



## Application of EFD types

- For DC-DC converter
- For flat transformer of lower center leg
- Optimized cross section of legs

## Flat EFD type, optimized distribution of cross section

- Good thermal response

## Product overview EFD type

Model	Dimension(mm)							Fig
	A	B	C	D	E	F	G	
EFD 1314A	13.2 ± 0.25	6.8 ± 0.15	4.8 ± 0.2	10.3 MIN	5.3 ± 0.2	5.3 ± 0.15	2.3 ± 0.15	2
EFD 1515	15.0 ± 0.4	7.5 ± 0.15	4.65 ± 0.15	11.0 ± 0.35	5.3 ± 0.15	5.5 ± 0.25	2.4 ± 0.1	2
EFD 1525	14.7 ± 0.3	12.5 ± 0.15	4.75 ± 0.15	10.3 MIN	6.0 ± 0.15	10.0 ± 0.15	3.3 ± 0.15	2
EFD 1620	16.4 ± 0.3	9.8 ± 0.2	4.5 ± 0.15	12.6 MIN	6.7 ± 0.15	8.1 ± 0.15	2.35 ± 0.1	4
EFD 1630	16.0 + 0.25 -0.15	14.95 + 0.15 -0.1	4.0 ± 0.075	12.0 ± 0.15	5.8 + 0.07 -0.1	12.65 ± 0.1	2.7 ± 0.1	2
EFD 1720	17.7 ± 0.3	10.15 ± 0.15	5.6 ± 0.15	13.1 MIN	7.5 ± 0.15	7.85 ± 0.15	3.40 ± 0.2	2
EFD 1820	17.7 ± 0.3	10.15 ± 0.15	5.6 ± 0.15	13.1 MIN	7.5 ± 0.15	7.85 ± 0.15	3.4 ± 0.15	4
EFD 1822	17.7 ± 0.3	10.9 ± 0.2	5.6 ± 0.15	13.1 MIN	7.5 ± 0.15	8.6 ± 0.15	3.4 ± 0.15	2
EFD 1840	18.25 ± 0.25	20.1 ± 0.2	5.5 ± 0.15	13.2 MIN	6.0 ± 0.15	17.1 ± 0.2	3.3 ± 0.15	5
EFD 2020	20.5 ± 0.4	10.0 ± 0.25	6.65 + 0.2 -0.15	15.9 ± 0.3	8.9 ± 0.2	7.7 ± 0.2	3.6 + 0.2 -0.15	1
EFD 2020L	20.5 ± 0.55	10.0 ± 0.15	5.70 ± 0.15	15.4 ± 0.5	8.9 ± 0.2	7.7 ± 0.2	3.6 + 0.2 -0.15	1
EFD 2025	20.5 ± 0.35	12.75 ± 0.25	6.65 ± 0.2 -0.15	15.9 ± 0.3	8.9 ± 0.2	10.45 ± 0.2	3.6 ± 0.2 -0.15	1
EFD 2124C	21.2 ± 0.4	11.8 ± 0.2	5.9 ± 0.15	15.8 MIN	9.4 ± 0.2	9.2 ± 0.2	3.3 ± 0.1	2
EFD 2322	22.7 ± 0.45	11.0 ± 0.22	10.0 ± 0.2	16.75 ± 0.33	7.35 ± 0.15	7.4 ± 0.15	6.85 ± 0.14	2
EFD 2525D	25.6 ± 0.65	12.5 ± 0.15	9.1 ± 0.2	19.3 ± 0.4	11.4 ± 0.2	9.3 ± 0.25	5.2 ± 0.15	3

Model	Dimension(mm)							Fig
	A	B	C	D	E	F	G	
EFD 2525L	25.0 ±0.65	12.5 ±0.2	7.6 ±0.2	18.7 ±0.6	11.4 ±0.3	9.3 ±0.2	4.3 ±0.2	3
EFD 2526	25.0 + 0.7 -0.6	12.8 0 -0.4	12.7 0 -0.5	18.8 + 0.8 0	8.8 ± 0.25	9.3 + 0.5 0	8.6 0 -0.6	5
EFD 3030D	30.9 ± 0.8	15.0 ± 0.2	9.1 ± 0.2	23.3 ± 0.5	14.6 ± 0.25	11.2 ± 0.3	4.9 ± 0.15	1
EFD 3130D	31.4 ± 0.5	15.0 ± 0.2	9.1 ± 0.2	23.4 MIN	14.6 ± 0.25	11.3 ± 0.2	4.9 ± 0.15	1
EFD 3133	31.7 ± 0.8	16.4 ± 0.3	12.5 ± 0.4	24.1 ± 0.5	11.6 ± 0.3	11.9 ± 0.3	8.2 ± 0.3	6
EFD 3142	31.7 ± 0.8	20.9 ± 0.3	12.5 ± 0.4	24.1 ± 0.5	11.6 ± 0.3	16.4 ± 0.3	8.2 ± 0.3	2
EFD 3244	31.8 ± 0.5	22.0 ± 0.15	5.1 ± 0.2	21.6 MIN	15.5 ± 0.3	17.0 ± 0.15	3.1 ± 0.17	2
EFD 3374	33.60 ±0.9	37.40 ±0.4	9.80 ±0.4	24.6 ±0.5	7.80 ±0.3	29.40 ±0.3	6.80 ±0.3	2
EFD 3528	35.0 ±0.5	14.2 ±0.15	4.7 ±0.15	26.2 ±0.5	17.8 ±0.3	9.8 ±0.15	2.3 ±0.15	2
EFD 3634	36.5 ± 0.7	16.9 ± 0.3	11.5 ± 0.4	26.5 ± 0.5	15.3 ± 0.3	11.7 ± 0.2	7.7 ± 0.3	2
EFD 3634S	36.5 ±0.7	16.9 ±0.3	9.7 ±0.4	26.5 ±0.5	15.3 ±0.3	11.7 ±0.2	6.0 ±0.3	2
EFD 4349D	42.9 ± 0.7	24.3 ± 0.15	6.7 ± 0.15	27.8 MIN	21.6 ± 0.3	17.0 ± 0.15	4.4 ± 0.15	2
EFD 4549	45.2 ± 0.8	24.7 ± 0.2	6.1 ± 0.3	33.3 ± 0.8	24.0 ± 0.4	18.0 ± 0.25	3.0 ± 0.2	2
EFD 5055	50.5 ± 0.5	27.6 ± 0.3	7.5 ± 0.2	35.0 ± 0.5	24.0 ± 0.3	20.2 ± 0.3	4.2 ± 0.2	2
EFD 5055S	50.5 ± 0.7	28.0 ± 0.3	6.5 ± 0.2	35.0 ± 0.6	24.0 ± 0.3	20.6 ± 0.3	3.2 ± 0.2	2
EFD 5155	51.5 ± 0.8	27.7 ± 0.2	4.5 ± 0.3	36.0 ± 0.8	28.0 ± 0.4	20.0 ± 0.25	2.5 ± 0.3	2
EFD 5155C	51.5 ±0.8	27.7 ±0.2	5.3 ±0.3	36.0 ±0.8	28.0 ±0.4	20.0 ±0.25	2.7 ±0.3	2

## Inductance, AL(nH)

Model	Materials								
	PM5	PM7	PM9	PM11	PM12	PM15H	PM15H	HM3A	FM4
EFD 1314A		830 <sup>5)</sup>			1000 <sup>5)</sup>				
EFD 1515		780 <sup>1)</sup>			950 <sup>1)</sup>				780 <sup>3)</sup>
EFD 1525		890 <sup>2)</sup>							
EFD 1620		750 <sup>1)</sup>							
EFD 1630			740 <sup>6)</sup>						
EFD 1720		1020 <sup>4)</sup>							
EFD 1820		1020 <sup>1)</sup>							
EFD 1822		1080 <sup>1)</sup>							
EFD 1840		532 <sup>2)</sup>							
EFD 2020		1320 <sup>7)</sup>							
EFD 2020L		1690 <sup>2)</sup>							
EFD 2025		1120 <sup>7)</sup>							
EFD 2124C		1170 <sup>1)</sup>							
EFD 2322		2422 <sup>3)</sup>							
EFD 2525D	2080 <sup>7)</sup>	2210 <sup>7)</sup>							
EFD 2525L		1860 <sup>1)</sup>							
EFD 2526	2520 <sup>1)</sup>								
EFD 3030D		2290 <sup>1)</sup>							
EFD 3130D		2200 <sup>1)</sup>							
EFD 3133		2880 <sup>1)</sup>							
EFD 3142		2510 <sup>1)</sup>							
EFD 3244					1400 <sup>2)</sup>				
EFD 3374		1030 <sup>2)</sup>							
EFD 3634		3300 <sup>2)</sup>							
EFD 4349D		2000 <sup>2)</sup>							
EFD 3634S		2640 <sup>2)</sup>							
EFD 4549					2050 <sup>2)</sup>		1600 <sup>2)</sup>		
EFD 5055					2650 <sup>2)</sup>				
EFD 5055S					2150 <sup>2)</sup>				
EFD 5155						1490 <sup>2)</sup>			
EFD 5155C						1670 <sup>2)</sup>			

