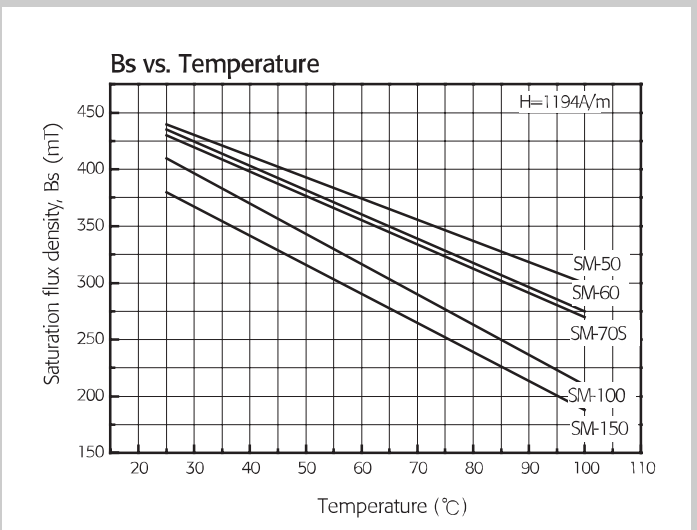
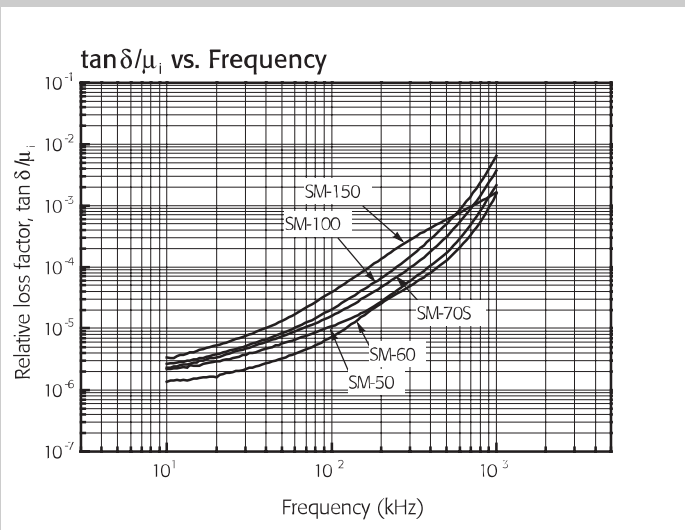
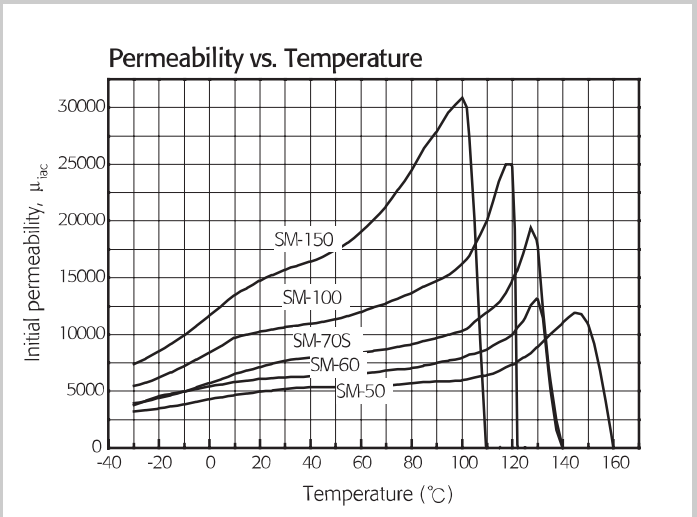
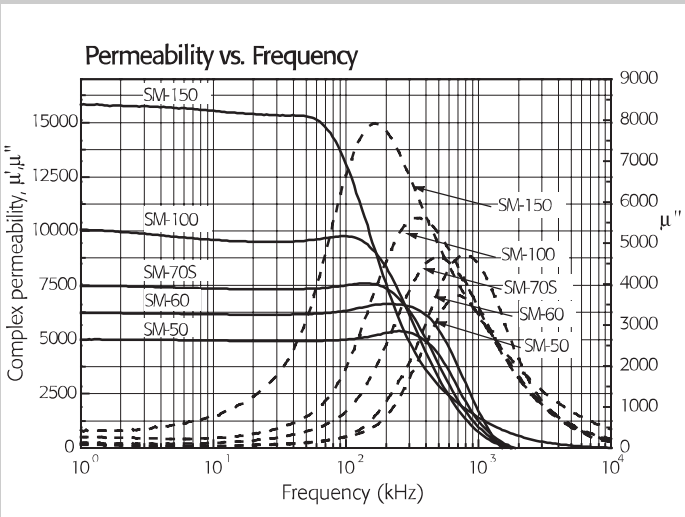


