
RSML-Iron Powder Cores

MATERIAL PROPERTIES

Material Mix No.	Reference Permeability (μo)	Temp.Coeff.of Perm	Permeability With DC Bias HDC=50 Oersteds		Color Code
			% μo	$\mu\text{effective}$	
-2	10	100	100	10	Red/Clear
-8	35	300	91	32	Yellow/Red
-18	55	385	74	41	Green/Red
-26	75	825	51	38	Yellow/White
-28	22	415	91	20	Gray/Green
-33	33	635	84	28	Gray/Yellow
-38	85	955	51	44	Gray/Black
-40	60	950	62	37	Green/Yellow
-45	100	1040	46	46	Black/Black
-52	75	650	59	44	Green/Blue

*Permeability initial value is only for reference, cores are made according to rated inductance value AL.

THERMAL CHARACTERISTICS

Iron Powder Cores are fitted for temperature range from -65 to +125 . When cores are placed in higher temperature, it will make inductance and quality factor(Q)to perpetually decrease. Change in this character is depended on time, temperature, core size, frequency and flux density etc.

MAGNETIC TOLERANCES

Material(Blending color No.)	-2	-8	-18	-26	-28	-33	-38	-40	-45	-52
AL width limited	±5%	±10%	±10%	±10%	±10%	±10%	±10%	±10%	±10%	±10%

The cores are manufactured to the AL values listed; the permeability for each material is for reference only. In all cases, the AL values are based on a peak AC flux density of 10 gauss (1mT) at a frequency of 10 kHz.

Typical tolerance of magnetic character curve is $\pm 10\%$, that of core loss curve is $\pm 15\%$.

The toroidal cores are tested with a even separated single-layer winding in order to minimize leakage effects.

SURFACE COATING

Toroidal iron powder cores, manufactured by this company, is well finished with protecting paint. The minimum dielectric strength of coating is 600Vrms under 50HZ. The dielectric strength also may be increased according to the needs of customer. The surface of E-shaped and I-shaped cores are treated with antirust material. We suggest the user to carefully store the untreated products to avoid moist and rain.

SPECIAL PRODUCTS

Except for the listed size in this manual, we can manufacture special products to meet the needs of customers. The listed materials in this manual can be made cores with different height, but not increase model tool. If you have any special requirements, please contact with this company.

Our normal packing box weight is 15 to 20kg.

MATERIAL DESCRIPTION

-2Material The Low permeability of this material will result in a lower operating AC flux density than with other material with no additional gap-loss.

Toroidal Core Sizes

RSM. Part No.	A_L nH/N^2	OD mm	ID mm	Ht mm	l_e cm	A_e cm^2	V cm^3
T25-2	3.4	6.48	3.05	2.44	1.50	.037	.055
T25-8	10.0						
T25-18	17.0						
T25-26	24.5						
T25-40	20.5						
T25-45	31.0						
T25-52	23.0						
T26-8	24.0	6.73	2.67	4.83	1.47	.090	.133
T26-18	41.5						
T26-26	57.0						
T26-45	77.0						
T26-52	56.0						
T30-2	4.3	7.80	3.84	3.25	1.84	.060	.110
T30-8	14.0						
T30-18	22.0						
T30-26	33.5						
T30-40	28.0						
T30-45	40.5						
T30-52	30.5						
T37-2	4.0	9.53	5.21	3.25	2.31	.064	.147
T37-8	12.0						
T37-18	19.0						

T37-26	28.5						
T37-40	24.5						
T37-45	34.0						
T37-52	26.0						
T38-2	7.4	9.53	4.45	4.83	2.18	.114	.248
T38-8	20.0						
T38-18	36.0						
T38-26	49.0						
T38-40	41.5						
T38-45	65.0						
T38-52	49.0						
T44-2	5.2	11.2	5.82	4.04	2.68	.099	.266
T44-8	18.0						
T44-18	25.5						
T44-26	37.0						
T44-40	31.0						
T44-45	46.5						
T44-52	35.0						
T44-52D	70.0	11.2	5.28	6.35	2.68	.212	.418
T50-2	4.9	12.7	7.70	4.83	3.19	.112	.358
T50-8	17.5						
T50-18	24.0						
T50-26	33.0						
T50-38	37.5						
T50-40	29.5						
T50-45	44.0						