Note : 1) 10kHz, 0.1V  
2) 1kHz, 1V  
3) 1kHz, 0.1V  
4) 10 kHz, 1V  
5) 1 kHz, 30mV  
6) 10 kHz, 50mV  
7) 10 kHz, 30mV  
8) 1 kHz, 0.25V

Effective Parameter

Model	Parameter			
	$L_e$ (mm)	$A_e$ (mm <sup>2</sup> )	$V_e$ (mm <sup>3</sup> )	C
EFD 1314A	31.63	13.25	420	0.527
EFD 1515	34.00	15.00	510	0.550
EFD 1525	52.30	20.40	1070	0.490
EFD 1618	42.40	15.80	660	0.460
EFD 1620	45.90	15.60	720	0.430
EFD 1630	64.16	16.24	1042	0.318
EFD 1720	51.60	25.60	1320	0.620
EFD 1820	51.60	25.60	1320	0.620
EFD 1822	54.80	25.60	1400	0.590
EFD 1840	74.96	22.60	1690	0.380
EFD 2020	46.69	31.12	1460	0.830
EFD 2020L	46.69	31.12	1460	0.830
EFD 2025	58.00	30.30	1760	0.660
EFD 2124C	53.41	30.10	1610	0.710
EFD 2125	60.90	31.30	1910	0.650
EFD 2125C	60.90	31.30	1910	0.650
EFD 2322	49.08	58.10	2851	1.487
EFD 2525D	57.60	58.00	3340	1.270
EFD 2525L	56.66	50.11	2839	1.112
EFD 2526	59.00	74.00	4370	1.570
EFD 3030D	67.20	69.30	4660	1.300
EFD 3130D	67.62	68.68	4660	1.290
EFD 3133	76.80	96.30	7400	1.580
EFD 3142	92.39	98.09	9060	1.330
EFD 3244	92.44	48.68	4501	0.662
EFD 3374	137.35	66.95	9195	0.631
EFD 3528	64.96	41.20	2676	0.797
EFD 3634	76.09	117.23	8920	1.937
EFD 3634S	76.02	95.88	7288	1.585
EFD 4349D	100.50	96.14	9660	1.200
EFD 4549	104.96	74.00	7770	0.886
EFD 5055	120.05	106.93	12837	1.120
EFD 5055S	118.91	86.78	10319	0.917
EFD 5155	117.18	69.77	8175	0.748
EFD 5155C	117.01	79.12	9258	0.850

## Application of EER types

- For high inductance and low height
- Use of winding wires of tapes
- For compact winding design with low leakage inductance

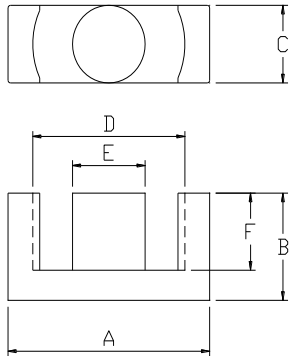


Fig. 1

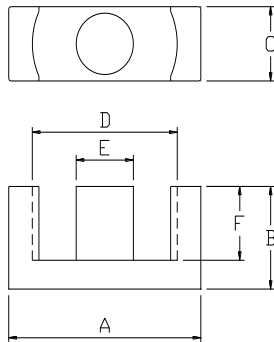


Fig. 2

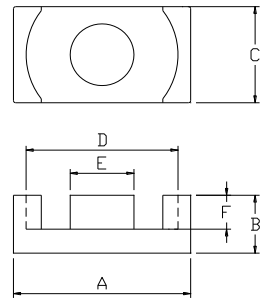


Fig. 3

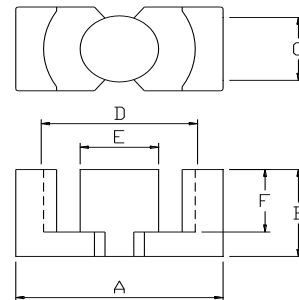


Fig. 4

## Product overview EER type

Model	Dimension(mm)						Parameter				Fig
	A	B	C	D	E	F	$L_e$ (mm)	$A_e$ (mm <sup>2</sup> )	$V_e$ (mm <sup>3</sup> )	C	
EER 1916	19.0 ± 0.3	8.05 ± 0.2	5.1 ± 0.2	14.5 ± 0.3	5.1 ± 0.2	5.65 + 0.25 - 0.05	39.66	22.52	890	0.71	2
EER 2828D	28.5 + 0.6 - 0.5	14.0 ± 0.25	11.4 ± 0.25	21.6 MIN	9.9 ± 0.25	9.6 + 0.3 - 0.25	62.29	86.66	5400	1.75	2
EER 2828S	28.9 + 0.6 - 0.3	14.0 ± 0.25	11.4 ± 0.25	22.5 MIN	9.9 ± 0.25	9.6 + 0.3 - 0.25	64.22	82.38	5290	1.61	2
EER 2834D	28.5 + 0.6 - 0.5	16.9 ± 0.2	11.4 ± 0.25	21.6 MIN	9.9 ± 0.25	12.5 + 0.3 - 0.25	73.79	86.05	6350	1.47	2
EER 2834S	28.9 + 0.6 - 0.3	17.0 ± 0.25	11.4 ± 0.25	22.5 MIN	9.9 ± 0.25	12.6 + 0.3 - 0.25	76.18	81.72	6230	1.35	2
EER 2940	29.3 + 0.6 - 0.5	20.0 ± 0.2	11.4 ± 0.25	22.9 + 0.4 - 0.2	9.9 ± 0.25	15.8 ± 0.2	88.70	83.70	7422	1.19	2
EER 3010	30.0 ± 0.5	5.2± 0.15	20.0 ± 0.3	26.0 ± 0.4	11.0 ± 0.2	2.5 ± 0.15	32.70	108.50	3456	4.17	1
EER 3016	30.0 ± 0.4	8.0 ± 0.2	20.3 ± 0.3	26.0 ± 0.4	11.0 ± 0.2	5.3 ± 0.2	41.60	108.70	4510	3.29	3
EER 3019N	30.0 ± 0.5	9.7 ± 0.15	20.3 ± 0.3	25.4 ± 0.4	13.3 + 0.15 - 0.2	6.6 ± 0.15	49.50	128.80	6380	3.27	3
EER 3124N	31.5 ± 0.5	12.2 ± 0.15	20.3 ± 0.3	26.9 ± 0.4	13.3 + 0.18 - 0.2	9.1 ± 0.15	58.32	127.21	7420	2.74	2
EER 3335S	33.0 ± 0.5	17.3 ± 0.3	13.8 ± 0.25	25.0 ± 0.5	12.5 ± 0.25	12.8 ± 0.3	78.5	125.2	9830	2.01	2
EER 3530D	35.0 ± 0.8	15.3 ± 0.2	11.3 ± 0.2	26.5 MIN	11.3 ± 0.2	9.8 ± 0.3	70.5	107.64	7550	1.93	1