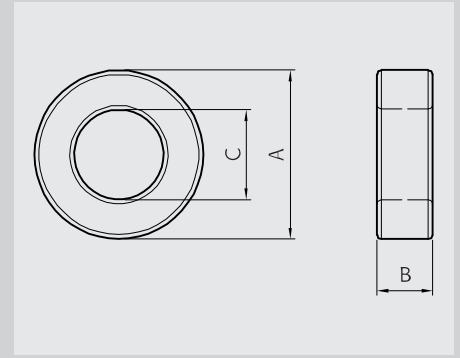
High Permeability Materials

Materials			SM-50	SM-60	SM-70S	SM-100	SM-150
Initial permeability	μ_{iac}		5000±25%	6000±25%	7500±25%	10000±30%	15000±30%
Relative loss factor	$\tan \delta / \mu_{iac}$	$\times 10^{-6}$	< 10(f:100kHz)	< 10(f:100kHz)	< 20(f:100kHz)	< 3(f:10kHz)	< 5(f:10kHz)
Saturation flux density (1194A/m)	Bs	mT	440	430	430	410	360
Remanence	Br	mT	110	100	100	90	90
Coercivity	Hc	A/m	10	6	6	5	4.5
Relative temp. factor (20~60°C)	$\alpha_{\mu r}$	$\times 10^{-6}/^{\circ}\text{C}$	-0.15~1.0	-0.1~1.0	-0.1~1.0	-0.15~2.0	-0.5~2.0
Curie temperature	Tc	°C	> 150	> 130	> 130	> 120	> 100
Density	d	kg/m ³	4.85 × 10 ³	4.90 × 10 ³	4.90 × 10 ³	4.90 × 10 ³	4.90 × 10 ³
Resistivity	ρ	$\Omega \cdot \text{m}$	1	1	0.3	0.2	0.15

Note: 1) Typical values
 2) The values were obtained with toroidal cores(30×8-20H) at room temperature unless indicated otherwise.



