

# PLANAR CORES

## Cores

EL11X4 to EL25X8.6

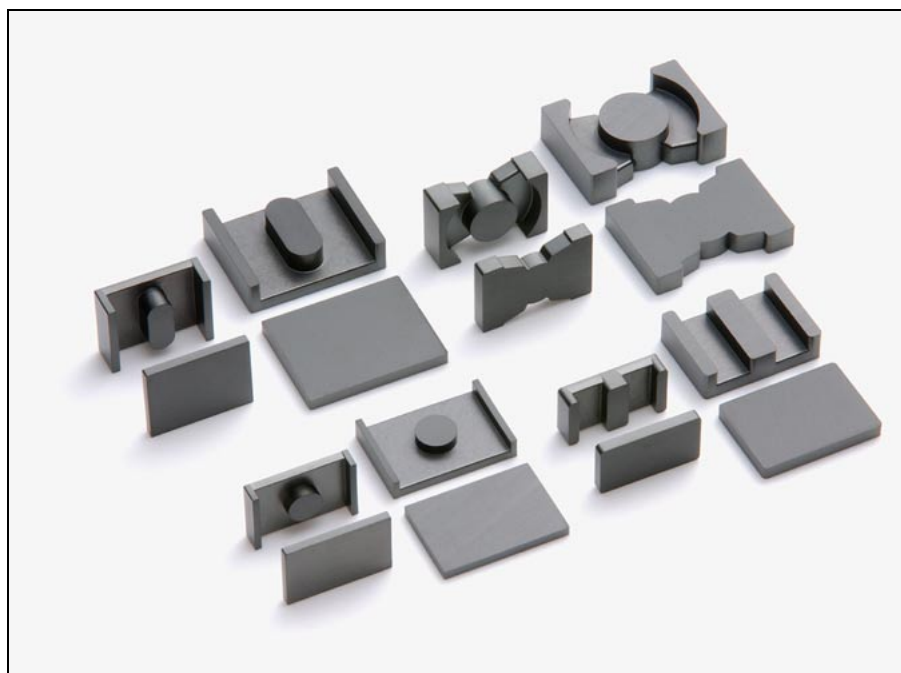
ELT11X3 to ELT25X8.6

PQI16/7.8 to PQI26/11.5

EIR14/4.5/9 to EIR22/5.5/15

ER14/4.5/9 to ER25/5.5/18

EI14/5/5 to EI22/8/16



## Ordering Code System

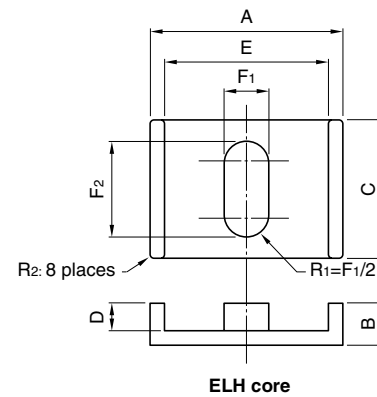
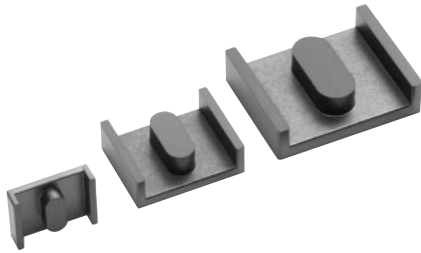
### Cores

PC95 EL 11X4 – A125

Material \_\_\_\_\_ AL-value(Z: without air gap)