Model	Dimension(mm)						Parameter				Fig
	A	B	C	D	E	F	L <sub>e</sub> (mm)	A <sub>e</sub> (mm <sup>2</sup> )	V <sub>e</sub> (mm <sup>3</sup> )	C	
EER 3534	35.0 ±0.8	16.3 ±0.4	11.3 ±0.2	25.6 + 1.3 0	11.3 ±0.2	10.8 ±0.4	74.20	111.30	8260	1.88	1
EER 3541D	35.0 ±0.8	20.8 ±0.2	11.3 ±0.2	26.5 MIN	11.3 ±0.2	15.3 ±0.3	91.93	106.99	9840	1.46	1
EER 3542D	35.0 ±0.8	20.9 ±0.25	11.3 ±0.2	25.6 + 1.3 0	11.3 ±0.2	14.9 ±0.3	90.52	109.84	9940	1.52	1
EER 3543D	35.0 ±0.8	21.6 ±0.25	11.3 ±0.2	25.6 + 1.3 0	11.3 ±0.2	15.6 +0.3 -0.2	92.50	109.70	10150	1.49	1
EER 3613	36 ±0.6	6.3± 0.2	20.3 ±0.3	31.0 ±0.6	13.3 ±0.2	3.3 ±0.15	41.30	131.40	5420	3.99	1
EER 3618	36 ±0.6	9.55± 0.2	20.3 ±0.3	31.0 ±0.6	13.3 ±0.2	6.55 ±0.15	54.20	134.00	7260	3.11	1
EER 3940L	39.1 ±0.9	21.0 ±0.2	12.5 ±0.3	30.1 ±0.8	12.5 ±0.3	15.8 ±0.4	96.70	124.90	12110	1.62	1
EER 3944L	39.1 ±0.9	22.0 + 0.4 -0.2	12.5 ±0.3	30.1 ±0.8	12.5 ±0.3	17.0 + 0.4 -0.25	102.2	124.80	12750	1.54	1
EER 4042	39.9 ±0.9	21.0 ±0.2	14.9 ±0.3	31.5 ±0.8	13.95 ±0.3	15.1 ±0.3	95.00	153.00	14600	2.00	4
EER 4045D	40.0 ±0.5	22.4 ±0.2	13.3 ±0.25	29.0 MIN	13.3 ±0.25	15.4 ±0.25	96.60	153.60	14840	2.00	4
EER 4215B	42.0 ±1.0	21.6 ±0.2	14.7 ±0.3	31.0 ±0.8	14.7 ±0.3	15.9 ±0.3	98.10	172.60	16940	2.21	1
EER 4220	42.0 ±1.0	21.2 ±0.2	19.6 ±0.4	32.3 ±0.8	17.3 ±0.35	15.0 + 0.6 0	94.10	234.00	21970	3.12	2
EER 4220B	42.0 ±1.0	24.7 ±0.2	19.6 ±0.4	32.3 ±0.8	17.3 ±0.35	18.5 + 0.6 0	108.10	233.60	25250	2.72	2
EER 4220L	42.0 ±1.0	21.55 ±0.2	19.6 ±0.4	32.3 ±0.8	17.3 ±0.35	15.5 + 0.4 -0.1	95.58	229.39	21930	3.02	2
EER 4233L	42.0 ±1.0	16.5 ±0.2	19.6 ±0.4	32.3 ±0.8	17.3 ±0.35	10.45 + 0.4 -0.1	76.58	229.73	17580	3.77	2
EER 4242D	42.4 ± 0.6	21.6 ± 0.3	15.2 ± 0.3	31.4 ± 0.6	15.2 ± 0.3	15.4 ± 0.3	97.76	185.06	18090	2.38	1
EER 4245C	42.0 ±0.6	22.4 ±0.2	15.5 ±0.25	29.4 MIN	15.5 ±0.3	15.4 +0.3 -0.15	96.60	201.80	19500	2.62	1
EER 4730H	47.0 + 0.3 -0.6	15.0 ±0.2	28.0 ±0.4	40.0 ±0.5	18.0 ±0.25	10.0 ±0.2	112.00	254.47	24030	2.75	3
EER 4942	49.0 + 0.7 -0.5	21.2 + 0.5 -0.1	17.2 + 0.2 -0.4	36.6 MIN	17.2 + 0.2 -0.4	14.6 + 0.4 0	99.00	231.20	22890	2.91	4
EER 4943	49.0 + 0.7 -0.5	21.2 + 0.5 -0.1	17.2 + 0.2 -0.4	36.6 MIN	17.2 ± 0.4	15.1 + 0.4 0	102.70	230.10	23620	2.81	4
EER 4954	49.0 ±0.8	27.0 ±0.2	17.2 ±0.4	37.0 ±0.6	17.2 ±0.3	18.5 ±0.25	117.00	243.80	28520	2.62	4
EER 5345	53.2 + 0.5 -0.8	23.2 ±0.3	21.5 ±0.3	39.2 ±0.5	20.0 + 0.2 -0.3	16.3 ±0.2	106.56	318.44	33930	3.76	4
EER 5437	54.00 ±1.08	18.30 ±0.4	26.15 ±0.52	43.85 ±0.87	20.00 ±0.4	11.40 ±0.23	90.80	336.50	30551	4.66	4

Model	Dimension(mm)						Parameter				Fig
	A	B	C	D	E	F	L <sub>e</sub> (mm)	A <sub>e</sub> (mm <sup>2</sup> )	V <sub>e</sub> (mm <sup>3</sup> )	C	
EER 5828	58.00 ±1.16	14.00 ±0.28	35.00 ±0.7	49.00 MIN	21.20 ±0.42	9.20 ±0.18	79.80	368.50	29420	5.80	4
EER 6027	59.8 + 1.3 -1.1	13.5 ±0.2	21.65 ±0.45	44.7 ±1.1	21.65 ±0.45	5.0 ±0.4	70.80	367.60	26016	6.53	1
EER 6028	59.8 ±0.5	14.0 ±0.2	21.65 ±0.45	44.7 ±1.1	21.65 ±0.45	5.5 ±0.4	72.80	367.60	26751	6.35	1
EER 6028H	59.8 + 0.3 -0.6	14.0 ±0.2	21.7 ±0.3	44.7 ±0.5	21.65 ±0.45	5.5 ±0.4	105.00	341.79	30219	4.09	1



## Inductance, AL(nH)

Model	Materials				
	PM5	PM7	PM9	PM11	PM12
EER 1916		1220 <sup>1)</sup>			
EER 2828D	2850 <sup>1)</sup>	2940 <sup>1)</sup>		2940 <sup>1)</sup>	
EER 2828S	2630 <sup>1)</sup>	2810 <sup>1)</sup>			
EER 2834D	2490 <sup>1)</sup>	2660 <sup>2)</sup>		2400 <sup>1)</sup>	
EER 2834S	2300 <sup>1)</sup>	2490 <sup>1)</sup>			
EER 2940		2250 <sup>3)</sup>			
EER 3010		6100 <sup>1)</sup>			
EER 3016		5310 <sup>4)</sup>			
EER 3019N		5900 <sup>3)</sup>	6780 <sup>3)</sup>		
EER 3124N		4660 <sup>1)</sup>			
EER 3335S				3660 <sup>1)</sup>	
EER 3530D		3690 <sup>3)</sup>			
EER 3534	3150 <sup>1)</sup>	3410 <sup>1)</sup>			
EER 3541D	2590 <sup>3)</sup>	2780 <sup>1)</sup>			
EER 3542D	2690 <sup>1)</sup>	2560 <sup>1)</sup>			
EER 3543D	2650 <sup>1)</sup>	3430 <sup>2)</sup>	2950 <sup>1)</sup>		
EER 3613		6190 <sup>1)</sup>			
EER 3618		5200 <sup>1)</sup>			
EER 3940L		2800 <sup>1)</sup>		2800 <sup>3)</sup>	
EER 3944L	2780 <sup>1)</sup>	2990 <sup>3)</sup>			
EER 4042	3570 <sup>1)</sup>	3830 <sup>1)</sup>	4770 <sup>1)</sup>	3600 <sup>1)</sup>	
EER 4045D		3830 <sup>3)</sup>			
EER 4215B	3970 <sup>1)</sup>	4260 <sup>1)</sup>			
EER 4220		5970 <sup>3)</sup>			
EER 4220B	4520 <sup>1)</sup>	4840 <sup>1)</sup>			
EER 4220L	5400 <sup>1)</sup>	5580 <sup>1)</sup>		5170 <sup>1)</sup>	
EER 4233L		6890 <sup>1)</sup>		6890 <sup>1)</sup>	
EER 4242D		4859 <sup>3)</sup>			
EER 4245C	4980 <sup>2)</sup>	5040 <sup>1)</sup>		5500 <sup>3)</sup>	
EER 4730H					8000 <sup>5)</sup>
EER 4942	5250 <sup>1)</sup>	4840 <sup>1)</sup>			
EER 4943				5470 <sup>1)</sup>	
EER 4954	4850 <sup>1)</sup>	5220 <sup>1)</sup>		5220 <sup>1)</sup>	

Model	Materials				
	PM5	PM7	PM9	PM11	PM12
EER 5345	6860 <sup>1)</sup>	7350 <sup>1)</sup>		7350 <sup>1)</sup>	
EER 5437		8330 <sup>3)</sup>			
EER 5828		9280 <sup>3)</sup>			
EER 6027					12750 <sup>6)</sup>
EER 6028					12500 <sup>5)</sup>
EER 6028H					12500 <sup>6)</sup>

Note : 1) 10kHz, 0.1V

2) 1kHz, 1V

3) 1kHz, 0.1V

4) 10kHz, 1V

5) 100kHz, 1V

6) 200kHz, 1V

## Application of EE types

### Small EE type

- Impedance matching transformer in telecom application
- For miniature transformer and SMD coil former

### Middle and Large EE type

- High permeability for common mode chokes and broadband transformer.
- For switching mode power supply
- Energy storage chokes.

