



## E- Planar Cores

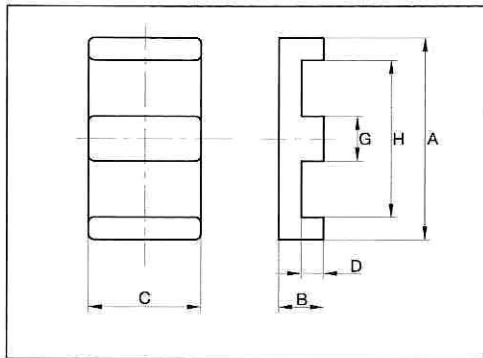


Figure 1 – E- Planar Cores without notch

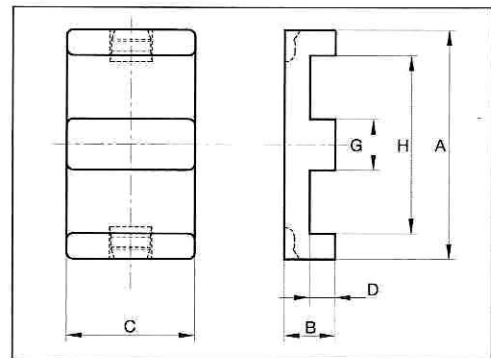


Figure 2 – E- Planar Cores with notches

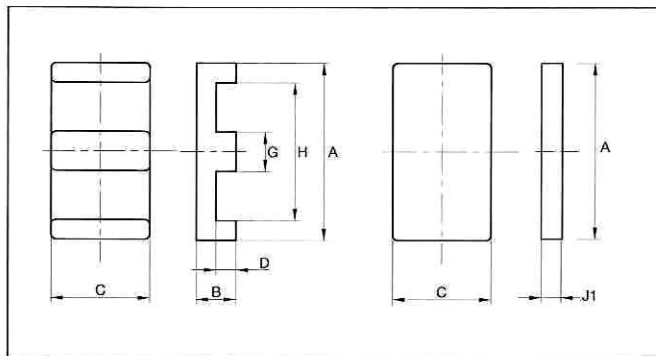


Figure 3 – E- and IE Planar Cores without notch

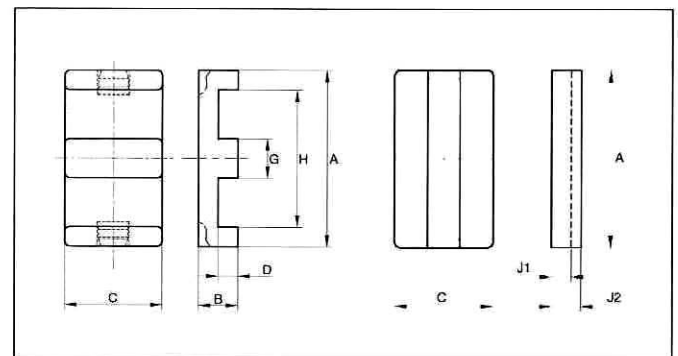


Figure 4 – E- and IE Planar Cores with notches

### PLANAR CLIPS

| P/N               | P/N Clips       | A<br>mm (inches) | B<br>mm (inches) | D<br>mm (inches) |
|-------------------|-----------------|------------------|------------------|------------------|
| E-1405B + E-1405B | --JP1405BEE---- | 14.6<br>(0.575)  | 8.0<br>(0.315)   | 5.75<br>(0.226)  |
| E-1810B + E-1810B | --JP1801BEE---- | 18.4<br>(0.724)  | 9.0<br>(0.354)   | 9.55<br>(0.376)  |
| E-2216B + E-2216B | --JP2216BEE---- | 22.1<br>(0.870)  | 11.7<br>(0.460)  | 13.25<br>(0.522) |
| E-1405B + IE1405B | --JP1405BEI---- | 14.6<br>(0.575)  | 5.95<br>(0.234)  | 5.75<br>(0.226)  |
| E-1810B + IE1810B | --JP1810BCI---- | 18.4<br>(0.724)  | 6.95<br>(0.274)  | 9.55<br>(0.376)  |
| E-2216B + IE2216B | --JP2216BEI---- | 22.1<br>(0.870)  | 8.4<br>(0.331)   | 13.25<br>(0.522) |