Size of EL core \_\_\_\_\_

## EL CORES



Part No. (ELH+ELH)	Dimensions in							
	mm		inches					
	A	B	C	D	E	F1	F2	R2
PC95EL11X4-Z	11.00±0.20	2.01±0.10	8.80±0.20	1.00±0.10	9.17±0.20	2.78±0.10	6.40±0.15	0.30
PC90EL11X4-Z	.433±.008	.079±.004	.346±.008	.039±.004	.361±.008	.109±.004	.252±.006	.012
PC95EL13X4.4-Z	13.00±0.25	2.19±0.10	10.40±0.20	1.00±0.10	10.83±0.20	3.29±0.10	7.56±0.15	0.30
PC90EL13X4.4-Z	.512±.010	.086±.004	.409±.008	.039±.004	.426±.008	.130±.004	.298±.006	.012
PC95EL15.5X5.8-Z	15.50±0.30	2.92±0.10	12.40±0.25	1.50±0.10	12.92±0.25	3.92±0.10	9.01±0.20	0.30
PC90EL15.5X5.8-Z	.610±.012	.115±.004	.488±.010	.059±.004	.509±.010	.154±.004	.355±.008	.012
PC95EL18X7.3-Z	18.00±0.30	3.65±0.10	14.40±0.25	2.00±0.10	15.00±0.30	4.55±0.10	10.47±0.20	0.30
PC90EL18X7.3-Z	.709±.012	.144±.004	.567±.010	.079±.004	.591±.012	.179±.004	.412±.008	.012
PC95EL20X7.7-Z	20.00±0.35	3.83±0.10	16.00±0.30	2.00±0.10	16.67±0.30	5.06±0.15	11.63±0.20	0.50
PC90EL20X7.7-Z	.787±.014	.151±.004	.630±.012	.079±.004	.656±.012	.199±.006	.458±.008	.020
PC95EL22X8-Z	22.00±0.40	4.02±0.10	17.60±0.30	2.00±0.10	18.33±0.35	5.56±0.15	12.79±0.25	0.50
PC90EL22X8-Z	.866±.016	.158±.004	.693±.012	.079±.004	.722±.014	.219±.006	.504±.010	.020
PC95EL25X8.6-Z	25.00±0.45	4.29±0.10	20.00±0.35	2.00±0.10	20.83±0.35	6.32±0.15	14.54±0.25	0.50
PC90EL25X8.6-Z	.984±.018	.169±.004	.787±.014	.079±.004	.820±.014	.249±.006	.572±.010	.020

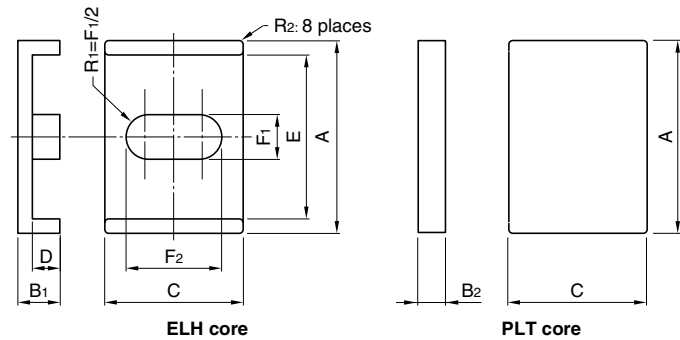
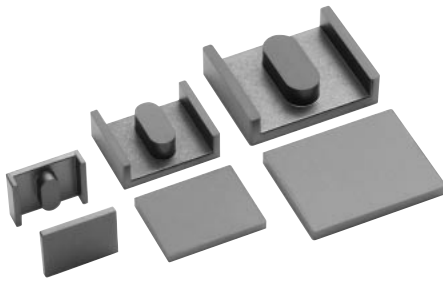
Part No. (ELH+ELH)	Effective parameter							Electrical characteristics	
	C <sub>1</sub>	ℓ <sub>e</sub>	A <sub>e</sub>	V <sub>e</sub>	A <sub>min</sub>	A <sub>cw</sub>	W <sub>t</sub>	AL-value (nH/N <sup>2</sup> )*	
	(mm <sup>-1</sup> )	(mm)	(mm <sup>2</sup> )	(mm <sup>3</sup> )	(mm <sup>2</sup> )	(mm <sup>2</sup> )	(g)	Without air gap	With air gap
PC95EL11X4-Z	0.826	13.7	16.5	226	15.9	6.39	1.3	2400±25%	50±3%
PC90EL11X4-Z								2040±25%	80±5%
PC95EL13X4.4-Z	0.667	15.4	23.1	357	22.4	7.54	2.0	3160±25%	63±3%
PC90EL13X4.4-Z								2670±25%	100±5%
PC95EL15.5X5.8-Z	0.597	19.6	32.9	646	31.9	13.5	3.5	3680±25%	100±3%
PC90EL15.5X5.8-Z								3080±25%	160±5%
PC95EL18X7.3-Z	0.538	23.8	44.3	1050	43.0	20.9	6.0	4760±25%	80±3%
PC90EL18X7.3-Z								3800±25%	125±3%
PC95EL20X7.7-Z	0.469	25.6	54.6	1400	52.9	23.2	7.8	5630±25%	200±5%
PC90EL20X7.7-Z								4300±25%	1560±15%**
PC95EL22X8-Z	0.413	27.3	66.2	1810	64.2	25.5	10	6540±25%	100±3%
PC90EL22X8-Z								5280±25%	160±3%
PC95EL25X8.6-Z	0.350	30.0	85.6	2570	83.0	29.0	15	7540±25%	250±5%
PC90EL25X8.6-Z								6110±25%	1850±15%**
								2350±15%**	

\* AL-value: 1kHz, 0.5mA, 100Ts

\*\* Only PC95 material

• All specifications are subject to change without notice.