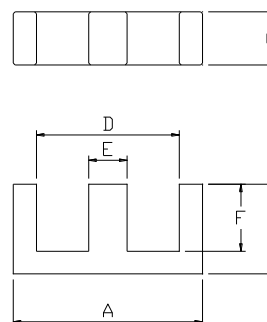


Fig. 1

## Product overview EE type

Model	Dimension(mm)						Parameter				Fig
	A	B	C	D	E	F	$L_e$ (mm)	$A_e$ (mm <sup>2</sup> )	$V_e$ (mm <sup>3</sup> )	C	
EE 1009K	10.2 ±0.2	4.35 ±0.1	4.83 ±0.17	7.8 ±0.2	2.4 ±0.15	3.225 ±0.1	21.90	11.30	250	0.650	1
EE 1011B	10.2 ±0.2	5.5 ±0.1	5.0 +0 -0.3	7.8 ±0.2	2.4 ±0.2	4.3 ±0.1	26.42	11.81	310	0.560	1
EE 118	118.0 +1.5 -2.5	86.5 +0.75 -0.50	35.5 ±0.5	82.5 REF	35.0 ±0.5	69.0 ±0.5	378.70	1244.20	4711	4.130	1
EE 1215	12.4 ±0.3	7.3 +0.3 0	5.0 +0 -0.3	8.8 MIN	2.5 +0 -0.2	5.0 +0.2 -0	31.30	14.50	450	0.647	1
EE 1312	13.0 ±0.3	6.0 ±0.15	5.9 ±0.2	10.2 ±0.3	2.8 +0 -0.4	4.6 ±0.1	30.30	16.10	487	0.667	1
EE 140	140.0 +1.5 -2.5	86.5 +0.75 -0.50	35.0 ±0.7	105.0 REF	35.0 ±0.5	69.0 ±0.5	401.00	1220.30	489300	3.830	1
EE 1518	15.40 ±0.3	9.10 +0.2 -0.1	3.3 +0.1 -0.15	11.80 ±0.3	3.4 ±0.2	7.35 +0.2 -0.2	43.10	10.60	460	0.308	1
EE 1612	16.0 +0.7 -0.5	5.95 +0 -0.3	4.45 ±0.15	11.3 +0.6 +0	4.5 ±0.15	3.45 +0.4 -0	28.60	19.48	560	0.860	1
EE 1614	16.0 ±0.3	7.1 +0.2 +0	5.0 +0 -0.4	12.0 ±0.3	4.0 +0 -0.4	5.2 +0.25 -0	34.57	18.63	640	0.680	1
EE 1616	16.1 ±0.6	8.15 ±0.15	4.5 ±0.2	11.3 MIN	4.55 ±0.15	6.0 ±0.2	37.34	20.51	770	0.690	1
EE 1625	16.2 ±0.4	12.25 ±0.2	4.9 ±0.2	12.2 ±0.3	4.0 ±0.2	10.2 ±0.2	55.36	19.70	1090	0.447	1
EE 1826	17.6 ±0.3	13.2 ±0.2	3.3 ±0.15	11.8 ±0.3	5.4 ±0.15	10.3 +0.2 -0.1	56.50	18.60	1050	0.413	1
EE 1916F	19.0 ±0.3	8.15 ±0.2	5.2 +0 -0.4	14.5 ±0.3	4.7 +0 -0.5	5.75 ±0.15	30.30	22.67	891	0.725	1
EE 1927	19.5 +0 -0.7	13.5 ±0.2	5.0 ±0.2	14.6 ±0.3	4.5 ±0.2	11.25 ±0.25	62.20	22.60	1410	0.460	1

Model	Dimension(mm)						Parameter				Fig
	A	B	C	D	E	F	L <sub>e</sub> (mm)	A <sub>e</sub> (mm <sup>2</sup> )	V <sub>e</sub> (mm <sup>3</sup> )	C	
EE 2020	20.0 +0.8 -0.6	10.2 +0 -0.4	5.9 +0 -0.5	14.2 +0.6 -0	5.9 +0 -0.4	7.1 +0.3 -0	45.90	33.13	1520	0.910	1
EE 2229	22.0 ±0.5	14.6 ±0.3	5.75 ±0.25	16.0 ±0.4	5.75 ±0.25	10.8 ±0.2	63.46	35.51	2250	0.700	1
EE 2519	25.4 ±0.5	9.65 ±0.25	6.35 ±0.25	6.35 ±0.25	6.35± 0.25	6.35 ±0.2	48.30	40.90	1970	1.070	1
EE 2520	25.4 ±0.5	9.9 ±0.25	6.35 ±0.25	19.05 REF	6.35 ±0.25	6.6 +0.3 -0.1	48.10	40.20	1940	1.050	1
EE 2522W	25.05 ±0.75	11.2 ±0.25	10.75 ±0.3	17.9 ±0.4	7.25 ±0.25	7.6 ±0.25	52.40	77.40	4050	1.860	1
EE 2525S	25.4 ±0.4	12.9 ±0.2	7.0 ±0.3	17.65 ±0.4	7.5 ±0.15	9.2 ±0.2	58.70	52.90	3110	1.132	1
EE 2527W	25.05 ±0.75	13.3 ±0.25	10.75 ±0.3	17.9 ±0.4	7.25 ±0.25	9.7 ±0.25	60.80	77.40	4700	1.600	1
EE 2532D	25.4 ±0.5	16.15 ±0.3	6.35 ±0.25	19.0 ±0.3	6.35 ±0.3	13.0 ±0.3	73.40	42.10	3090	0.720	1
EE 2625	26.05 ±0.4	12.55 ±0.25	10.75 ±0.3	18.9 ±0.4	7.25 ±0.25	8.95 ±0.25	58.80	77.40	4550	1.660	1
EE 2722	27.0 ±0.5	11.05 +0.3 -0.15	11.0 ±0.3	19.2 MIN	7.3 ±0.4	7.3 ±0.2	49.51	41.71	2070	1.060	1
EE 2825	28.0 ±0.3	12.5 +0.35 -0.15	8.0 ±0.3	19.6 MIN	8.0 +0.1 -0.3	8.5 +0.25 -0.05	59.00	63.40	3741	1.351	1
EE 2834	28.0 ±0.4	17.0 ±0.2	10.7 ±0.3	19.0 ±0.4	7.5 +0 -0.6	12.2 +0.5 0	74.30	87.40	6490	1.480	1
EE 3026B	30.0 ±0.6	13.3 ±0.25	10.65 ±0.3	20.0 ±0.4	10.1 ±0.3	8.1 +0.4 -0	58.80	106.90	6290	2.280	1
EE 3030	30.0 ±0.5	15.0 ±0.2	7.10 ±0.2	19.9 ±0.4	6.9 ±0.3	9.95 ±0.25	65.31	60.13	3930	1.160	1
EE 3050	30.25 ±0.45	25.7 +0.2 -0.3	9.20 ±0.2	20.35 ±0.35	10.65 ±0.35	20.7 +0.2 -0.3	108.30	93.90	10170	1.090	1
EE 3228	31.9 ±1.0	14.0 ±0.4	12.7 ±0.3	22.77 ±0.77	8.9 ±0.25	9.65 ±0.25	66.40	113.20	7510	2.140	1
EE 3327D	33.3 ±0.7	14.25 ±0.25	12.70 ±0.3	24.8 +0.6 -0.2	9.8 ±0.3	9.75 ±0.25	67.10	116.60	7820	2.180	1
EE 3354	34.00 ±0.8	27.10 ±0.2	7.20 ±0.2	24.60 ±0.5	8.20 ±0.2	19.10 ±0.2	107.50	68.20	7360	0.800	1
EE 3374	34.00 ±0.8	37.4 ±0.3	7.20 ±0.2	24.60 ±0.05	8.20 ±0.2	29.40 ±0.3	148.30	66.70	9980	0.565	1
EE 3452	34.5 ±0.5	26.1 ±0.15	8.2 ±0.15	24.5 ±0.5	10.2 ±0.2	21.1 ±0.15	114.50	82.60	9460	0.907	1