# Soft Ferrites

# TAK

## E- Planar Cores

### DIMENSIONS

millimeters (inches)

| P/N                     | A               |                 | B               |                 | C               |                 | D               |                 | F       |         | G               |                 | H               |                 | J1<br>(without notch) |                 | J2<br>(with notches) |                 |
|-------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------|---------|-----------------|-----------------|-----------------|-----------------|-----------------------|-----------------|----------------------|-----------------|
|                         | dimens.         | Tol.(±)         | dimens.         | Tol.(±)         | dimens.         | Tol.(±)         | dimens.         | Tol.(±)         | dimens. | Tol.(±) | dimens.         | Tol.(±)         | dimens.         | Tol.(±)         | dimens.               | Tol.(±)         | dimens.              | Tol.(±)         |
| E-1405B                 | 14.0<br>(0.551) | 0.30<br>(0.012) | 3.50<br>(0.138) | 0.10<br>(0.004) | 5.00<br>(0.197) | 0.10<br>(0.004) | 2.00<br>(0.078) | 0.10<br>(0.004) |         |         | 3.00<br>(0.118) | 0.05<br>(0.002) | 11.0<br>(0.433) | 0.25<br>(0.010) |                       |                 |                      |                 |
| E-1810B                 | 18.0<br>(0.708) | 0.35<br>(0.014) | 4.00<br>(0.157) | 0.10<br>(0.004) | 10.0<br>(0.394) | 0.20<br>(0.008) | 2.00<br>(0.078) | 0.10<br>(0.004) |         |         | 4.00<br>(0.157) | 0.10<br>(0.004) | 14.0<br>(0.551) | 0.30<br>(0.012) |                       |                 |                      |                 |
| E-2216B                 | 21.8<br>(0.858) | 0.40<br>(0.016) | 5.70<br>(0.224) | 0.10<br>(0.004) | 15.8<br>(0.622) | 0.30<br>(0.012) | 3.20<br>(0.126) | 0.10<br>(0.004) |         |         | 5.00<br>(0.197) | 0.10<br>(0.004) | 16.8<br>(0.661) | 0.40<br>(0.016) |                       |                 |                      |                 |
| E-1405B<br>+<br>IE1405B | 14.0<br>(0.551) | 0.30<br>(0.012) | 3.50<br>(0.138) | 0.10<br>(0.004) | 5.00<br>(0.197) | 0.10<br>(0.004) | 2.00<br>(0.078) | 0.10<br>(0.004) |         |         | 3.00<br>(0.118) | 0.05<br>(0.002) | 11.0<br>(0.433) | 0.25<br>(0.010) | 1.50<br>(0.708)       | 0.10<br>(0.004) | 1.80<br>(0.070)      | 0.10<br>(0.004) |
| E-1810B<br>+<br>IE1810B | 18.0<br>(0.708) | 0.35<br>(0.014) | 4.00<br>(0.157) | 0.10<br>(0.004) | 10.0<br>(0.394) | 0.20<br>(0.008) | 2.00<br>(0.078) | 0.10<br>(0.004) |         |         | 4.00<br>(0.157) | 0.10<br>(0.004) | 14.0<br>(0.551) | 0.30<br>(0.012) | 2.00<br>(0.078)       | 0.10<br>(0.004) | 2.40<br>(0.094)      | 0.10<br>(0.004) |
| E-2216B<br>+<br>IE2216B | 21.8<br>(0.858) | 0.40<br>(0.016) | 5.70<br>(0.224) | 0.10<br>(0.004) | 15.8<br>(0.622) | 0.30<br>(0.012) | 3.20<br>(0.126) | 0.10<br>(0.004) |         |         | 5.00<br>(0.197) | 0.10<br>(0.004) | 16.8<br>(0.661) | 0.40<br>(0.016) | 2.50<br>(0.098)       | 0.10<br>(0.004) | 2.90<br>(0.114)      | 0.10<br>(0.004) |

### EFFECTIVE CORE PARAMETERS

millimeters (inches)

| P/N                     | Permeance Factor C (nH) | Core Constant C mm <sup>-1</sup> (in. <sup>-1</sup> ) | Effective Length l <sub>e</sub> mm (in.) | Effective Area A <sub>e</sub> mm <sup>2</sup> (in. <sup>2</sup> ) | Min. Area A min. mm <sup>2</sup> (in. <sup>2</sup> ) | Effective Volume V <sub>e</sub> mm <sup>3</sup> (in. <sup>3</sup> ) | Weight Per Set W g (oz.) |
|-------------------------|-------------------------|-------------------------------------------------------|------------------------------------------|-------------------------------------------------------------------|------------------------------------------------------|---------------------------------------------------------------------|--------------------------|
| E-1405B                 | 0.87                    | 1.45 (36.34)                                          | 20.7 (0.814)                             | 14.3 (0.058)                                                      | 13.9 (0.054)                                         | 296 (0.116)                                                         | 1.58 (0.055)             |
| E-1810B                 | 2.03                    | 0.62 (16)                                             | 24.3 (0.956)                             | 39.3 (0.153)                                                      | 38.9 (0.154)                                         | 955 (0.376)                                                         | 5 (0.175)                |
| E-2216B                 | 3.03                    | 0.41 (10.65)                                          | 32.5 (1.28)                              | 78.3 (0.308)                                                      | 77.9 (0.306)                                         | 2540 (1)                                                            | 13.1 (0.46)              |
| E-1405B<br>+<br>IE1405B | 1.09                    | 1.15 (29.2)                                           | 16.7 (0.657)                             | 14.5 (0.057)                                                      | 13.9 (0.054)                                         | 242 (0.095)                                                         | 1.32 (0.046)             |
| E-1810B<br>+<br>IE1810B | 2.45                    | 0.51 (12.95)                                          | 20.3 (0.8)                               | 39.5 (0.155)                                                      | 38.9 (0.153)                                         | 805 (0.317)                                                         | 4.22 (0.147)             |
| E-2216B<br>+<br>IE2216B | 3.79                    | 0.33 (8.38)                                           | 26.2 (1.027)                             | 78.5 (0.309)                                                      | 77.9 (0.306)                                         | 2050 (0.807)                                                        | 10.7 (0.374)             |

