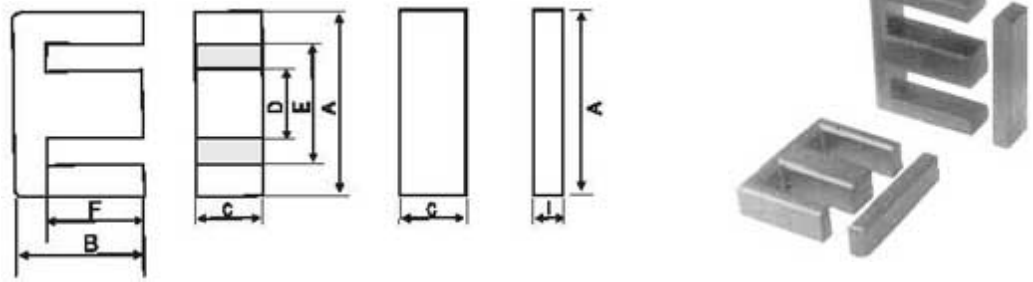
EI CORES



Introduce of EI cores

"E" shapes used in "E-E" and "E-I" combinations became popular choices. "Scrapless" "E-I" patterns were developed. The electrical steel stamped out of two adjacent "E" laminations (placed leg end to leg end) to form the winding window area became the two "I" laminations to be placed across the leg ends of the "E" laminations. Since EI-core has two open coil sides, ferrite EI core provide substantial room to bring high current lead wires out from the coil. This also permits good heat dissipation. Ferrite EI core is easier to achieve high voltage electrical. EI cores are for mains transformers possess many benefits such as low noise, low magnetising current, fast assembly, and low cost.

Application of EI cores

EI-core is widely used in various kinds of power transformer cores, power inductor cores and chokes.

Type	Dimensions(mm)						
	A	B	C	D	E	F	I
EI12.5	12.5±0.3	7.4±0.2	5.0±0.2	2.4±0.2	9.1min	5.1±0.2	1.5±0.15
EI16	16.0±0.4	12.4±0.3	4.8±0.2	4.0±0.2	11.7 min	10.4±0.3	2.0±0.2
EI16A	16.0±0.3	14.7±0.3	4.8±0.2	4.0±0.2	11.8 min	10.8±0.2	2.0±0.2
EI16B	16.1±0.3	6.5±0.2	9.0±0.2	3.0±0.2	12.5min	5.00±0.2	1.5±0.1
EI19	19.2±0.4	13.6±0.4	$5.1^{+0}_{-0.5}$	$5.1^{+0}_{-0.5}$	14.0min	11.0±0.3	2.4±0.2
EI19A	19.0±0.3	15.9±0.4	4.85±0.25	4.85±0.25	14.0±0.3	11.3±0.3	2.35±0.2
EI22	22.2±0.3	14.4±0.25	5.75±0.25	5.8±0.3	12.8min	10.5±0.3	4.5±0.2
EI22A	22.0±0.6	15.0±0.3	$6.0^{+0}_{-0.50}$	$6.0^{+0}_{-0.50}$	15.6min	$11.0^{+0.6}_{-0}$	4.0±0.3
EI22B	22.0±0.6	14.6±0.3	$6.0^{+0}_{-0.50}$	$6.0^{+0}_{-0.50}$	15.6min	10.6±0.3	4.5±0.3
EI22C	22.0±0.4	19.0±0.4	5.75±0.25	5.75±0.25	16.0±0.4	11.0±0.2	4.0±0.2
EI25A	25.4±0.5	$16.3^{+0.5}_{-0.1}$	6.8 +0 -0.5	6.6±0.3	18.6min	$13.0^{+0.5}_{-0.1}$	3.0±0.2
EI25B	25.1±0.4	19.0±0.5	6.75±0.25	6.5±0.3	19.1min	13.25±0.25	2.75±0.15
EI28	28.0±0.4	20.8±0.4	10.7±0.3	7.2±0.3	18.6min	12.8±0.2	3.5±0.15
EI28A	28.0±0.6	$17.5^{+0.3}_{-0.2}$	$11.0^{+0}_{-0.5}$	$7.5^{+0}_{-0.5}$	18.6min	$12.8^{+0.3}_{-0.2}$	3.5±0.3
EI28B	28.0±0.6	16.75±0.25	$11.0^{+0}_{-0.6}$	7.25±0.25	18.6min	12.25±0.25	3.5±0.3
EI30	30.5±0.5	$21.5^{+0.6}_{-0.2}$	$11.0^{+0}_{-0.5}$	$11.0^{+0}_{-0.6}$	20.0min	$16.5^{+0.6}_{-0}$	5.5±0.3
EI30A	30.0±0.6	21.25±0.25	10.7±0.3	10.7±0.3	19.5min	16.5±0.25	5.5±0.2
EI33	33.0±0.6	$24.0^{+0.5}_{-0}$	$13.0^{+0}_{-0.5}$	9.7±0.3	23.8min	$19.0^{+0.5}_{-0}$	5.0±0.3
EI33A	33.0±0.6	23.5±0.5	12.7±0.3	9.7±0.3	23.6min	19.0±0.5	5.0±0.3
EI35A	35.0±0.6	24.2±0.5	10.0±0.3	10.0±0.3	24.5min	18.2±0.3	5.0±0.3
EI35B	35.0±0.6	24.2±0.5	11.7±0.3	10.0±0.3	24.5min	18.2±0.3	5.0±0.3
EI40A	40.0±0.7	27.3±0.3	$12.0^{+0}_{-0.5}$	$12.0^{+0}_{-0.5}$	26.8min	$21.0^{+0.7}_{-0}$	6.7±0.3
EI40B	40.0±0.7	$27.2^{+0.6}_{-0}$	$12.0^{+0}_{-0.5}$	$12.0^{+0}_{-0.5}$	27.5min	$11.0^{+0.6}_{-0}$	7.5±0.3
EI41	41.0±0.9	26.2±0.4	11.8±0.6	11.8±0.6	28.0min	20.2±0.4	7.2±0.4
EI50	50.0±0.7	33.35±0.35	14.6±0.4	14.6±0.4	34.0min	24.75±0.3	9.0±0.3
EI50A	50.0±1.2	33.3±0.4	14.8±0.6	14.8±0.6	34.0min	24.8±0.4	9.0±0.4
EI60	60.0±0.8	35.85±0.35	15.6±0.4	15.6±0.4	44.1min	27.85±0.35	8.5±0.3
EI70	70.0±1.5	45.5±0.5	19.5±0.5	19.5±0.5	50.0±0.5	35.5±0.5	10.5±0.5