# ELT CORES



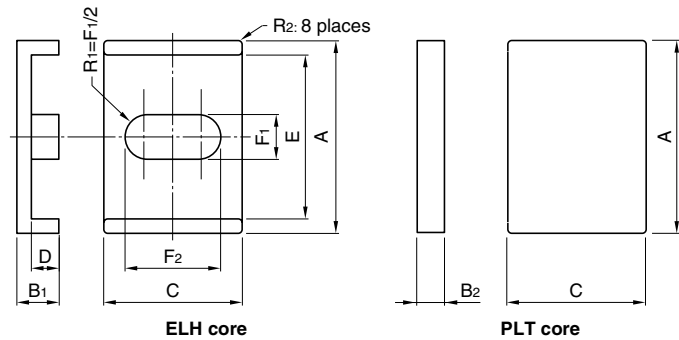
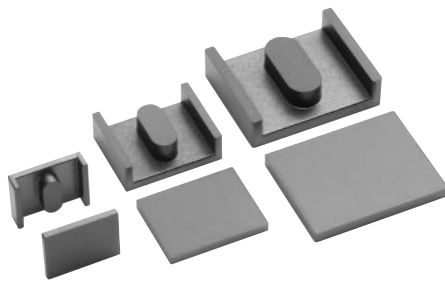
Part No. (ELH+PLT)	Dimensions in								
	mm		inches						
	A	B <sub>1</sub>	B <sub>2</sub>	C	D	E	F <sub>1</sub>	F <sub>2</sub>	R <sub>2</sub>
PC95ELT11X3-Z	11.00±0.20	2.01±0.10	1.01±0.05	8.80±0.20	1.00±0.10	9.17±0.20	2.78±0.10	6.40±0.15	0.30
PC90ELT11X3-Z	.433±.008	.079±.004	.040±.002	.346±.008	.039±.004	.361±.008	.109±.004	.252±.006	.012
PC95ELT11X4-Z	11.00±0.20	3.01±0.10	1.01±0.05	8.80±0.20	2.00±0.10	9.17±0.20	2.78±0.10	6.40±0.15	0.30
PC90ELT11X4-Z	.433±.008	.119±.004	.040±.002	.346±.008	.079±.004	.361±.008	.109±.004	.252±.006	.012
PC95ELT13X3.4-Z	13.00±0.25	2.19±0.10	1.19±0.05	10.40±0.20	1.00±0.10	10.83±0.20	3.29±0.10	7.56±0.15	0.30
PC90ELT13X3.4-Z	.512±.010	.086±.004	.047±.002	.409±.008	.039±.004	.426±.008	.130±.004	.298±.006	.012
PC95ELT13X4.4-Z	13.00±0.25	3.19±0.10	1.19±0.05	10.40±0.20	2.00±0.10	10.83±0.20	3.29±0.10	7.56±0.15	0.30
PC90ELT13X4.4-Z	.512±.010	.126±.004	.047±.002	.409±.008	.079±.004	.426±.008	.130±.004	.298±.006	.012
PC95ELT15.5X4.3-Z	15.50±0.30	2.92±0.10	1.42±0.10	12.40±0.25	1.50±0.10	12.92±0.25	3.92±0.10	9.01±0.20	0.30
PC90ELT15.5X4.3-Z	.610±.012	.115±.004	.056±.004	.488±.010	.059±.004	.509±.010	.154±.004	.355±.008	.012
PC95ELT15.5X5.8-Z	15.50±0.30	4.42±0.10	1.42±0.10	12.40±0.25	3.00±0.10	12.92±0.25	3.92±0.10	9.01±0.20	0.30
PC90ELT15.5X5.8-Z	.610±.012	.174±.004	.056±.004	.488±.010	.118±.004	.509±.010	.154±.004	.355±.008	.012
PC95ELT18X5.3-Z	18.00±0.30	3.65±0.10	1.65±0.10	14.40±0.25	2.00±0.10	15.00±0.30	4.55±0.10	10.47±0.20	0.30
PC90ELT18X5.3-Z	.709±.012	.144±.004	.065±.004	.567±.010	.079±.004	.591±.012	.179±.004	.412±.008	.012