### MATERIALS

| P/N                                                                            | F2                                                                     |                      | F4                                                                     |                       |
|--------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------|------------------------------------------------------------------------|-----------------------|
|                                                                                | AI (nH) ±25%                                                           | Loss W (300kHz-50mT) | AI (nH) ±25%                                                           | Loss W (1000kHz-50mT) |
| E-1405B<br><i>codif. without notch</i><br><i>codif. with notches</i>           | 1050                                                                   | <0.035               | 800                                                                    | <0.21                 |
|                                                                                | F2E1405B-----<br>F2E1405B----R-                                        |                      | F4E-1405B-----<br>F4E-1405B----R-                                      |                       |
| E-1810B<br><i>codif. without notch</i><br><i>codif. with notches</i>           | 2550                                                                   | 0.11                 | 1950                                                                   | <0.65                 |
|                                                                                | F2E-1810B-----<br>F2E-1810B----R-                                      |                      | F4E-1810B-----<br>F4E-1810B----R-                                      |                       |
| E-2216B<br><i>codif. without notch</i><br><i>codif. with notches</i>           | 4150                                                                   | <0.30                | 3150                                                                   | <1.80                 |
|                                                                                | F2E-2216B-----<br>F2E-2216B----R-                                      |                      | F4E-2216B-----<br>F4E-2216B----R-                                      |                       |
| E-1405B + IE1405B<br><i>codif. without notch</i><br><i>codif. with notches</i> | 1200                                                                   | <0.028               | 940                                                                    | <0.17                 |
|                                                                                | F2E-1405B----- + F2IE1405B-----<br>F2E-1405B----R- + F2IE1405B----R-   |                      | F4E-1405B----- + F4IE1405B-----<br>F4E-1405B----R- + F4IE1405B----R-   |                       |
| E-1810B + IE1810B<br><i>codif. without notch</i><br><i>codif. with notches</i> | 2900                                                                   | <0.093               | 2250                                                                   | <0.55                 |
|                                                                                | F2E-1810B----- + F2IE-1810B-----<br>F2E-1810B----R- + F2IE-1810B----R- |                      | F4E-1810B----- + F4IE-1810B-----<br>F4E-1810B----R- + F4IE-1810B----R- |                       |
| E-2216B + IE2216B<br><i>codif. without notch</i><br><i>codif. with notches</i> | 4900                                                                   | <0.24                | 3700                                                                   | <1.40                 |
|                                                                                | F2E-2216B----- + F2IE-2216B-----<br>F2E-2216B----R- + F2IE-2216B----R- |                      | F4E-2216B----- + F4IE-2216B-----<br>F4E-2216B----R- + F4IE-2216B----R- |                       |