Model	Dimension(mm)						Parameter				Fig
	A	B	C	D	E	F	L <sub>e</sub> (mm)	A <sub>e</sub> (mm <sup>2</sup> )	V <sub>e</sub> (mm <sup>3</sup> )	C	
EE 3457	34.5 ±0.5	27.5 ±0.2	8.0 ±0.25	24.5 ±0.5	10.2 ±0.35	22.5 ±0.2	120.10	80.60	9683	0.844	1
EE 3528	34.6 ±0.64	14.15 +0.5 -0.25	9.35 +0.45 -0.4	25.0 MIN	9.3 +0.35 -0.2	9.78 ±0.28	69.50	85.50	5940	1.546	1
EE 3545	35.0 ±0.5	24.2 ±0.15	8.6 ±0.2	26.5 Min	8.8 ±0.25	19.8 ±0.15	110.60	74.60	8250	0.848	
EE 3549	35.0 ±0.7	24.2 +0.4 -0	10.4 ±0.2	25.0 REF	10.3 +0 -0.5	18.2 +0.7 -0	105.90	103.80	11000	1.230	1
EE 3946	38.5 ±0.7	23.0 ±0.2	8.5 ±0.2	26.5 ±0.7	12.5 ±0.25	17.0 ±0.2	101.00	103.60	10460	1.290	1
EE 4035	39.9 ±0.8	17.3 ±0.15	11.7± 0.3	27.5 +1.1 -0	11.65 ±0.35	10.2 ±0.2	77.00	145.00	11150	2.350	1
EE 4054	40.2 ±0.7	27.25 ±0.25	11.65 ±0.35	29.0 ±0.5	11.65 ±0.35	20.25 ±0.25	117.00	146.00	17060	1.570	1
EE 4133	41.5 ±1.0	16.8 ±0.3	12.7 ±0.25	28.55 MIN	12.7 ±0.3	10.4 ±0.25	77.60	162.80	12630	2.640	1
EE 4215	43.0 +0 -1.7	21.2 +0 -0.4	15.2 +0 -0.5	29.5 +1.2 -0	12.2 +0 -0.5	14.8 +0.7 -0	97.40	178.10	17340	2.300	1
EE 4220	43.0 +0 -1.7	21.2 +0 -0.4	20.0 +0 -1.0	29.5 +1.2 -0	12.2 +0 -0.5	14.8 +0.7 -0	97.40	232.30	22620	3.000	1
EE 4445	44.0 ±0.8	22.6 ±0.2	7.5 ±0.2	30.0 ±0.8	16.0 ±0.3	15.6 ±0.2	98.80	109.80	10850	1.400	1
EE 4576	45.20 ±0.7	38.00 ±0.2	7.10 ±0.2	34.2 ±0.7	16.6 ±0.2	30.40 ±0.2	156.30	93.10	14560	0.784	1
EE 5049	50.0 ±0.5	24.5 ±0.4	12.0 +0.3 -0.2	34.0 ±0.5	15.5 ±0.3	16.5 ±0.4	109.40	189.80	20760	2.180	1
EE 5154C	50.5 ±1.0	26.8 ±0.3	11.0 ±0.3	34.5 ±0.6	16.0 ±0.25	18.8 ±0.3	118.80	176.00	20910	1.862	
EE 5154	50.5 ±1.0	26.8 ±0.3	12.0 ±0.3	34.5 ±0.6	16.0 ±0.25	18.8 ±0.3	118.80	192.00	22816	2.031	1
EE 5555A	55.15 ±1.05	27.5 ±0.3	21.0 +0 -0.8	38.1 ±0.6	16.95 ±0.25	18.8 ±0.3	123.40	352.50	43480	3.590	1
EE 6565	65.15 ±1.35	32.5 ±0.3	27.0 ±0.4	45.1 ±0.9	19.65 ±0.35	22.6 ±0.4	147.00	535.50	78710	4.580	1
EE 7050	70.5 ±1.0	25.0 +0 -0.5	32.0 +0 -0.6	48.0 +1.5 -0	22.0 +0 -0.7	13.7 +0.7 -0	116.70	691.00	80640	7.443	1
EE 7066	70.5 ±1.0	33.2 +0 -0.5	32.0 +0 -0.6	48.0 +1.5 -0	22.0 +0 -0.7	21.9 +0.7 -0	148.90	702.80	104700	5.930	1
EE 7091	70.0 ±1.5	45.5 ±0.5	19.5 ±0.5	50.0 ±0.5	19.5 ±0.5	35.5 ±0.5	203.70	386.10	78650	2.380	1

Model	Dimension(mm)						Parameter				Fig
	A	B	C	D	E	F	L <sub>e</sub> (mm)	A <sub>e</sub> (mm <sup>2</sup> )	V <sub>e</sub> (mm <sup>3</sup> )	C	
EE 8075	79.3 ±1.6	37.5 ±0.5	19.8 ±0.4	61.0 ±1.6	19.75 ±0.25	28.3 ±0.3	183.60	372.10	68330	2.547	1



Model												
	PM5	PM7	PM9	PM11	PM12	PM15H	PM15H	FM4	HM1	HM2A	HM3A	HM5A
EE 3452		1600 <sup>2)</sup>										
EE 3452		1600 <sup>2)</sup>										
EE 3457		1570 <sup>1)</sup>										
EE 3528	2650 <sup>7)</sup>											
EE 3545		2260 <sup>1)</sup>										
EE 3549	2240 <sup>1)</sup>											
EE 3946		2440 <sup>2)</sup>										
EE 4035		4100 <sup>1)</sup>										
EE 4054		3130 <sup>1)</sup>										
EE 4133		5195 <sup>1)</sup>										
EE 4215		4520 <sup>1)</sup>										
EE 4220		5350 <sup>1)</sup>										
EE 4445		2900 <sup>2)</sup>										
EE 4576		1657 <sup>1)</sup>										
EE 5049				4300 <sup>1)</sup>								
EE 5154C		3915 <sup>1)</sup>										
EE 5154					5120 <sup>3)</sup>							
EE 5555A		6500 <sup>1)</sup>										
EE 6565		9000 <sup>7)</sup>										
EE 7050		16231 <sup>1)</sup>										
EE 7066		11920 <sup>7)</sup>						9180 <sup>2)</sup>				
EE 7091	4730 <sup>7)</sup>											
EE 8075		4660 <sup>3)</sup>										

Note : 1) 10kHz, 0.1V

2) 1kHz, 1V

3) 1kHz, 0.1V

4) 10 kHz, 1V

5) 1 kHz, 30mV

6) 10 kHz, 50mV

7) 10 kHz, 30mV

8) 1 kHz, 0.25V

9) 1 kHz, 0.5mA



Inductance, AL(nH)

Model	Materials			
	PM5	PM7	PM9	PM11
ETD 2932	2280 <sup>1)</sup>	2380 <sup>1)</sup>		
ETD 3435	2670 <sup>1)</sup>	2780 <sup>1)</sup>		2780 <sup>1)</sup>
ETD 3940	3020 <sup>1)</sup>	3240 <sup>1)</sup>		
ETD 3940F	3020 <sup>4)</sup>	3240 <sup>1)</sup>		3190 <sup>1)</sup>
ETD 4445	3810 <sup>1)</sup>	4110 <sup>2)</sup>	4470 <sup>1)</sup>	3800 <sup>1)</sup>
ETD 4949D	4260 <sup>3)</sup>			
ETD 4949F	4290 <sup>4)</sup>	4600 <sup>1)</sup>	5000 <sup>1)</sup>	4600 <sup>1)</sup>
ETD 5455	5210 <sup>1)</sup>	5610 <sup>1)</sup>		

Note : 1) 10kHz, 0.1V

2) 1kHz, 0.1V

3) 1kHz, 1V

4) 10kHz, 1V

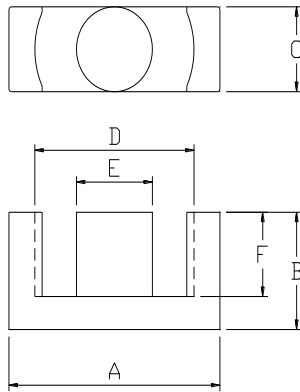


Fig. 1

ETD: constant cross section along the magnetic pith

## Product overview ETD type

Model	Dimension(mm)						Parameter				Fig
	A	B	C	D	E	F	$L_e$ (mm)	$A_e$ (mm <sup>2</sup> )	$V_e$ (mm <sup>3</sup> )	C	
ETD 2932	29.8 ±0.8	15.8 ±0.2	9.5 ±0.3	22.7 ±0.7	9.5 ±0.3	11.0 ±0.3	70.40	76.39	5380	####	1
ETD 3435	34.2 ±0.8	17.3 ±0.2	10.8 ±0.3	26.3 +0.7 -0.6	10.8 ±0.3	12.1 +0.3 -0.2	78.64	97.13	7638	####	1
ETD 3940	39.1 ±0.9	19.8 ±0.2	12.5 ±0.3	30.1 ±0.8	12.5 ±0.3	14.6 ±0.4	92.20	125.00	11520	####	1
ETD 3940F	39.1 ±0.9	19.8 +0.4 -0	12.5 ±0.3	30.1 ±0.8	12.5 ±0.2	14.6 +0.4 -0.1	92.20	125.00	11520	####	1
ETD 4445	44.0 ±0.7	22.7 ±0.3	14.8 ±0.4	33.3 ±0.7	14.8 ±0.4	16.5 +0.4 -0	103.00	173.20	17830	####	1
ETD 4949D	49.5 +0.4 -0.5	24.7 ±0.2	16.3 ±0.4	37.5 MIN	16.3 ±0.4	18.1 ±0.4	115.00	211.30	24280	####	1
ETD 4949F	48.7 ±0.7	24.7 +0.5 -0.15	16.3 ±0.4	37.0 ±0.7	16.3 ±0.4	18.1 +0.5 -0.15	113.80	211.30	24040	####	1
ETD 5455	54.5 ±0.7	27.8 +0 -0.4	19.3 +0 -0.8	41.2 ±0.7	19.3 +0 -0.8	19.8 +0.8 -0	127.30	275.80	35124	####	1