Part No. (ELH+PLT)	Effective parameter							Electrical characteristics	
	C <sub>1</sub>	∅e	A <sub>e</sub>	V <sub>e</sub>	A <sub>min.</sub>	A <sub>cw</sub>	Wt	AL-value (nH/N <sup>2</sup> ) <sup>*</sup>	
	(mm <sup>-1</sup> )	(mm)	(mm <sup>2</sup> )	(mm <sup>3</sup> )	(mm <sup>2</sup> )	(mm <sup>2</sup> )	(g)	Without air gap	With air gap
PC95ELT11X3-Z	0.702	11.7	16.6	194	15.9	3.20	1.1	2590±25%	50±3%
PC90ELT11X3-Z								2100±25%	80±5%
PC95ELT11X4-Z	0.826	13.7	16.5	226	15.9	6.39	1.3	2400±25%	50±3%
PC90ELT11X4-Z								2040±25%	80±5%
PC95ELT13X3.4-Z	0.578	13.4	23.2	312	22.4	3.77	1.8	3390±25%	63±3%
PC90ELT13X3.4-Z								2800±25%	100±5%
PC95ELT13X4.4-Z	0.667	15.4	23.1	357	22.4	7.54	2.0	3160±25%	63±3%
PC90ELT13X4.4-Z								2670±25%	100±5%
PC95ELT15.5X4.3-Z	0.503	16.6	33.1	550	31.9	6.75	3.0	4340±25%	63±3%
PC90ELT15.5X4.3-Z								3450±25%	100±3%
PC95ELT15.5X5.8-Z	0.597	19.6	32.9	646	31.9	13.5	3.5	3680±25%	63±3%
PC90ELT15.5X5.8-Z								3080±25%	100±5%
PC95ELT18X5.3-Z	0.446	19.8	44.5	882	43.0	10.5	5.0	5330±25%	80±3%
PC90ELT18X5.3-Z								4200±25%	125±3%

\* AL-value: 1kHz, 0.5mA, 100Ts

\*\* Only PC95 material

# ELT CORES



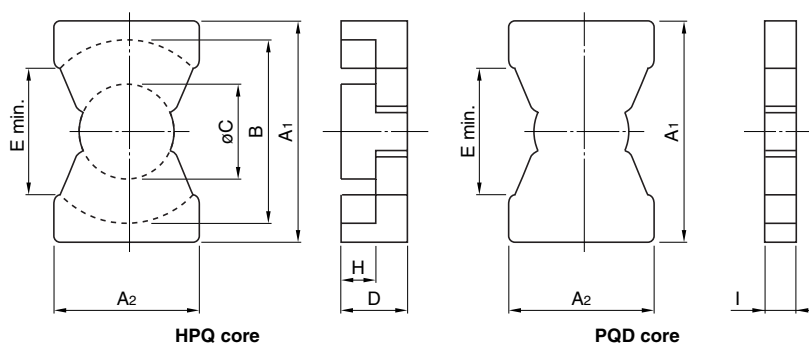
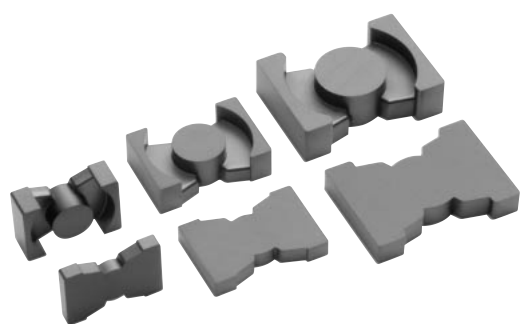
Part No. (ELH+PLT)	Dimensions in								
	mm		inches						
	A	B <sub>1</sub>	B <sub>2</sub>	C	D	E	F <sub>1</sub>	F <sub>2</sub>	R <sub>2</sub>
PC95ELT18X7.3-Z	18.00±0.30	5.65±0.10	1.65±0.10	14.40±0.25	4.00±0.15	15.00±0.30	4.55±0.10	10.47±0.20	0.30
PC90ELT18X7.3-Z	.709±.012	.222±.004	.065±.004	.567±.010	.157±.006	.591±.012	.179±.004	.412±.008	.012
PC95ELT20X5.7-Z	20.00±0.35	3.83±0.10	1.83±0.10	16.00±0.30	2.00±0.10	16.67±0.30	5.06±0.15	11.63±0.20	0.50
PC90ELT20X5.7-Z	.787±.014	.151±.004	.072±.004	.630±.012	.079±.004	.656±.012	.199±.006	.458±.008	.020
PC95ELT20X7.7-Z	20.00±0.35	5.83±0.15	1.83±0.10	16.00±0.30	4.00±0.15	16.67±0.30	5.06±0.15	11.63±0.20	0.50
PC90ELT20X7.7-Z	.787±.014	.230±.006	.072±.004	.630±.012	.157±.006	.656±.012	.199±.006	.458±.008	.020
PC95ELT22X6-Z	22.00±0.40	4.02±0.10	2.02±0.10	17.60±0.30	2.00±0.10	18.33±0.35	5.56±0.15	12.79±0.25	0.50
PC90ELT22X6-Z	.866±.016	.158±.004	.080±.004	.693±.012	.079±.004	.722±.014	.219±.006	.504±.010	.020
PC95ELT22X8-Z	22.00±0.40	6.02±0.15	2.02±0.10	17.60±0.30	4.00±0.15	18.33±0.35	5.56±0.15	12.79±0.25	0.50
PC90ELT22X8-Z	.866±.016	.237±.006	.080±.004	.693±.012	.157±.006	.722±.014	.219±.006	.504±.010	.020
PC95ELT25X6.6-Z	25.00±0.45	4.29±0.10	2.29±0.10	20.00±0.35	2.00±0.10	20.83±0.35	6.32±0.15	14.54±0.25	0.50
PC90ELT25X6.6-Z	.984±.018	.169±.004	.090±.004	.787±.014	.079±.004	.820±.014	.249±.006	.572±.010	.020
PC95ELT25X8.6-Z	25.00±0.45	6.29±0.15	2.29±0.10	20.00±0.35	4.00±0.15	20.83±0.35	6.32±0.15	14.54±0.25	0.50
PC90ELT25X8.6-Z	.984±.018	.248±.006	.090±.004	.787±.014	.157±.006	.820±.014	.249±.006	.572±.010	.020