## E- Planar Cores

### DIMENSIONS

| P/N               | A                |                 | B                |                 | C                |                 | D               |                 | G                |                 | H                |                 | J1              |                 |
|-------------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|-----------------|-----------------|------------------|-----------------|------------------|-----------------|-----------------|-----------------|
|                   | dimens.          | Tol.(±)         | dimens.          | Tol.(±)         | dimens.          | Tol.(±)         | dimens.         | Tol.(±)         | dimens.          | Tol.(±)         | dimens.          | Tol.(±)         | dimens.         | Tol.(±)         |
| E-3220A           | 31.75<br>(1.250) | 0.65<br>(0.025) | 6.35<br>(0.250)  | 0.15<br>(0.006) | 20.32<br>(0.800) | 0.41<br>(0.016) | 3.20<br>(0.126) | 0.20<br>(0.008) | 6.35<br>(0.250)  | 0.15<br>(0.006) | 25.5<br>(1.004)  | 0.60<br>(0.023) |                 |                 |
| E-3825A           | 38.10<br>(1.500) | 0.80<br>(0.031) | 8.25<br>(0.325)  | 0.15<br>(0.006) | 25.40<br>(1.000) | 0.55<br>(0.022) | 4.45<br>(0.175) | 0.15<br>(0.006) | 7.60<br>(0.299)  | 0.20<br>(0.008) | 30.8<br>(1.212)  | 0.60<br>(0.023) |                 |                 |
| E-4328A           | 43.20<br>(1.700) | 0.90<br>(0.035) | 9.50<br>(0.374)  | 0.15<br>(0.006) | 27.90<br>(1.098) | 0.60<br>(0.024) | 5.40<br>(0.213) | 0.15<br>(0.006) | 8.10<br>(0.319)  | 0.20<br>(0.008) | 35.5<br>(1.398)  | 0.80<br>(0.031) |                 |                 |
| E-5838A           | 58.40<br>(2.300) | 1.20<br>(0.047) | 10.55<br>(0.415) | 0.15<br>(0.006) | 38.10<br>(1.500) | 0.80<br>(0.031) | 6.50<br>(0.256) | 0.15<br>(0.006) | 8.10<br>(0.319)  | 0.20<br>(0.008) | 51.10<br>(2.012) | 1.10<br>(0.043) |                 |                 |
| E-6450A           | 64.00<br>(2.520) | 1.30<br>(0.051) | 10.20<br>(0.402) | 0.15<br>(0.006) | 50.80<br>(2.000) | 1.10<br>(0.043) | 5.10<br>(0.201) | 0.15<br>(0.006) | 10.20<br>(0.402) | 0.20<br>(0.008) | 53.60<br>(2.110) | 1.10<br>(0.043) |                 |                 |
| E-3220A + IE3220A | 31.75<br>(1.250) | 0.65<br>(0.025) | 6.35<br>(0.250)  | 0.15<br>(0.006) | 20.32<br>(0.800) | 0.41<br>(0.016) | 3.20<br>(0.126) | 0.20<br>(0.008) | 6.35<br>(0.250)  | 0.15<br>(0.006) | 25.5<br>(1.004)  | 0.60<br>(0.023) | 3.15<br>(0.124) | 0.15<br>(0.006) |
| E-3825A + IE3825A | 38.10<br>(1.500) | 0.80<br>(0.031) | 8.25<br>(0.325)  | 0.15<br>(0.006) | 25.40<br>(1.000) | 0.55<br>(0.022) | 4.45<br>(0.175) | 0.15<br>(0.006) | 7.60<br>(0.299)  | 0.20<br>(0.008) | 30.8<br>(1.212)  | 0.60<br>(0.023) | 3.80<br>(0.150) | 0.15<br>(0.006) |
| E-4328A + IE4328A | 43.20<br>(1.700) | 0.90<br>(0.035) | 9.50<br>(0.374)  | 0.15<br>(0.006) | 27.90<br>(1.098) | 0.60<br>(0.024) | 5.40<br>(0.213) | 0.15<br>(0.006) | 8.10<br>(0.319)  | 0.20<br>(0.008) | 35.5<br>(1.398)  | 0.80<br>(0.031) | 4.10<br>(0.161) | 0.15<br>(0.006) |
| E-5838A + IE5838A | 58.40<br>(2.300) | 1.20<br>(0.047) | 10.55<br>(0.415) | 0.15<br>(0.006) | 38.10<br>(1.500) | 0.80<br>(0.031) | 6.50<br>(0.256) | 0.15<br>(0.006) | 8.10<br>(0.319)  | 0.20<br>(0.008) | 51.10<br>(2.012) | 1.10<br>(0.043) | 4.05<br>(0.160) | 0.20<br>(0.008) |
| E-6450A + IE6450A | 64.00<br>(2.520) | 1.30<br>(0.051) | 10.20<br>(0.402) | 0.15<br>(0.006) | 50.80<br>(2.000) | 1.10<br>(0.043) | 5.10<br>(0.201) | 0.15<br>(0.006) | 10.20<br>(0.402) | 0.20<br>(0.008) | 53.60<br>(2.110) | 1.10<br>(0.043) | 5.10<br>(0.200) | 0.15<br>(0.006) |