Type	Core parameter				weight (g/pr.)	A_l(nH/N²)			Pc(W)
	C1 (mm^{-1})	Ae (mm^2)	Ie (mm)	Ve (mm^3)		F2BD (±25%)	F2B1 (±25%)	F3 (±25%)	F2B1 (max.)
EI12.5	1.44	14.4	20.6	297.5	1.9	1200	1200	1300	
EI16	1.84	19.7	34.9	685.3	3.3	1000	1000	1400	
EI16A	1.90	18.8	35.9	676	3.4		1250		0.42
EI16B	1.10	26.4	29.1	767	3.4		2300		0.38
EI19	1.5	24	39.0	1028.2	5.0	1200	1200	1500	
EI19A	1.68	23.3	39.2	913	4.6		1300		0.55
EI22	0.94	42.0	39.3	1630	9.8		2400		0.81
EI22A	1.1	40.1	42.3	1697.0	9.8	1800	1800	≥1600	
EI22B	0.94	42	39.3	1650.6	9.8	1900	1900	≥1700	
EI22C	1.15	37.0	42.5	1570	8.4		1950		0.95
EI25A	1.1	44.3	48.5	2145	9.8	1800	1800	≥1500	
EI25B	1.22	39.7	48.6	1930	9.8		1900		1.16
EI28	0.586	84.4	49.5	4170	22		3800		2.51
EI28A	0.55	89.5	49.3	4399	22.0	3800	3800	≥3600	
EI28B	0.52	92.3	48.9	4515	22.0	3800	3800	4500	
EI30	0.5	115.6	58.2	67341.1	34.0	4000	3700	4900	
EI30A	0.522	111	58.0	6440	34		4690		3.23
EI33	0.57	124.9	67.3	8408	41.0	4200	4000	≥3900	
EI33A	0.570	119	67.5	8000	41		4400		4.0
EI35A	0.6	107	68.1	731.1	36.0	3500	3200	4200	
EI35B	0.5	126	68.1	8564	43.0	3200	3200	4400	
EI40A	0.5	150	76.5	11534	60.0	5100	4860	5400	
EI40B	0.5	153	76.3	11683	60.0	5100	4860	5400	
EI41	0.533	145	77.0	11100	56		4860		6.45
EI50	0.4	231	94.1	21759	115	6450	6100	7000	
EI50A	0.411	230	94.0	21600	115		6110		2.16*
EI60	0.4	272	111.8	30454.4	139	6250	5600	6400	
EI70	0.37	390	133	51900	252		8070		6.23*

A_l:1kHz,0.5mA,100Ts

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