

■ EFFECTIVE PARAMETERS

CORES	EFFECTIVE PARAMETERS				
	C _v (mm ⁻¹)	Le(mm)	Ae(mm ²)	Ve(mm ³)	Wt(g/set)
ER7.5/5	2.26	13.06	5.78	75.51	0.35
ER17.5/5	1.53	8.94	5.84	52.17	0.31
ER9.5/3.6	1.22	11.14	9.16	102.04	0.48
ER9.5/5	1.56	13.63	8.73	118.99	0.62
ER11/3.9	1.01	12.14	11.92	144.70	0.80
ER11/5	1.17	14.18	12.13	172.00	0.90
ER11.63/5.15	1.29	15.29	11.87	181.49	1.00
ER13/5.4	0.82	16.24	19.82	321.88	1.84
ER14.5/6	1.07	18.38	17.13	314.85	1.69
ER14.5/6.8	1.17	20.18	17.18	346.69	1.90
ER14.5/9.4	1.49	25.46	17.13	436.13	2.38
ER19	1.34	33.89	25.34	858.77	4.80
ER20/9.5/6.25	0.96	34.07	35.42	1206.76	7.00
ER21.2	1.36	43.65	32.06	1399.42	8.64
ER25.5	0.70	28.80	41.21	1186.73	6.18
ER25.5A	0.67	31.83	47.24	1503.59	8.92
ER26.6	0.93	30.70	33.00	1013.10	8.70
ER29.8	0.50	24.19	48.39	1170.35	10.32
ER33	0.62	28.70	46.33	1329.40	10.26
ER63	0.27	104.58	389.13	40696.00	222.60

Material Characteristics (1)

	Symbol	Unit	Measuring Conditions			Low Loss Materials			
			Freq.	Flux den.	Temp.	P4	P41	P42	P48
Initial Permeability	μ_i		$\leq 10\text{kHz}$	0.25mT	25°C	2500 \pm 25%	2400 \pm 25%	1800 \pm 25%	2500 \pm 25%
Amplitude Permeability	μ_a		25kHz	200mT	25°C	> 4500	> 4500	> 5000	> 5000
					100°C	> 4500	> 4500	> 5000	> 5000
Power Loss	Pv	KW/m ³	25kHz	200mT	25°C	105	125	125	
					100°C	55	50	50	
			100kHz	200mT	25°C	700	650	750	550
					100°C	450	350	350	250
			300kHz	100mT	25°C	660	820	900	500
					100°C	430	500	500	300
			500kHz	50mT	25°C	380	400	450	250
					100°C	330	300	300	200
Saturation Flux Density	Bms	mT	10kHz	H = 1200A/m	25°C	480	495	520	515
					100°C	380	395	420	410
Remanence	Brms	mT	10kHz	H = 1200A/m	25°C	100	170	200	150
					100°C	70	70	70	60
Coercivity	Hc	A/m	10kHz	H = 1200A/m	25°C	10	11	12	13
					100°C	6	6	6	7
Hysteresis Material Constant	η_B	10 ⁻⁶ /mT	10kHz	1.5-3.0mT	25°C	< 1.2	< 1	< 1	< 1
Disaccommodation Factor	D _r	10 ⁻⁶	10kHz	< 0.25 mT	25°C	< 2	< 2	< 2	< 2
Curie Temperature	T _c	°C				220	230	240	220
Resistivity	ρ	Ωm				5.50	4.00	8.00	5.00
Density	d	g/cm ³				4.80	4.85	4.90	4.90

Materials Cross Reference

Power Ferrite

Ferrite Manufacturers	MATERIALS												
	P4	P41	P42	P45	P46	P47	P48	P49	P56	P5	P51	P52	P61
ACME													
TDK	PC40	PC44	PC90	PC95		PC95	PC47	PC33/PE22			PC50		
Nicera	NC-2H	2HM4	8M27	3H		3H	2HM5	8M29	38				
FDK	6H10	6H20		6H60		6H42	6H40/6H41	4H45/4H47S			7H20	7H10	
Hitachi Metals	ML24D					ML33D	ML25D	M819D	ML30D/M828D				ML12D
JFE	M81	M83		MBT2	M8T1		M84	M81H				M8F4	MC2
Tomita	2G8			2N2							2H8		
FERROXCUBE	3C30,3C34,3C90	3C94	3C96	3C97		3C95	3C98	3C92		3F3	3F35	3F31	3F45
TDK-EPC	N41,N67,N72,N87	N87		N95		N96	N97	N92	N51	N49	N49		
MAGNETICS	P	R		T	F								
Fair-Rite	78	98				95		97			79		
COSMO	CF124	CF139											
TDC	TP4	TP4A	TP4S	TP4W		TPW33	TP4D	TP4E	TP4C				
DMEGC	DMR40	DMR44	DMR90	DMR95		DMR95	DMR47	DMR24			DMR508		