### EFFECTIVE CORE PARAMETERS

| P/N               | Permeance Factor C (nH) | Core Constant C1 mm <sup>-1</sup> (in. <sup>-1</sup> ) | Effective Length l <sub>e</sub> mm (in.) | Effective Area A <sub>e</sub> mm <sup>2</sup> (in. <sup>2</sup> ) | Min. Area A min. mm <sup>2</sup> (in. <sup>2</sup> ) | Effective Volume V <sub>e</sub> mm <sup>3</sup> (in. <sup>3</sup> ) | Weight Per Set W g (oz.) |
|-------------------|-------------------------|--------------------------------------------------------|------------------------------------------|-------------------------------------------------------------------|------------------------------------------------------|---------------------------------------------------------------------|--------------------------|
| E-3220A           | 3.95                    | 0.32 (8.128)                                           | 41.4 (1.623)                             | 130 (0.201)                                                       | 128 (0.198)                                          | 5390 (0.329)                                                        | 27.5 (0.971)             |
| E-3825A           | 4.65                    | 0.27 (6.858)                                           | 52.4 (2.062)                             | 194 (0.300)                                                       | 192 (0.298)                                          | 10200 (0.622)                                                       | 51.5 (1.818)             |
| E-4328A           | 4.71                    | 0.27 (6.858)                                           | 61.1 (2.405)                             | 229 (0.355)                                                       | 225 (0.349)                                          | 14000 (0.854)                                                       | 70.3 (2.481)             |
| E-5838A           | 4.83                    | 0.26 (6.604)                                           | 80.7 (3.177)                             | 310 (0.480)                                                       | 308 (0.477)                                          | 25000 (1.525)                                                       | 123 (4.342)              |
| E-6450A           | 8.17                    | 0.15 (3.81)                                            | 79.9 (3.145)                             | 519 (0.804)                                                       | 518 (0.803)                                          | 41500 (2.531)                                                       | 210 (7.413)              |
| E-3220A + IE3220A | 4.66                    | 0.27 (6.858)                                           | 35.1 (1.382)                             | 130 (0.201)                                                       | 128 (0.198)                                          | 4560 (0.278)                                                        | 23.6 (0.833)             |
| E-3825A + IE3825A | 5.59                    | 0.22 (5.588)                                           | 43.5 (1.712)                             | 194 (0.300)                                                       | 192 (0.298)                                          | 8440 (0.515)                                                        | 43.4 (1.532)             |
| E-4328A + IE4328A | 5.72                    | 0.22 (5.588)                                           | 50.4 (1.984)                             | 229 (0.355)                                                       | 225 (0.349)                                          | 11500 (0.701)                                                       | 58.9 (2.079)             |
| E-5838A + IE5838A | 5.75                    | 0.22 (5.588)                                           | 67.7 (2.665)                             | 310 (0.480)                                                       | 308 (0.477)                                          | 21000 (1.281)                                                       | 105 (3.706)              |
| E-6450A + IE6450A | 9.36                    | 0.13 (3.302)                                           | 69.7 (2.744)                             | 519 (0.804)                                                       | 518 (0.803)                                          | 36200 (2.208)                                                       | 185 (6.530)              |

### MATERIALS

| P/N                         | F1           |                       | F2           |                      |
|-----------------------------|--------------|-----------------------|--------------|----------------------|
|                             | AI (nH) ±25% | Loss W (100kHz-200mT) | AI (nH) ±25% | Loss W (300kHz-50mT) |
| E-3220A<br>codif.           | 6500         | < 3.2                 | 5700         | < 0.62               |
| E-3825A<br>codif.           | 7700         | < 6                   | 6700         | < 1.2                |
| E-4328A<br>codif.           | 8100         | < 8.2                 | 7000         | < 1.7                |
| E-5838A<br>codif.           | 8800         | < 15                  | 7600         | < 2.9                |
| E-6450A<br>codif.           | 13000        | < 25                  | 13000        | < 4.8                |
| E-3220A + IE3220A<br>codif. | 7300         | < 2.7                 | 6400         | < 0.63               |
| E-3825A + IE3825A<br>codif. | 6700         | < 4.9                 | 7800         | < 0.98               |
| E-4328A + IE4328A<br>codif. | 9300         | < 6.7                 | 8100         | < 1.4                |
| E-5838A + IE5838A<br>codif. | 10000        | < 13                  | 8700         | < 2.5                |
| E-6450A + IE6450A<br>codif. | 16500        | < 21                  | 14500        | < 4.2                |