Part No. (ELH+PLT)	Effective parameter							Electrical characteristics	
	C <sub>1</sub>	∅e	A <sub>e</sub>	V <sub>e</sub>	A <sub>min.</sub>	A <sub>cw</sub>	Wt	AL-value (nH/N <sup>2</sup> ) <sup>*</sup>	
	(mm <sup>-1</sup> )	(mm)	(mm <sup>2</sup> )	(mm <sup>3</sup> )	(mm <sup>2</sup> )	(mm <sup>2</sup> )	(g)	Without air gap	With air gap
PC95ELT18X7.3-Z	0.538	23.8	44.3	1050	43.0	20.9	6.0	4760±25%	80±3%
PC90ELT18X7.3-Z								3800±25%	125±3%
PC95ELT20X5.7-Z	0.393	21.6	54.9	1180	52.9	11.6	6.7	6270±25%	80±3%
PC90ELT20X5.7-Z								5000±25%	125±3%
PC95ELT20X7.7-Z	0.469	25.6	54.6	1400	52.9	23.2	7.8	5630±25%	80±3%
PC90ELT20X7.7-Z								4340±25%	125±3%
PC95ELT22X6-Z	0.351	23.4	66.6	1560	64.2	12.8	9.0	7250±25%	100±3%
PC90ELT22X6-Z								5750±25%	160±3%
PC95ELT22X8-Z	0.413	27.3	66.2	1810	64.2	25.5	10	6540±25%	100±3%
PC90ELT22X8-Z								5280±25%	160±3%
PC95ELT25X6.6-Z	0.302	26.0	86.0	2230	83.0	14.5	13	8600±25%	100±3%
PC50ELT25X6.6-Z								7000±25%	160±3%
PC95ELT25X8.6-Z	0.350	30.0	85.6	2570	83.0	29.0	15	7540±25%	100±3%
PC50ELT25X8.6-Z								6110±25%	160±3%