OR CORES



Dimensions in mm

Part No.	A	B	C
OR12.7×4.7-7.1H	12.70 ±0.30	4.70 ±0.25	7.10 ±0.30
OR12.7×6-8.1H	12.70 ±0.25	6.00 ±0.25	8.10 ±0.25
OR12.7×6.35-7.92H	12.70 ±0.25	6.35 ±0.25	7.92 ±0.20
OR12.7×6.35-8.1H	12.70 ±0.25	6.35 ±0.25	8.10 ±0.25
OR13×5-8H	13.00 ±0.50	5.00 ±0.30	8.00 $\begin{smallmatrix} +0 \\ -1.00 \end{smallmatrix}$
OR13×5.4-7H	12.90 ±0.25	5.40 ±0.20	7.00 ±0.20
OR13×6-8H	13.00 ±0.50	6.00 ±0.30	8.00 $\begin{smallmatrix} +0 \\ -1.00 \end{smallmatrix}$
OR13×6.5-8H	13.00 ±0.50	6.50 ±0.30	8.00 $\begin{smallmatrix} +0 \\ -1.00 \end{smallmatrix}$
OR14×4-8H	14.00 ±0.20	4.00 ±0.20	8.00 ±0.20
OR14×4-7.5H	14.00 ±0.30	4.00 ±0.30	7.50 ±0.30
OR14×5-7.5H	14.00 ±0.30	5.00 ±0.30	7.50 ±0.30
OR14×5-9H	14.00 ±0.30	5.00 ±0.30	9.00 ±0.30
OR14×6.5-7.5H	14.00 ±0.30	6.50 ±0.30	7.50 ±0.30
OR14×7-7.5H	14.00 ±0.30	7.00 ±0.30	7.50 ±0.30
OR14×7-8H	14.00 ±0.20	7.00 ±0.20	8.00 ±0.20
OR16×4-9.6H	16.00 ±0.30	4.00 ±0.30	9.60 ±0.30
OR16×4-12H	16.00 ±0.30	4.00 ±0.30	12.00 ±0.30
OR16×4.3-12H	16.00 ±0.30	4.30 ±0.30	12.00 ±0.30
OR16×5-9.6H	16.00 ±0.30	5.00 ±0.30	9.60 ±0.30
OR16×5-12H	16.00 ±0.30	5.00 ±0.30	12.00 ±0.30
OR16×6.3-9.6H	16.00 ±0.30	6.30 ±0.30	9.60 ±0.30
OR16×8-8H	16.00 ±0.50	8.00 ±0.40	8.00 ±0.40
OR16×8-12H	16.00 ±0.30	8.00 ±0.30	12.00 ±0.30
OR16×8-12HT	15.80 ±0.30	8.00 ±0.30	11.90 ±0.30
OR16×11-8H	16.00 ±0.50	11.00 ±0.40	8.00 ±0.40
OR19×5-10H	19.00 ±0.30	5.00 ±0.30	9.80 ±0.40
OR19×6-13H	19.00 ±0.30	6.00 ±0.20	13.00 ±0.30
OR19×10-10H	19.00 ±0.40	10.30 ±0.30	9.80 ±0.40

Core Set Parameters

C1(mm ⁻¹)	Le(mm)	Ae(mm ²)	Ve(mm ³)	Aw(mm ²)	W(g)
2.300	29.4	12.8	376	39.6	2.0
2.330	31.6	13.6	429	51.5	2.2
2.100	31.2	14.9	465	49.2	2.4
2.200	31.6	14.4	454	51.5	2.4
2.590	31.7	12.3	389	50.2	2.0
1.900	29.4	15.4	454	38.5	2.4
2.160	31.7	14.7	467	50.2	2.4
1.990	31.7	15.9	506	50.2	2.6
2.810	32.8	11.7	384	50.2	2.0
2.520	31.7	12.6	399	44.2	2.1
2.010	31.7	15.7	498	44.2	2.6
2.840	35.0	12.3	430	63.6	2.2
1.550	31.7	20.5	648	44.2	3.4
1.440	31.7	22.0	698	44.2	3.6
1.600	32.8	20.5	672	50.2	3.5
3.080	38.5	12.5	482	72.3	2.5
5.460	43.4	8.0	345	113.0	1.8
5.080	43.4	8.5	371	113.0	1.9
2.460	38.5	15.7	603	72.3	3.1
4.370	43.4	9.9	431	113.0	2.2
1.950	38.5	19.7	760	72.3	4.0
1.130	34.8	30.7	1071	50.2	5.9
2.730	43.4	15.9	689	113.0	3.6
2.790	42.9	15.4	661	111.2	3.4
0.820	34.8	42.3	1472	50.2	7.6
1.900	42.1	22.2	934	75.4	4.9
2.760	49.1	17.8	873	132.7	4.5
0.920	42.1	45.7	1923	75.4	10

Note : 1) Core loss

- Unit : Watt max.
- Measuring conditions
 PL-7, PL-11 : 100 kHz, 200 mT, at 100°C
 PL-9 : 100 kHz, 200 mT, at 80°C

2) AL value

- Unit : nH/N²
- Measuring conditions : 1 kHz, 0.1 V, 10Ts, 23°C
- Tolerance: ±25% (SM-100 : ±30%)

3) Coating

- Toroid cores can be coated with epoxy or parylene.
- Isolation voltage : epoxy - DC 1000 V min., parylene - DC 750 V min.