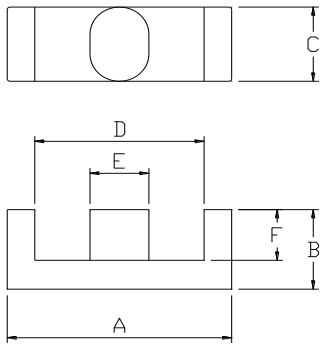


Fig. 1

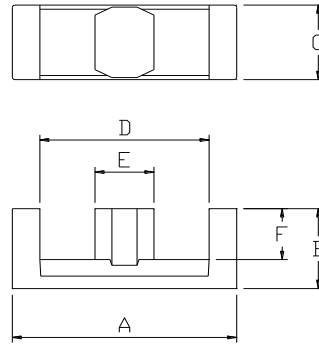


Fig. 2

### Product overview EED, EEH type

Model	Dimension(mm)						Parameter				Fig
	A	B	C	D	E	F	L <sub>e</sub> (mm)	A <sub>e</sub> (mm <sup>2</sup> )	V <sub>e</sub> (mm <sup>3</sup> )	C	
EED 2820	28.0 ±0.4	10.2 ±0.2	11.9 ±0.2	20.8 ±0.3	8.5 ±0.2	6.6 ±0.2	50.5	85.7	4328	2.132	1
EED 2919	29.0 ±0.5	9.45 ±0.15	30 ±0.4	22.5 ±0.5	9.3 ±0.2	6.25 ±0.15	49.4	192.2	9495	4.890	1
EED 4022B	40.2 ±0.5	11.7 ±0.2	22.0 +0.4 -0.2	30.3 ±0.3	11.4 ±0.3	6.4 ±0.2	62.5	229.4	14338	4.614	1
EED 4025	40.8 ±0.5	12.5 ±0.3	21.9 ±0.3	30.8 ±0.5	11.0 ±0.3	8.7 ±0.2	67.8	192.8	13079	3.547	1
EED 4128	40.8 ±0.5	14± 0.3	21.9 ±0.3	30.8 ±0.5	11.0 ±0.3	8.7 ±0.2	71.1	223.8	15912	3.957	1
EED 4547C	45.5 ±0.7	23.55 ±0.2	19.6 ±0.4	33.5 +0.8 -0	17.3 ±0.25	17.5 +0.4	109.5	232.0	25404	2.663	1
EEH 2618	26.0 ±0.4	9.15 ±0.2	11.5 ±0.15	18.4 MIN	7.8 ±0.15	5.65 ±0.2	44.9	81.7	3668	2.287	2
EEH 2624	26.0 ±0.4	12.15 ±0.2	11.5 ±0.15	18.4 MIN	7.8 ±0.15	8.65 ±0.2	55.8	8.2	4475	1.807	2
EEH 2625	25.7 ±0.4	12.3 ±0.2	13.0 ±0.25	18.1 MIN	8.5 ±0.15	8.7 ±0.2	56.6	95.1	5383	2.112	2
EEH 2629	26.0 ±0.4	14.9 ±0.2	11.5 ±0.15	18.4 MIN	7.8 ±0.15	11.4 ±0.2	67.9	81.7	5547	1.512	2
EEH 2918	29.3 ±0.4	9.1 ±0.2	12.0 +0.3 -0.2	22.0 ±0.4	8.5 ±0.15	5.5 ±0.2	46.0	86.0	3956	2.350	2
EEH 2921C	29.3 ±0.4	10.65 ±0.15	13.3 +0.3 -0.2	22.0 ±0.4	8.5 ±0.15	7.05 ±0.15	53.5	97.7	5227	2.295	2
EEH 2922	29.3 ±0.4	10.9 ±0.2	12.0 +0.3 -0.2	22.0 ±0.4	8.5 ±0.15	7.3 ±0.2	49.6	86.2	4276	2.185	2
EEH 2929	29.3 ±0.4	14.6 ±0.2	12.0 +0.3 -0.2	22.0 ±0.4	8.5 ±0.15	11.0 ±0.2	64.4	86.4	5564	1.686	2
EEH 3034	30.3 ±0.4	17.1 ±0.2	13.0 ±0.25	22.0 ±0.4	8.5 ±0.15	13.0 ±0.2	78.5	100.7	7905	1.612	2

Inductance, AL(nH)

Model	Materials						
	PM2A	PM5	PM7	PM9	PM11	PM12	PM15
EED 2820		3250 <sup>1)</sup>	3450 <sup>1)</sup>				
EED 2919					6200 <sup>2)</sup>		
EED 4022B			8210 <sup>1)</sup>		8210 <sup>1)</sup>		
EED 4025					6590 <sup>1)</sup>		
EED 4128					7240 <sup>1)</sup>		
EED 4547C					3850 <sup>1)</sup>		
EEH 2618					5200 <sup>1)</sup>		
EEH 2624			3470 <sup>3)</sup>				
EEH 2625			3030 <sup>3)</sup>				
EEH 2629			3730 <sup>3)</sup>				
EEH 2918			2680 <sup>3)</sup>				
EEH 2921C			3500 <sup>3)</sup>				
EEH 2922			3320 <sup>3)</sup>				
EEH 2929			3000 <sup>3)</sup>				
EEH 3034			2980 <sup>2)</sup>				

Note : 1) 10KHz, 0.1V

2) 1KHz, 0.1V

3) 1KHz, 30mV

## Application of EPC types

- For DC-DC converter
- For flat transformer of lower center leg
- Optimized cross section of legs
- EMI suppression chokes
- Good thermal response

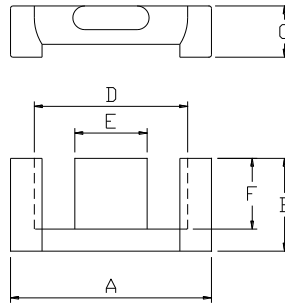


Fig. 1

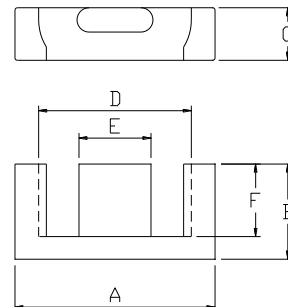


Fig. 2

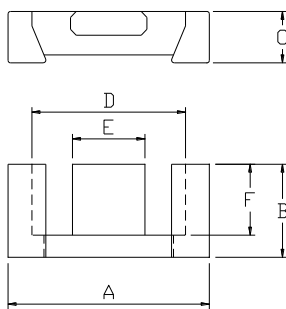


Fig. 3

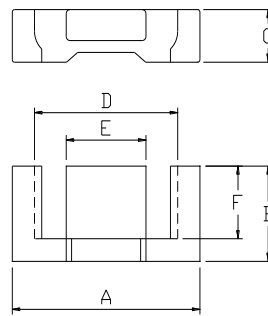


Fig. 4

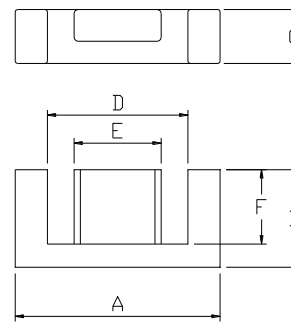


Fig. 5

## Product overview EPC type

Model	Dimension(mm)							Parameter				Fig
	A	B	C	D	E	F	G	$L_e$ (mm)	$A_e$ (mm <sup>2</sup> )	$V_e$ (mm <sup>3</sup> )	C	
EPC 1313	13.3 ±0.25	6.6 ±0.2	4.6 ±0.15	10.5 MIN	5.6 ±0.15	4.5 ±0.1	2.1 ±0.1	30.60	12.50	383	0.510	1
EPC 1716	16.8 ±0.3	7.7 ±0.1	5.75 ±0.2	11.35 ±0.2	7.7 ±0.15	5.3 +0.15 -0.1	2.85 ±0.15	33.70	9.90	670	0.750	2
EPC 1717	17.6 ±0.4	8.55 ±0.2	6.0 ±0.15	14.3 MIN	7.7 ±0.15	6.05 ±0.2	2.8 ±0.1	40.20	22.80	917	0.710	1
EPC 1920	19.6 ±0.5	9.75 ±0.2	6.0 ±0.2	16.4 ±0.5	8.2 ±0.2	7.25 ±0.2	2.4 ±0.15	43.30	23.00	996	0.670	3
EPC 2025	20.7 ±0.4	12.3 ±0.1	4.15 ±0.15	15.5 MIN	10.2 ±0.15	9.2 ±0.15	2.05 ±0.1	52.91	21.44	1135	0.509	1
EPC 3028	30.3 ±0.5	14.25 ±0.15	8.0 ±0.2	24.0 ±0.4	15.0 ±0.3	9.75 ±0.15	4.0 ±0.1	68.60	61.00	4185	1.118	1
EPC 3842	38.0 ±0.6	21.5 ±0.2	7.7 ±0.2	29.7 ±0.6	18.7 ±0.3	16.8 ±0.2	3.4 ±0.2	96.01	65.29	6269	0.855	1
EPC 4344C	43.4 ±0.6	22.1 ±0.2	7.0 ±0.3	34.4 Ref	22.5 ±0.3	17.0 ±0.2	2.7 ±0.15	100.10	64.13	6419	0.805	1
EPC 4344S	43.4 ±0.6	22.1 ±0.2	8.0 ±0.3	34.4 Ref	22.5 ±0.3	17.0 ±0.2	3.2 ±0.15	100.10	73.84	7391	0.927	1
EPC 5050	50.5 ±0.6	25.6 ±0.3	9.0 ±0.3	38 ±0.4	23.5 ±0.3	18.5 ±0.3	5.0 ±0.3	113.70	114.30	12996	1.264	5