\* AL-value: 1kHz, 0.5mA, 100Ts

\*\* Only PC95 material

# PQI CORES



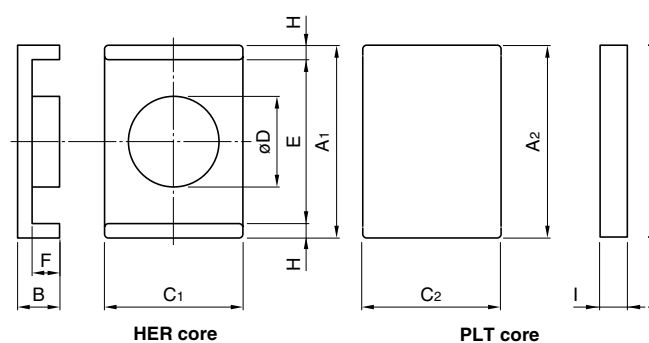
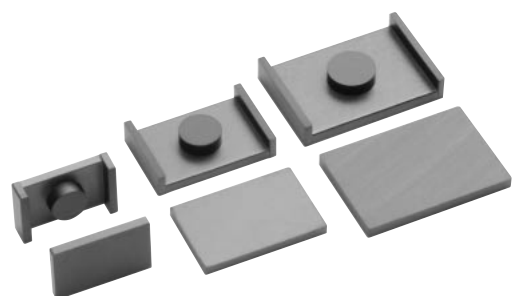
Part No. (HPQ+PQD)	Dimensions in		mm					
	A1	A2	B	øC	D	E min.	H	I
PC95PQI16/7.8Z-12	16.40±0.30	11.20±0.30	14.40±0.30	7.00±0.20	5.40±0.10	9.60	3.05±0.15	2.35±0.10
PC90PQI16/7.8Z-12	.646±.012	.441±.012	.567±.012	.276±.008	.213±.004	.378	.120±.006	.093±.004
PC95PQI20/9Z-12	20.50±0.40	14.00±0.40	18.00±0.40	8.80±0.20	6.00±0.10	12.00	3.05±0.15	2.95±0.10
PC90PQI20/9Z-12	.807±.016	.551±.016	.709±.016	.346±.008	.236±.004	.472	.120±.006	.116±.004
PC95PQI26/12Z-12	26.50±0.45	19.00±0.45	22.50±0.45	12.00±0.20	7.30±0.10	15.50	3.10±0.15	4.20±0.10
PC90PQI26/12Z-12	1.043±.018	.748±.018	.886±.018	.472±.008	.287±.004	.610	.122±.006	.165±.004

Part No. (HPQ+PQD)	Effective parameter							Electrical characteristics	
	C <sub>1</sub> (mm <sup>-1</sup> )	∅e (mm)	A <sub>e</sub> (mm <sup>2</sup> )	V <sub>e</sub> (mm <sup>3</sup> )	A <sub>min.</sub> (mm <sup>2</sup> )	A <sub>cw</sub> (mm <sup>2</sup> )	Wt (g)	AL-value (nH/N <sup>2</sup> )*	
								Without air gap	With air gap
PC95PQI16/7.8Z-12	0.467	19.5	41.8	815	37.6	11.3	5.0	4910±25%	63±3%
PC90PQI16/7.8Z-12								4100±25%	100±5%
PC95PQI20/9Z-12	0.346	22.9	66.0	1510	59.3	14.0	9.0	7070±25%	100±3%
PC90PQI20/9Z-12								5600±25%	160±5%
PC95PQI26/12Z-12	0.224	27.7	123	3410	109	16.3	21	11950±25%	250±7%
PC90PQI26/12Z-12								9700±25%	1830±15%**

\* AL-value: 1kHz, 0.5mA, 100Ts

\*\* Only PC95 material

## EIR CORES



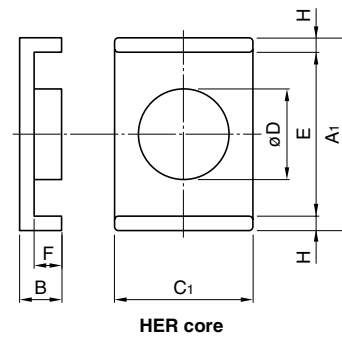
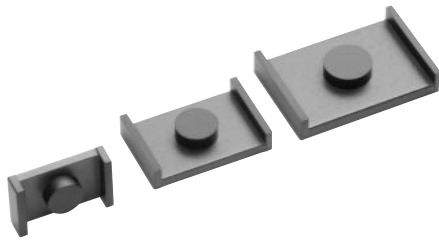
Part No. (HER+PLT)	Dimensions in									
	mm		inches							
	A <sub>1</sub>	B	C <sub>1</sub>	øD	E	F	H	A <sub>2</sub>	C <sub>2</sub>	I
PC95EIR14/4.5/9-Z	13.85±0.25	3.20±0.10	9.00±0.20	5.20±0.10	11.35±0.15	1.90±0.10	1.25	14.00±0.20	9.20±0.20	1.30±0.10
PC90EIR14/4.5/9-Z	.545±.010	.126±.004	.354±.008	.205±.004	.447±.006	.075±.004	.049	.551±.008	.362±.008	.051±.004
PC95EIR18/5/12-Z	18.15±0.30	3.50±0.10	12.00±0.20	6.00±0.10	15.75±0.25	2.00±0.10	1.20	18.20±0.25	12.20±0.20	1.50±0.10
PC90EIR18/5/12-Z	.715±.012	.138±.004	.472±.008	.236±.004	.620±.010	.079±.004	.047	.717±.010	.480±.008	.059±.004
PC95EIR22/5.5/15-Z	22.10±0.35	3.75±0.10	15.25±0.25	6.80±0.10	19.70±0.30	2.00±0.10	1.20	22.20±0.30	15.50±0.20	1.75±0.10
PC90EIR22/5.5/15-Z	.870±.014	.148±.004	.600±.010	.268±.004	.776±.012	.079±.004	.047	.874±.012	.610±.008	.069±.004