T50-52	33.0						
T50-8B	23.0	12.7	7.70	6.35	3.19	.148	.471
T50-18B	32.0						
T50-26B	43.5						
T50-38B	49.5						
T50-40B	38.5						
T50-45B	58.0						
T50-52B	43.5						
T50-8C	28.3	12.7	7.70	8.51	3.19	.200	.637
T50-26C	61.0						
T50-26D	72.0	12.7	7.70	9.53	3.19	.223	.711
T50-40D	59.0						
T50-52D	66.0						
T51-8C	37.0	12.7	5.08	6.35	2.79	.223	.622
T51-18C	55.0						
T51-26C	83.0						
T51-40C	67.0						
T51-52C	75.0						
T60-2	6.5	15.2	8.53	5.94	3.74	.187	.699
T60-8	19.0						
T60-18	34.5						
T60-26	50.0						
T60-40	41.5						
T60-52	47.0						

RSM. Part No.	AL nH/N²	OD mm	ID mm	Ht mm	le cm	Ae cm²	V cm³
T60-26D	97.0	15.2	8.53	11.9	3.74	.374	1.40
T60-52D	94.0						
T68-2	5.7	17.5	9.40	4.83	4.23	.179	.759
T68-8	19.5						
T68-18	29.0						
T68-26	43.5						
T68-38	45.0						
T68-40	35.0						
T68-45	53.0						
T68-52	40.0						
T68-2A	7.0						
T68-8A	26.0						
T68-18A	39.5						
T68-26A	58.0						
T68-38A	61.0						
T68-40A	47.0						
T68-45A	71.0						
T68-52A	54.0						
T68-2D	11.4	17.5	9.40	9.53	4.23	.358	1.52
T68-26D	87.0						
T68-40D	70.0						
T68-52D	80.0						

T72-2	12.8	18.3	7.11	6.60	4.01	.349	1.40
T72-8	36.0						
T72-18	60.0						
T72-26	90.0						
T72-40	71.0						
T72-52	82.0						
T80-2	5.5	20.2	12.6	6.35	5.14	.231	1.19
T80-8	18.0						
T80-18	31.0						
T80-26	46.0						
T80-38	48.0						
T80-40	39.5						
T80-45	56.0						
T80-52	42.0						
T80-8B	29.5	20.2	12.6	9.53	5.14	.347	1.78
T80-18B	46.5						
T80-26B	71.0						
T80-38B	72.0						
T80-40B	59.0						
T80-45B	84.0						
T80-52B	63.0						
T80-26D	92.0	20.2	12.6	12.7	5.14	.453	2.33
T80-40D	79.0						
T80-52D	83.0						
T90-8	30.0	22.9	14.0	9.53	5.78	.395	2.28
T90-18	47.0						

T90-26	70.0						
T90-38	73.0						
T90-40	57.0						
T90-45	85.0						
T90-52	64.0						
T94-2	8.4	23.9	14.2	7.92	5.97	.362	2.16
T94-8	25.0						
T94-18	42.0						
T94-26	60.0						
T94-38	65.0						
T94-40	49.0						
T94-45	76.0						
T94-52	57.0						
T106-2	13.5	26.9	14.5	11.1	6.49	.659	4.28
T106-8	45.0						
T106-18	70.0						
T106-26	93.0						
T106-28	30.0						
T106-33	40.0						
T106-38	108.0						
T106-40	81.0						
T106-45	125.0						
T106-52	95.0						
T106-18A	49.0	26.9	14.5	7.92	6.49	.461	3.00
T106-26A	67.0						
T106-40A	58.0						

T106-52A	67.0						
T106-18B	91.0	26.9	14.5	14.6	6.49	.858	5.57
T106-26B	124.0						
T106-40B	106.0						
T106-52B	124.0						
T124-26	58.0	31.6	18.0	7.11	7.75	.459	3.55
T130-2	11.0	33.0	19.8	11.1	8.28	.698	5.78
T130-8	35.0						
T130-18	58.0						
T130-26	81.0						
T130-28	25.0						
T130-33	33.5						
T130-38	90.0						
T130-40	69.0						
T130-45	105.0						
T130-52	79.0						