Inductance, AL(nH)

Model	Materials							
	PM2A	PM5	PM7	PM9	PM11	PM12	PM15	HM3A
EPC 1313			1110 <sup>2)</sup>					
EPC 1716		1000 <sup>1)</sup>	1050 <sup>1)</sup>					
EPC 1717			1570 <sup>2)</sup>					
EPC 1920		980 <sup>1)</sup>	1030 <sup>1)</sup>		1200 <sup>1)</sup>			
EPC 2025						1130 <sup>1)</sup>		
EPC 3028			2000 <sup>3)</sup>					
EPC 3842						2210 <sup>2)</sup>		
EPC 4344C						1650 <sup>2)</sup>		
EPC 4344S						1930 <sup>2)</sup>	1640 <sup>2)</sup>	
EPC 5050			2400 <sup>1)</sup>					

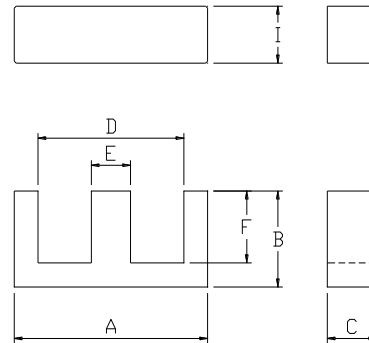
Note : 1) 10kHz, 0.1V

2) 1kHz, 1V

3) 1kHz, 0.1V

## Application of EI types

- Transformer for switching mode power supply
- Impedance matching transformer in telecom application
- For miniature transformer and SMD coil former



## Product overview EI type

Fig. 1

Model	Dimension(mm)							Parameter				Fig
	A	B	C	D	E	F	I	$L_e$ (mm)	$A_e$ (mm <sup>2</sup> )	$V_e$ (mm <sup>3</sup> )	C	
EI 1614	16.2 ±0.4	12.25 ±0.2	5.1 +0 -0.4	12.2 ±0.3	4.2 +0 -0.4	10.2 ±0.2	2.0 ±0.2	34.8	20.8	724	0.752	1
EI 1916	19.5 +0 -0.7	13.5 ±0.2	5.0 ±0.2	14.6 ±0.3	4.5 ±0.2	11.25 ±0.25	2.4 0 -0.3	39.9	23.3	930	0.736	1
EI 1916F	19.5 +0 -0.7	13.7 ±0.2	5.0 ±0.2	14.6 ±0.3	4.5 ±0.2	11.45 ±0.25	2.4 0 -0.3	40.3	23.4	943	0.729	1
EI 2218	22.0 ±0.4	14.6 +0.5 -0.1	6.0 +0 -0.5	16.0 ±0.4	6.0 +0 -0.5	10.8 +0.4 -0	4.0 ±0.2	42.0	39.0	1638	1.169	1
EI 2820	28.0 ±0.4	17.0 ±0.2	10.7 ±0.3	19.0 ±0.4	7.5 +0 -0.6	12.2 +0.5 -0	3.5 ±0.2	48.3	86.5	4178	2.252	1
EI 3026	30.25 ±0.45	21.3 ±0.3	10.65 ±0.35	20.35 ±0.35	10.65 ±0.35	16.3 ±0.3	5.5 ±0.2	58.5	109.9	6429	2.359	1
EI 3329D	33.0 ±0.5	23.6 ±0.2	12.7 ±0.3	24.0 ±0.5	10.0 +0 -0.6	19.0 +0.5 -0	5.0 ±0.2	66.9	120.6	8068	2.267	1
EI 4035D	40.2 ±0.7	27.25 ±0.25	11.65 ±0.35	29.0 ±0.5	11.65 ±0.35	20.25 ±0.25	7.5 ±0.3	77.5	142.9	11075	2.319	1
EI 5042	50.1 ±1.0	33.05 +0.5 -0	14.6 ±0.4	34.5 +1.4 -0	14.6 ±0.4	24.5 +1.0 -0	9.0 ±0.25	94.1	230.8	21718	3.082	1
EI 7056	70.0 ±1.5	45.5 ±0.5	19.5 ±0.5	50.0 ±0.5	19.5 ±0.5	35.5 ±0.5	10.5 ±0.5	133.0	389.8	51843	3.683	1

Inductance,AL(nH)

Model	Materials				
	HM1A	HM3A	PM5	PM7	PM9
EI 1614		2360 <sup>2)</sup>			
EI 1916	1720 <sup>2)</sup>	2630 <sup>2)</sup>		1440 <sup>3)</sup>	
EI 1916F					
EI 2218	2730 <sup>2)</sup>		1590 <sup>1)</sup>	1680 <sup>4)</sup>	
EI 2820			3340 <sup>1)</sup>	3540 <sup>1)</sup>	
EI 3026	5680 <sup>1)</sup>		3760 <sup>1)</sup>	4270 <sup>3)</sup>	
EI 3329D			3893 <sup>1)</sup>		
EI 4035D			3960 <sup>2)</sup>	4410 <sup>3)</sup>	4940 <sup>2)</sup>
EI 5042				6090 <sup>3)</sup>	
EI 7056			3040 <sup>1)</sup>		

Note:1) 10kHz, 0.1V

2) 1kHz, 0.1V

3) 1kHz, 1V

4) 10kHz, 1V



## Application of EQ types

- For compact transformet
- Low distortion broadband transmission at low signal modular
- DC-DC converter
- Our product range also low-profile EQ cores