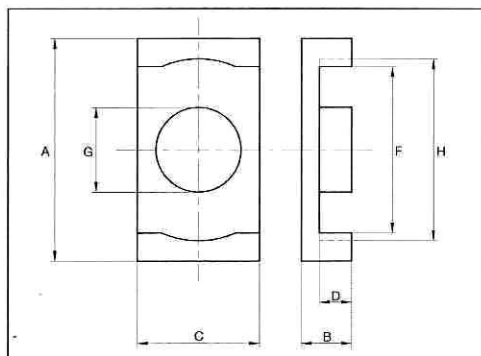


Figure 5 - ER Planar Cores

### DIMENSIONS

millimeters (inches)

| P/N     | A                |                 | B               |                 | C               |                 | D               |                 | F               |                 | G               |                 | H               |                 |
|---------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|         | dimens.          | Tol.(±)         | dimens.         | Tol.(±)         | dimens.         | Tol.(±)         | dimens.         | Tol.(±)         | dimens.         | Tol.(±)         | dimens.         | Tol.(±)         | dimens.         | Tol.(±)         |
| ER0905A | 9.35<br>(0.368)  | 0.20<br>(0.008) | 2.45<br>(0.096) | 0.07<br>(0.003) | 4.90<br>(0.192) | 0.10<br>(0.004) | 1.68<br>(0.066) | 0.07<br>(0.003) | 7.20<br>(0.283) | 0.20<br>(0.008) | 3.40<br>(0.133) | 0.15<br>(0.006) | 7.63<br>(0.300) | 0.12<br>(0.005) |
| ER1106A | 10.83<br>(0.426) | 0.17<br>(0.007) | 2.45<br>(0.096) | 0.07<br>(0.003) | 5.90<br>(0.232) | 0.10<br>(0.004) | 1.58<br>(0.062) | 0.07<br>(0.003) | 8.10<br>(0.318) | 0.20<br>(0.008) | 4.12<br>(0.162) | 0.12<br>(0.005) | 8.85<br>(0.348) | 0.15<br>(0.006) |
| ER1507A | 14.5<br>(0.570)  | 0.20<br>(0.008) | 2.95<br>(0.116) | 0.10<br>(0.004) | 6.70<br>(0.263) | 0.10<br>(0.004) | 1.65<br>(0.065) | 0.10<br>(0.004) | 11.8<br>(0.464) | 0.20<br>(0.008) | 4.70<br>(0.185) | 0.10<br>(0.004) | 11.8<br>(0.464) | 0.20<br>(0.008) |

### EFFECTIVE CORE PARAMETERS

millimeters (inches)

| P/N     | Permeance Factor C (nH) | Core Constant C1 mm <sup>-1</sup> (in. <sup>-1</sup> ) | Effective Length le mm (in.) | Effective Area Ae mm <sup>2</sup> (in. <sup>2</sup> ) | Min. Area A min. mm <sup>2</sup> (in. <sup>2</sup> ) | Effective Volume Ve mm <sup>3</sup> (in. <sup>3</sup> ) | Weight Per Set W g (oz.) |
|---------|-------------------------|--------------------------------------------------------|------------------------------|-------------------------------------------------------|------------------------------------------------------|---------------------------------------------------------|--------------------------|
| ER0905A | 0.81                    | 1.54 (39.11)                                           | 13.6 (0.535)                 | 8.81 (0.034)                                          | 7.6 (0.03)                                           | 120 (0.047)                                             | 0.67 (0.023)             |
| ER1106A | 1.10                    | 1.14 (28.95)                                           | 14.1 (0.555)                 | 12.4 (0.048)                                          | 10.3 (0.04)                                          | 174 (0.006)                                             | 1.08 (0.037)             |
| ER1507A | 1.26                    | 0.99 (25.14)                                           | 18.2 (0.716)                 | 18.3 (0.072)                                          | 17.3 (0.068)                                         | 333 (0.131)                                             | 1.85 (0.064)             |

### MATERIALS

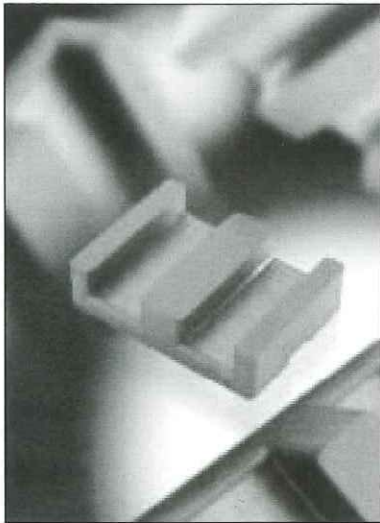
| P/N     | F2             |                      | F4             |                       |
|---------|----------------|----------------------|----------------|-----------------------|
|         | AI (nH) ±25%   | Loss W (300kHz-50mT) | AI (nH) ±25%   | Loss W (1000kHz-50mT) |
| ER0905A | 810            | <0.014               | 650            | <0.09                 |
| codif.  | F2ER0905A----- |                      | F4ER0905A----- |                       |
| ER1106A | 1100           | <0.021               | 895            | <0.12                 |
| codif.  | F2ER1106A----- |                      | F4ER1106A----- |                       |
| ER1507A | 1450           | <0.039               | 1100           | <0.23                 |
| codif.  | F2ER1507A----- |                      | F4ER1507A----- |                       |



