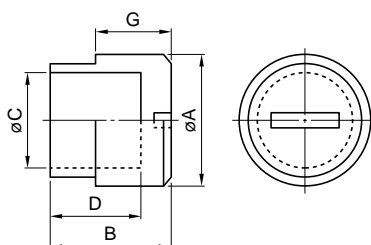


Fig.2

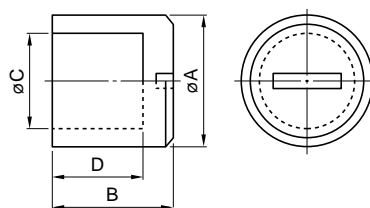


Fig.3

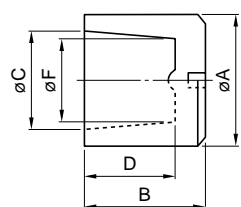


Fig.4



Dimensions in mm

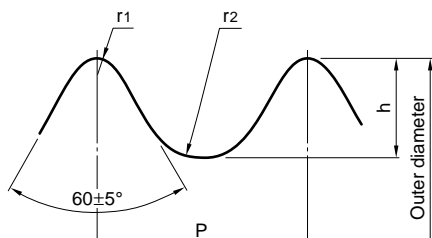
Part No.	Fig.	øA	B	øC	D	øF	G	Threaded diagram type
M8NTHP3.89X1.37C8	3	3.89±0.03	1.37±0.1	2.9±0.1	0.97±0.1			OC3 P=0.35
M10NTHP4.3X2.2C1	3	4.3±0.03	2.2±0.1	3.2±0.1	1.4±0.1			OC4 P=0.5
M8CTHP4.8X2.8C4	4	4.8±0.03	2.8±0.15	3.8+0.2, -0.1	1.8±0.1	3.7+0.1, -0.2		OC4 P=0.5
Q1CTHP4.8X3C4	4	4.8±0.03	3±0.15	3.8+0.2, -0.1	2±0.1	3.7+0.1, -0.2		OC4 P=0.5
Q2THP5.7X5.3	1	5.7±0.03	5.3±0.2	4.2+0.2, -0.1	4±0.15	4.15+0.2, -0.1	3+0.5, -0	OC4 P=0.5
M8CTHP5.7X5.3	1	5.7±0.03	5.3±0.2	4.2+0.2, -0.1	4±0.15	4.15+0.2, -0.1	3+0.5, -0	OC4 P=0.5
Q2THP5.95X2.7C4	3	5.95±0.03	2.7±0.15	4.6+0.15	1.7±0.1			OC4 P=0.5
M8CTHP5.95X2.7C4	3	5.95±0.03	2.7±0.15	4.6+0.15	1.7±0.1			OC4 P=0.5
M8CTHP6.74X6.2C4	4	6.74±0.03	6.2±0.2	5±0.15	4.7±0.2	5±0.15		OC4 P=0.6
M8CTHP6.85X3.7C4	3	6.85±0.03	3.7±0.15	5.4±0.15	2.6±0.15			OC3 P=0.6
Q1CTHP7.5X6.5C2	2	7.45+0, -0.08	6.5±0.2	5.35+0.25, -0.05	4.5±0.2		4.3±0.3	OC4 P=0.8
Q2THP7.5X6.5C2	2	7.45+0, -0.08	6.5±0.2	5.35+0.25, -0.05	4.5±0.2		4.3±0.3	OC4 P=0.8
M8CTHP7.5X6.5C2	2	7.45+0, -0.08	6.5±0.2	5.35+0.25, -0.05	4.5±0.2		4.3±0.3	OC4 P=0.8
L6THP8.95X8C2	2	8.95±0.03	8±0.2	7.2+0.1, -0.2	6±0.2		5±0.3	OC3 P=0.6
L6THP9.25X9.5C4	3	9.25±0.03	9.5+0.3, -0.1	7.2+0.15	7.7+0.3, -0.1			OC4 P=0.6

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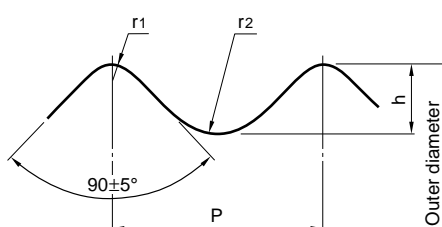
THP CORE THREADED DIAGRAMS OC3 TYPE



Dimensions in mm

P	h	r1	r2 max.
0.35±0.03	0.16+0.1, -0.05	0.06±0.03	0.12
0.5±0.03	0.23+0.1, -0.03	0.06±0.03	0.15
0.6±0.03	0.28+0.1, -0.03	0.07±0.03	0.17
0.75±0.03	0.35+0.14, -0.03	0.08±0.03	0.22

OC4 TYPE



Dimensions in mm

P	h	r1	r2 max.
0.5±0.03	0.17+0.06, -0.03	0.06±0.03	0.15
0.6±0.03	0.2+0.08, -0.03	0.07±0.03	0.18
0.75±0.03	0.25+0.1, -0.03	0.07±0.03	0.22
0.8±0.03	0.28+0.1, -0.03	0.07±0.03	0.22