Part No. (HER+PLT)	Effective parameter							Electrical characteristics	
	C <sub>1</sub>	∅e	A <sub>e</sub>	V <sub>e</sub>	A <sub>min.</sub>	A <sub>cw</sub>	Wt	AL-value (nH/N <sup>2</sup> )	
	(mm <sup>-1</sup> )	(mm)	(mm <sup>2</sup> )	(mm <sup>3</sup> )	(mm <sup>2</sup> )	(mm <sup>2</sup> )	(g)	Without air gap	With air gap
PC95EIR14/4.5/9-Z	0.679	15.4	22.7	349	21.2	5.84	2.0	3020±25%	63±3%
PC90EIR14/4.5/9-Z								2400±25%	100±5%
PC95EIR18/5/12-Z	0.601	19.7	32.8	645	28.3	9.75	3.8	3690±25%	80±3%
PC90EIR18/5/12-Z								2900±25%	125±5%
PC95EIR22/5.5/15-Z	0.505	23.2	46.1	1070	36.3	12.9	6.5	4550±25%	200±7%
PC90EIR22/5.5/15-Z								3400±25%	890±15%**

\* AL-value: 1kHz, 0.5mA, 100Ts

\*\* Only PC95 material

## ER CORES



HER core

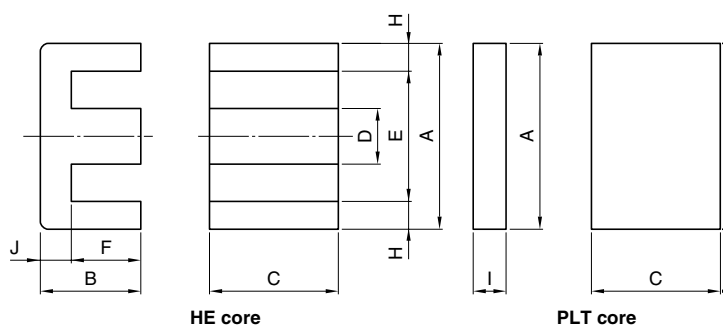
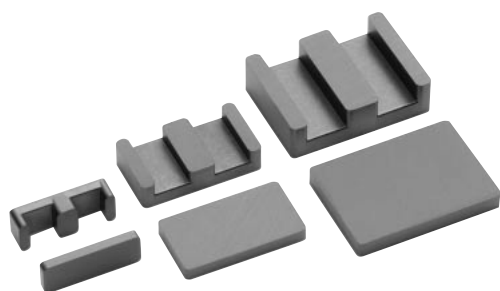
Part No. (HER+HER)	Dimensions in		C <sub>1</sub>	øD	E	F	H
	mm	inches					
PC95ER14/4.5/9-Z	13.85±0.25	2.25±0.10	9.00±0.20	5.20±0.10	11.35±0.15	0.95±0.10	1.25
PC90ER14/4.5/9-Z	.545±.010	.089±.004	.354±.008	.205±.004	.447±.006	.037±.004	.049
PC95ER18/5/12-Z	18.15±0.30	2.50±0.10	12.00±0.20	6.00±0.10	15.75±0.25	1.00±0.10	1.20
PC90ER18/5/12-Z	.715±.012	.098±.004	.472±.008	.236±.004	.620±.010	.039±.004	.047
PC95ER22/5.5/15-Z	22.10±0.35	2.75±0.10	15.25±0.25	6.80±0.10	19.70±0.30	1.00±0.10	1.20
PC90ER22/5.5/15-Z	.870±.014	.108±.004	.600±.010	.268±.004	.776±.012	.039±.004	.047
PC95ER25/5.5/18-Z	25.30±0.40	2.75±0.10	18.00±0.40	7.00±0.15	22.90±0.40	1.00±0.10	1.20
PC90ER25/5.5/18-Z	.996±.016	.108±.004	.709±.016	.276±.006	.902±.016	.039±.004	.047