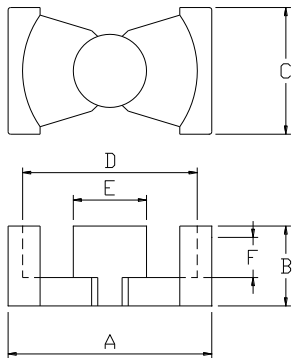


Fig. 1

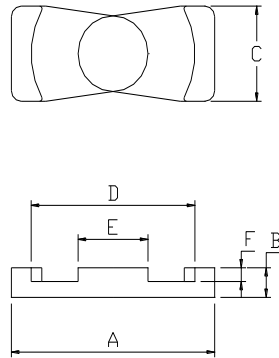


Fig. 2

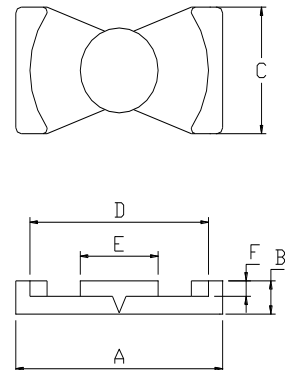


Fig. 3

## Product overview EQ type

Model	Dimension(mm)						Parameter				Fig
	A	B	C	D	E	F	$L_e$ (mm)	$A_e$ (mm <sup>2</sup> )	$V_e$ (mm <sup>3</sup> )	C	
EQ 2020	20.5 ±0.4	10.1 ±0.2	14.0 ±0.4	18.0 ±0.4	8.8 ±0.2	7.15 ±0.2	45.4	62.0	2800	1.720	1
EQ 2021	20.5 ±0.4	10.6 ±0.2	14.0 ±0.4	18.0 ±0.4	8.8 ±0.2	7.65 ±0.2	46.4	62.0	2880	1.680	1
EQ 2620	26.5 ±0.45	10.075 ±0.125	19.0 ±0.5	22.5 ±0.45	12.0 ±0.2	5.75 ±0.15	45.3	119.0	5490	3.220	1
EQ 2620B	26.5 ±0.45	10.475 ±0.125	19.0 ±0.5	22.5 ±0.45	12.0 ±0.2	6.15 ±0.15	46.9	119.0	5580	3.190	1
EQ 2625	26.6 ±0.3	12.5 0 -0.25	19.0 ±0.45	22.5 ±0.45	12.0 ±0.2	7.9 +0.3 0	55.5	118.0	6550	2.660	1
EQ 3211	32.0 ±0.5	5.6 ±0.15	22.0 ±0.5	27.5 ±0.5	13.45 ±0.25	2.6 ±0.15	36.3	145.8	5300	5.046	1
EQ 3221	32.0 ±0.5	10.575 ±0.2	22.0 ±0.5	27.5 ±0.5	13.45 ±0.25	6.05 ±0.2	56.7	170.0	9640	3.770	1
EQ 3231	32.0 ±0.5	15.475 ±0.2	22.0 ±0.5	27.5 ±0.5	13.45 ±0.25	10.95 ±0.2	74.6	161.0	11970	2.730	1
EQ 3511	35.0 ±0.6	5.6 ±0.15	18.6 ±0.35	29.8 ±0.6	12.9 ±0.25	2.7 ±0.15	38.8	109.0	4230	3.527	2
EQ 3514	35.0 ±0.6	7.3 ±0.15	18.6 ±0.35	29.8 ±0.6	12.9 ±0.25	4.4 ±0.15	45.5	111.3	5060	3.077	2
EQ 3535	35.1 ±0.6	17.5 0 -0.25	26.0 ±0.5	32.0 ±0.5	14.35 ±0.25	12.35 +0.3 0	87.9	196.0	17260	2.810	1

Model	Dimension(mm)						Parameter				Fig
	A	B	C	D	E	F	L <sub>e</sub> (mm)	A <sub>e</sub> (mm <sup>2</sup> )	V <sub>e</sub> (mm <sup>3</sup> )	C	
EQ 3811	38.0 ±0.65	5.6 ±0.15	21.32 ±0.4	32.8 ±0.65	14.3 ±0.25	2.6 ±0.15	41.0	140.5	5760	4.309	2
EQ 3813	38.0 ±0.65	6.5 ±0.15	21.32 ±0.4	32.8 ±0.65	14.3 ±0.25	3.5 ±0.15	44.4	137.0	6080	3.881	2
EQ 4040	40.5 ±0.9	20.0 +0 -0.25	28.0 ±0.6	37.0 ±0.6	14.9 ±0.3	14.6 +0.3 -0	101.9	201.0	20450	2.470	1
EQ 4511	45.0 ±0.8	5.35 ±0.1	22.66 ±0.4	39.8 ±0.8	14.3 ±0.25	2.55 ±0.1	47.0	136.4	6410	3.650	2
EQ 5016	50.0 ±0.7	8.0 ±0.2	32.0 ±0.6	44.0 ±0.7	20.0 ±0.35	4.2 ±0.2	56.6	280.0	15840	6.222	1
EQ 5031	50.0 ±0.7	15.5 ±0.2	32.0 ±0.6	44.0 ±0.7	20.0 ±0.35	8.6 ±0.2	77.6	361.0	28010	5.848	1
EQ 5050	50.0 ±0.7	24.975 ±0.2	32.0 ±0.6	44.0 ±0.7	20.0 ±0.35	18.05 ±0.2	113.0	328.0	37100	2.650	1
EQ 6145	61.0 ±0.7	22.5 ±0.2	35.0 ±0.8	53.0 ±0.7	25.0 ±0.6	14.5 ±0.2	110.0	479.5	52830	5.474	3
EQ 6172	61.0 +1.2 -0.9	36.0 ±0.3	35.0 ±0.8	53.0 +1.2 -0.9	25.0 ±0.6	28.0 ±0.3	163.6	467.5	76470	3.593	3
EQ 7070	70.0 +1.0 -0.7	35.0 ±0.3	40.0 ±0.8	60.0 +1.0 -0.7	30.0 ±0.6	27.0 ±0.3	165.0	626.5	103390	4.771	3
EQ 7264	72.0 +1.3 -0.7	32.0 ±0.4	53.0 ±0.6	65.0 +1.3 -0.7	31.0 ±0.4	21.0 +0.4 -0.2	147.9	822.3	121650	6.988	2
EQ 9874	98.0 ±2.0	37.0 ±0.65	68.0 ±1.4	83.5 (MIN)	41.0 ±0.8	25.0 ±0.65	183.7	1431.7	263040	9.795	3
EQ 107	107.0 ±2.0	43.5 ±0.7	70.0 ±1.5	95.7 ±2.0	41.0 ±1.0	28.0 ±0.7	206.0	1503.8	309860	9.174	1

Inductance,AL(nH)

Model	Materials						
	PM5	PM7	PM9	PM11	PM12	PM15	PM16
EQ 2020	2550 <sup>1)</sup>	2700 <sup>1)</sup>					
EQ 2021	2350 <sup>1)</sup>	2640 <sup>1)</sup>					
EQ 2620	4770 <sup>1)</sup>	5050 <sup>1)</sup>	5730 <sup>1)</sup>	5050 <sup>1)</sup>			
EQ 2620B	4780 <sup>1)</sup>	5050 <sup>1)</sup>					
EQ 2625	4190 <sup>1)</sup>	4460 <sup>1)</sup>	5110 <sup>1)</sup>	4460 <sup>1)</sup>			
EQ 3211					8600 <sup>1)</sup>		
EQ 3221		6360 <sup>1)</sup>	7000 <sup>1)</sup>	6360 <sup>1)</sup>			
EQ 3231	4640 <sup>1)</sup>	4960 <sup>1)</sup>	5840 <sup>1)</sup>	4960 <sup>1)</sup>			
EQ 3511					5730 <sup>1)</sup>		
EQ 3514						4940 <sup>1)</sup>	
EQ 3535		4860 <sup>1)</sup>	5680 <sup>2)</sup>	4860 <sup>1)</sup>			
EQ 3811					8020 <sup>1)</sup>		
EQ 3813					7690 <sup>1)</sup>		
EQ 4040	3940 <sup>1)</sup>	4300 <sup>1)</sup>	5040 <sup>2)</sup>				
EQ 4511						6000 <sup>1)</sup>	
EQ 5016					11800 <sup>3)</sup>		
EQ 5031					10200 <sup>3)</sup>		
EQ 5050		7220 <sup>1)</sup>		7300 <sup>2)</sup>			8284 <sup>4)</sup>
EQ 6145					10069 <sup>5)</sup>		
EQ 6172					6875 <sup>5)</sup>		
EQ 7070					9000 <sup>6)</sup>		
EQ 7264					14843 <sup>5)</sup>		
EQ 9874					20000 <sup>6)</sup>		
EQ 107				15500 <sup>2)</sup>			

Note:1) 10kHz, 0.1V

2) 1kHz, 1V

3) 1kHz, 0.1V

4) 150kHz, 1V

5) 94kHz, 1V

6) 100kHz, 1V

## Application of EP types

- Low magnetic leakage
- For power application
- Excellent properties for broadband transformer
- For transformers featuring high inductance and low height

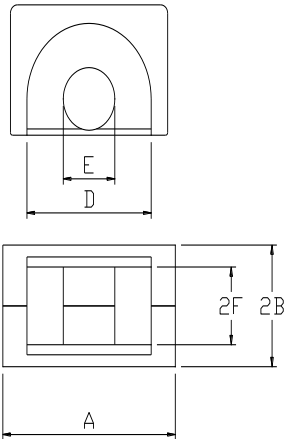


Fig. 1

## Product overview EP type

Model	Dimension(mm)							Parameter				Fig
	A	B	C	D	D1	E	F	$L_e$ (mm)	$A_e$ (mm <sup>2</sup> )	$V_e$ (mm <sup>3</sup> )	C	
EP 7	9.4	3.75	6.5	7.2	-	3.4	2.5	15.5	10.7	165	0.870	1
	0	0	0	+0.4	-	0	+0.2					
	-0.4	-0.1	-0.3	0	-	-0.2	0					
EP 10	11.5	5.1	7.65	9.4	-	3.3	3.7	19.3	11.3	215	0.739	1
	±0.3	±0.1	±0.2	±0.2	-	±0.15	±0.1					
	-	-	-	-	-	-	-					
EP 13	12.8	6.5	9.0	9.7	-	4.5	4.5	24.2	19.5	470	1.010	1
	0	0	0	+0.6	-	0	+0.2					
	-0.6	-0.15	-0.4	0	-	-0.3	0					

Inductance, AL(nH)

Model	Materials			
	PM7	BM30	HM3A	HM5A
EP 7	1100 <sup>3)</sup>	1360 <sup>1)</sup>		1910 <sup>1)</sup>
EP 10	1100 <sup>3)</sup>	1300 <sup>1)</sup>		
EP 13		1970 <sup>1)</sup>		3100 <sup>3)</sup>

Note : 1) 10kHz, 0.1V

2) 1kHz, 1V

3) 1kHz, 0.1V