P CORE(CUP CORE) SHAPES AND DIMENSIONS

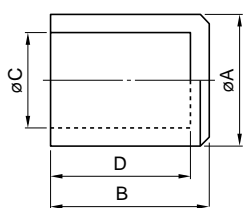


Fig.1

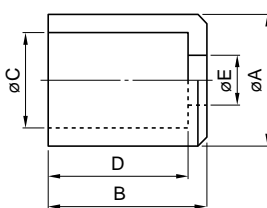


Fig.2

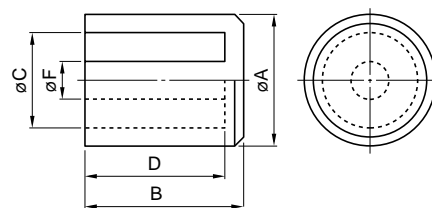


Fig.3

Dimensions in mm

Part No.	Fig.	øA	B	øC	D	øE	øF
M5MP5.2X3P2	2	5.2+0.05, -0.2	3±0.15	4.1+0.2, -0.05	2.3±0.15	3.2±0.15	
L6P6X6	1	6±0.15	6±0.15	4.8+0.15	4.8±0.15		
M11P6.9X6P2	2	6.9+0.15, -0.2	6±0.2	5.6±0.15	4.7+0.1, -0.15	4.1±0.15	
M5MP6.9X6P2	2	6.9+0.15, -0.2	6±0.2	5.6±0.15	4.7+0.1, -0.15	4.1±0.15	
M9P6.9X3P2	2	6.9+0.1, -0.15	3±0.15	5.7+0.2, -0.1	2.5±0.15	4.05+0.25, -0.05	
M11P6.9X3P2	2	6.9+0.1, -0.15	3±0.15	5.7+0.2, -0.1	2.5±0.15	4.05+0.25, -0.05	
M5MP6.9X3P2	2	6.9+0.1, -0.15	3±0.15	5.7+0.2, -0.1	2.5±0.15	4.05+0.25, -0.05	
L6P9.2X9.4P16	3	9.2+0.15, -0.3	9.4±0.25	7.2±0.2	7.6±0.25		3.4+0.1, -0.15
L5P12.4X12P2	2	12.4+0.1, -0.4	12+0.1, -0.4	10+0.2, -0.1	10.5+0, -0.4	5+0.25, -0.05	



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TH SERIES STANDARD TYPE

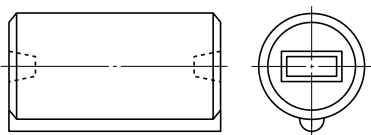


Fig.1

S14 TYPE

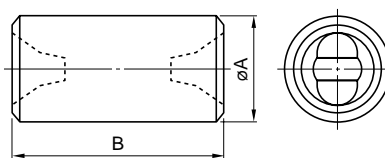


Fig.4

S4 TYPE

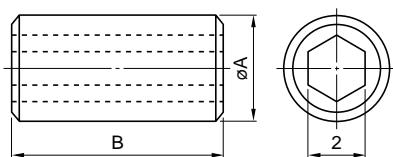


Fig.2

S17 TYPE

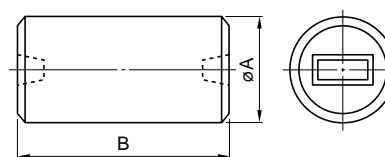


Fig.5

S8 TYPE

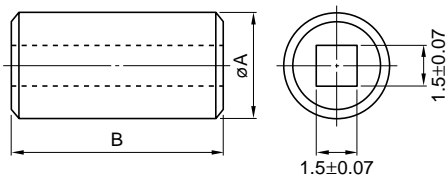


Fig.3

•Silicon resin is provided with this type.
All other core dimensions are identical to those of the standard type.



COMBINATIONS BETWEEN OUTER DIAMETER, LENGTH AND MATERIAL(Typical)

Dimensions in mm

Outer diameter ϕA	Length $B \pm 0.2$										Fig.
	2.5	3	4	5	6	6.5	8	10	15		
2.18 \pm 0.025	M2N, M9N, V5F	2									1, 4, 5
2.6 \pm 0.025	M2N, M5N, M9E		M5M								1, 4, 5
3.16 \pm 0.025		M9, M11M, M5E		M9, M11M, M5E							1, 3, 4
3.2 \pm 0.025				V3F		M11M					1, 4
3.25 \pm 0.025		M9, M11M, M5E		M9, M11M, M5E							1, 4
3.8 \pm 0.025			M5M		M5M						1, 3
4 \pm 0.025					M5M		M11, M5E, M9M				1, 3
4.2 \pm 0.025				M9M		M9					1, 2
4.54 \pm 0.025						M5E					2
4.6 \pm 0.025						M9, M9E, V3F		Q1C, M11M			2
5.9 \pm 0.03								Q1C	Q1C		2
6 \pm 0.03								Q1C	Q1C		2

Ferrite Cores

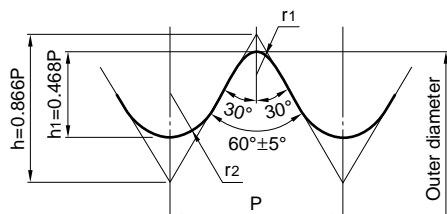
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TH SERIES

THREADED DIAGRAM

OC3 TYPE



Dimensions in mm				
$P \pm 0.03$	h	h_1	r_1	r_2 max.
0.35	0.303	$0.16 + 0.1, -0.05$	0.06 ± 0.03	0.12
0.5	0.433	$0.23 + 0.1, -0.03$	0.06 ± 0.03	0.15
0.6	0.52	$0.28 + 0.1, -0.03$	0.07 ± 0.03	0.17
0.75	0.65	$0.35 + 0.14, -0.03$	0.08 ± 0.03	0.2
1	0.866	$0.47 + 0.14, -0.03$	0.11 ± 0.03	0.29