Part No.	Electrical Characteristics											Core loss		
	AL value											PL-7	PL-9	PL-11
	PL-7	PL-9	PL-11	SM-8T	SM-23T	SM-43T	SM-50	SM-60	SM-70S	SM-100				
OR12.7×4.7-7.1H	1300	1600	1400	440	1300	2400	2700	3300	4100	5500	0.19	0.17	0.17	
OR12.7×6-8.1H	1300	1600	1300	430	1200	2300	2700	3200	4000	5400	0.21	0.19	0.19	
OR12.7×6.35-7.92H	1400	1800	1500	480	1400	2600	3000	3600	4500	6000	0.23	0.21	0.21	
OR12.7×6.35-8.1H	1400	1700	1400	460	1300	2500	2900	3400	4300	5700	0.23	0.20	0.20	
OR13×5-8H	1200	1500	1200	390	1100	2100	2400	2900	3600	4900	0.19	0.18	0.18	
OR13×5.4-7H	1600	2000	1700	530	1500	2800	3300	4000	5000	6600	0.23	0.20	0.20	
OR13×6-8H	1400	1700	1500	470	1300	2500	2900	3500	4400	5800	0.23	0.21	0.21	
OR13×6.5-8H	1500	1900	1600	510	1500	2700	3200	3800	4700	6300	0.25	0.23	0.23	
OR14×4-8H	1100	1300	1100	360	1000	1900	2200	2700	3400	4500	0.19	0.17	0.17	
OR14×4-7.5H	1200	1500	1200	400	1100	2100	2500	3000	3700	5000	0.20	0.18	0.18	
OR14×5-7.5H	1500	1900	1600	500	1400	2700	3100	3800	4700	6300	0.25	0.22	0.22	
OR14×5-9H	1100	1300	1100	350	1000	1900	2200	2700	3300	4400	0.22	0.19	0.19	
OR14×6.5-7.5H	1900	2400	2000	650	1900	3500	4100	4900	6100	8100	0.32	0.29	0.29	
OR14×7-7.5H	2100	2600	2200	700	2000	3800	4400	5200	6500	8700	0.35	0.31	0.31	
OR14×7-8H	1900	2400	2000	630	1800	3400	3900	4700	5900	7900	0.34	0.31	0.31	
OR16×4-9.6H	1000	1200	1000	330	900	1800	2000	2400	3100	4100	0.24	0.22	0.22	
OR16×4-12H	600	700	600	180	500	1000	1200	1400	1700	2300	0.17	0.16	0.16	
OR16×4.3-12H	600	700	600	200	600	1100	1200	1500	1900	2500	0.19	0.17	0.17	
OR16×5-9.6H	1200	1500	1300	410	1200	2200	2600	3100	3800	5100	0.30	0.27	0.27	
OR16×5-12H	700	900	700	230	700	1200	1400	1700	2200	2900	0.22	0.19	0.19	
OR16×6.3-9.6H	1500	1900	1600	520	1500	2800	3200	3900	4800	6400	0.38	0.34	0.34	
OR16×8-8H	2700	3300	2800	890	2600	4800	5600	6700	8300	11100	0.55	0.49	0.49	
OR16×8-12H	1100	1400	1200	370	1100	2000	2300	2800	3500	4600	0.34	0.31	0.31	
OR16×8-12HT	1100	1400	1100	360	1000	1900	2300	2700	3400	4500	0.34	0.30	0.30	
OR16×11-8H	3700	4600	3800	1230	3500	6600	7700	9200	11500	15300	0.75	0.68	0.68	
OR19×5-10H	1600	2000	1700	530	1500	2800	3300	4000	5000	6600	0.47	0.42	0.42	
OR19×6-13H	1100	1400	1100	360	1000	2000	2300	2700	3400	4600	0.44	0.39	0.39	
OR19×10-10H	3300	4100	3400	1090	3100	5900	6800	8200	10200	13700	0.96	0.87	0.87	