# Soft Ferrites

## Planar Cores

# TAK

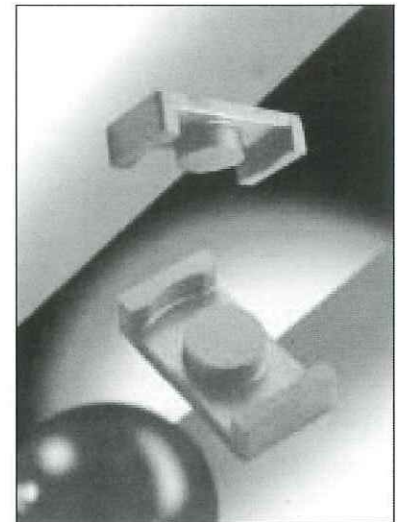


E- Cores

AVX/TPC introduces a new range of Ferrite products with high frequency materials for power conversion.

Planar cores can be glued or assembled with clamps in order to reduce the size of converter.

These cores are also designed with different heights upon request. For specific requirements on design or materials, please contact your local representative.



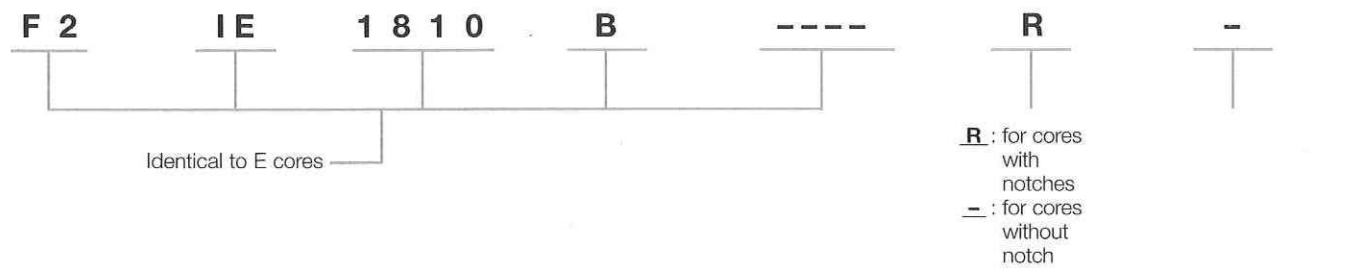
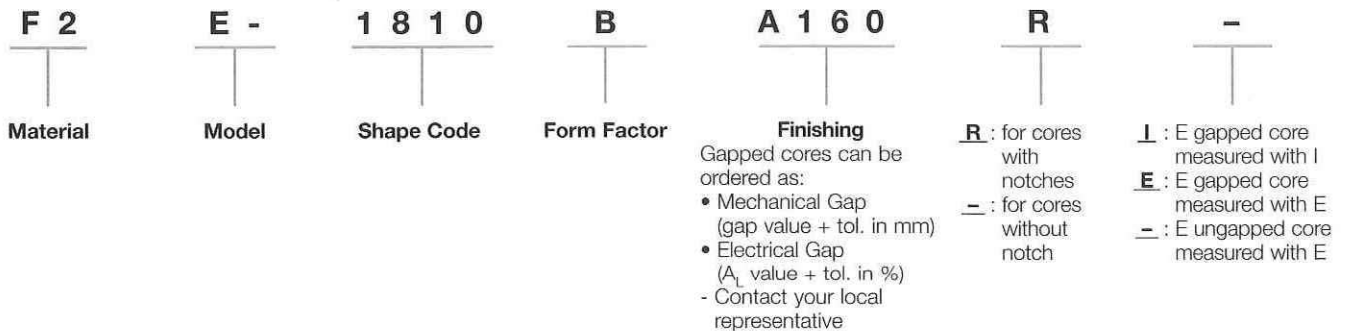
ER Cores