Part No. (HER+HER)	Effective parameter							Electrical characteristics	
	C <sub>1</sub> (mm <sup>-1</sup> )	ℓ <sub>e</sub> (mm)	A <sub>e</sub> (mm <sup>2</sup> )	V <sub>e</sub> (mm <sup>3</sup> )	A <sub>min</sub> (mm <sup>2</sup> )	A <sub>cw</sub> (mm <sup>2</sup> )	Wt (g)	A <sub>L</sub> -value (nH/N <sup>2</sup> ) <sup>*</sup> Without air gap	With air gap
PC95ER14/4.5/9-Z	0.679	15.4	22.7	349	21.2	5.84	2.0	3020±25%	63±3%
PC90ER14/4.5/9-Z								2400±25%	100±5%
PC95ER18/5/12-Z	0.601	19.7	32.8	645	28.3	9.75	3.8	3690±25%	80±3%
PC90ER18/5/12-Z								2900±25%	125±5%
PC95ER22/5.5/15-Z	0.505	23.2	46.1	1070	36.3	12.9	6.5	4550±25%	80±3%
PC90ER22/5.5/15-Z								3400±25%	125±5%
PC95ER25/5.5/18-Z	0.486	26.1	53.7	1400	38.5	15.9	8.5	4640±25%	80±3%
PC90ER25/5.5/18-Z								3600±25%	125±3%
									200±7%
									1130±15%**
									1140±15%**

\* A<sub>L</sub>-value: 1kHz, 0.5mA, 100Ts

\*\* Only PC95 material

# EI CORES



Part No. (HE+PLT)	Dimensions in		C	D	E	F	H	I	J
	mm inches								
	A	B							
PC95EI14/5/5-Z	14.00±0.30	3.50±0.10	5.00±0.10	3.00±0.10	11.00±0.25	2.00±0.10	1.50	1.50±0.05	1.50
PC90EI14/5/5-Z	.551±.012	.138±.004	.197±.004	.118±.004	.433±.010	.079±.004	.059	.059±.002	.059
PC95EI18/6/10-Z	18.00±0.35	4.00±0.10	10.00±0.20	4.00±0.10	14.00±0.30	2.00±0.10	2.00	2.00±0.05	2.00
PC90EI18/6/10-Z	.709±.014	.157±.004	.394±.008	.157±.004	.551±.012	.079±.004	.079	.079±.002	.079
PC95EI22/8/16-Z	21.80±0.40	5.70±0.10	15.80±0.30	5.00±0.10	16.80±0.40	3.20±0.10	2.50	2.50±0.05	2.50
PC90EI22/8/16-Z	.858±.016	.224±.004	.622±.012	.197±.004	.661±.016	.126±.004	.098	.098±.002	.098

Part No. (HE+PLT)	Effective parameter							Electrical characteristics	
	C <sub>1</sub>	ℓ <sub>e</sub>	A <sub>e</sub>	V <sub>e</sub>	A <sub>min</sub>	A <sub>cw</sub>	Wt	AL-value (nH/N <sup>2</sup> )*	
	(mm <sup>-1</sup> )	(mm)	(mm <sup>2</sup> )	(mm <sup>3</sup> )	(mm <sup>2</sup> )	(mm <sup>2</sup> )	(g)	Without air gap	With air gap
PC95EI14/5/5-Z	1.11	16.7	15.0	251	15.0	8.00	1.3	1970±25%	63±3%
PC90EI14/5/5-Z								1500±25%	100±5%
PC95EI18/6/10-Z	0.507	20.3	40.0	811	40.0	10.0	4.4	4720±25%	100±3%
PC90EI18/6/10-Z								3800±25%	160±3%
PC95EI22/8/16-Z	0.330	26.1	79.0	2060	79.0	18.9	11	8010±25%	160±3%
PC90EI22/8/16-Z								6400±25%	250±3%
									2300±15%**

\* AL-value: 1kHz, 0.5mA, 100Ts

\*\* Only PC95 material