RSM. Part No.	AL nH/N ²	OD mm	ID mm	Ht mm	le cm	Ae cm ²	V cm ³
T130-26A	41.0	33.0	19.8	5.72	8.28	.361	2.99
T130-40A	34.0						
T131-8	52.5	33.0	16.3	11.1	7.72	.885	6.84
T131-18	79.0						
T131-26	116.0						
T131-33	46.5						
T131-40	93.0						
T131-52	108.0						
T132-26	103.0						
T132-40	83.0						
T132-52	95.0						
T141-26	75.0	35.9	22.4	10.5	9.14	.674	6.16
T141-40	60.0						
T141-52	69.0						
T150-26	96.0	38.4	21.5	11.1	9.38	.887	8.31
T150-40	78.0						
T150-52	89.0						
T150-26A	66.0	38.4	21.5	8.26	9.38	.657	6.16
T150-38A	84.0						
T150-45A	74.5						
T157-2	14.0	39.9	24.1	14.5	10.1	1.06	10.7
T157-8	42.0						
T157-18	73.0						
T157-26	100.0						

T157-28	31.5						
T157-33	43.5						
T157-38	112.0						
T157-40	86.0						
T157-45	130.0						
T157-52	99.0						
T175-2	15.0	44.5	27.2	16.5	11.2	1.34	15.0
T175-18	82.0						
T175-26	105.0						
T175-40	90.0						
T175-52	105.0						
T184-2	24.0	46.7	24.1	18.0	11.2	1.88	21.0
T184-8	72.0						
T184-18	116.0						
T184-26	169.0						
T184-28	51.0						
T184-33	70.0						
T184-40	143.0						
T184-52	159.0						
T200-2	12.0	50.8	31.8	14.0	13.0	1.27	16.4
T200-8	42.5						
T200-18	67.0						
T200-26	92.0						
T200-33	37.0						
T200-40	79.0						
T200-52	92.0						

T200-2B	21.8	50.8	31.8	25.4	13.0	2.32	30.0
T200-8B	78.5						
T200-18B	120.0						
T200-26B	160.0						
T200-40B	142.0						
T200-52B	155.0						
T201-18	164.0	50.8	24.1	22.2	11.8	2.81	33.2
T201-26	224.0						
T201-40	194.0						
T201-52	224.0						
T224-26C	155.0	57.2	31.8	19.1	14.0	2.31	32.2
T224-52C	155.0						
T225-2	12.0	57.2	35.7	14.0	14.6	1.42	20.7
T225-8	42.5						
T225-18	67.0						
T225-26	98.0						
T225-28	28.0						
T225-33	37.0						
T225-40	78.0						
T225-52	92.0						
T225-2B	21.5	57.2	35.7	25.4	14.6	2.59	37.8
T225-26B	160.0						
T225-52B	155.0						
T249-26	203.0	63.5	35.7	25.4	15.6	3.36	52.3
T249-52	203.0						
T250-18	177.0	63.5	31.8	25.4	15.0	3.84	57.4

T250-26	242.0												
T250-40	194.0												
T250-52	242.0												
T300-2	11.4	77.2	49.0	12.7	19.8	1.68	33.4						
T300-8	37.0												
T300-18	58.0												
T300-26	80.0												
T300-28	23.0												
T300-33	34.5												
T300-40	71.0												
T300-52	80.0												
T300-2D	22.8							77.2	49.0	25.4	19.8	3.38	67.0
T300-26D	160.0												
T300-28D	46.0												
T300-33D	69.0												
T300-40D	142.0												
T300-52D	160.0												

Size Tolerance (mm)

RSM. Part No.	OD	ID	Ht
T25-T38	±0.40	±0.40	±0.50
T44-T72	±0.50	±0.50	±0.50
T80-T141	±0.50	±0.50	±0.65
T150-T225	±0.60	±0.60	±0.75
T249-T300	±0.75	±0.75	±0.75