### KEY APPLICATIONS

- SMPS



### HOW TO ORDER



## E- Planar Cores

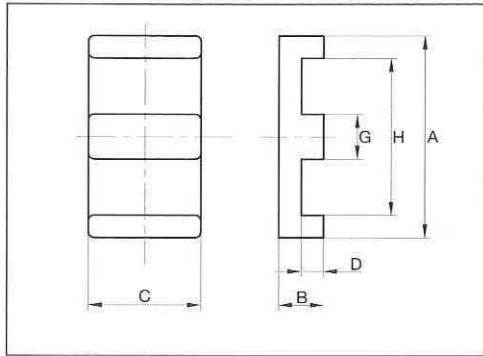


Figure 1 – E- Planar Cores without notch

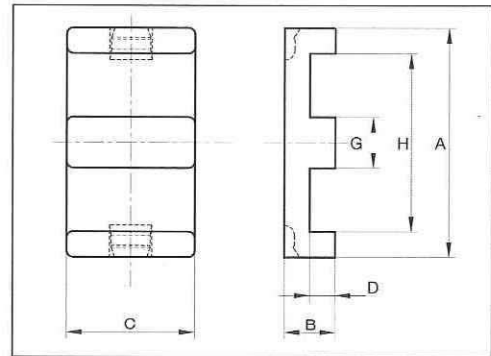


Figure 2 – E- Planar Cores with notches

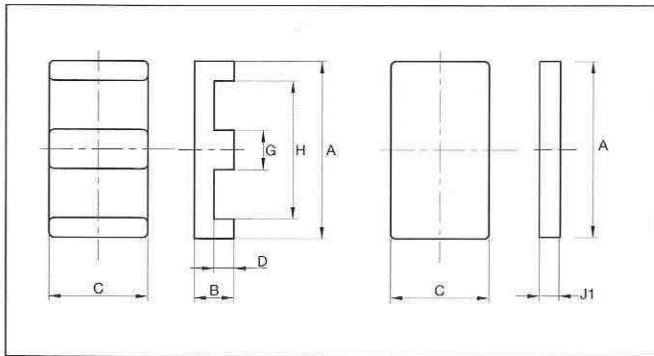


Figure 3 – E- and IE Planar Cores without notch

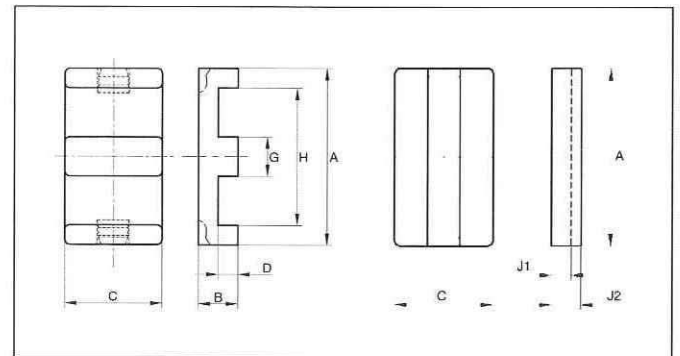


Figure 4 – E- and IE Planar Cores with notches

### PLANAR CLIPS

| P/N               | P/N Clips       | A<br>mm (inches) | B<br>mm (inches) | D<br>mm (inches) |
|-------------------|-----------------|------------------|------------------|------------------|
| E-1405B + E-1405B | --JP1405BEE---- | 14.6<br>(0.575)  | 8.0<br>(0.315)   | 5.75<br>(0.226)  |
| E-1810B + E-1810B | --JP1801BEE---- | 18.4<br>(0.724)  | 9.0<br>(0.354)   | 9.55<br>(0.376)  |
| E-2216B + E-2216B | --JP2216BEE---- | 22.1<br>(0.870)  | 11.7<br>(0.460)  | 13.25<br>(0.522) |
| E-1405B + IE1405B | --JP1405BEI---- | 14.6<br>(0.575)  | 5.95<br>(0.234)  | 5.75<br>(0.226)  |
| E-1810B + IE1810B | --JP1810BCI---- | 18.4<br>(0.724)  | 6.95<br>(0.274)  | 9.55<br>(0.376)  |
| E-2216B + IE2216B | --JP2216BEI---- | 22.1<br>(0.870)  | 8.4<br>(0.331)   | 13.25<br>(0.522) |

## E- Planar Cores

### DIMENSIONS

millimeters (inches)

| P/N                     | A               |                 | B               |                 | C               |                 | D               |                 | F       |         | G               |                 | H               |                 | J1<br>(without notch) |                 | J2<br>(with notches) |                 |
|-------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------|---------|-----------------|-----------------|-----------------|-----------------|-----------------------|-----------------|----------------------|-----------------|
|                         | dimens.         | Tol.(±)         | dimens.         | Tol.(±)         | dimens.         | Tol.(±)         | dimens.         | Tol.(±)         | dimens. | Tol.(±) | dimens.         | Tol.(±)         | dimens.         | Tol.(±)         | dimens.               | Tol.(±)         | dimens.              | Tol.(±)         |
| E-1405B                 | 14.0<br>(0.551) | 0.30<br>(0.012) | 3.50<br>(0.138) | 0.10<br>(0.004) | 5.00<br>(0.197) | 0.10<br>(0.004) | 2.00<br>(0.078) | 0.10<br>(0.004) |         |         | 3.00<br>(0.118) | 0.05<br>(0.002) | 11.0<br>(0.433) | 0.25<br>(0.010) |                       |                 |                      |                 |
| E-1810B                 | 18.0<br>(0.708) | 0.35<br>(0.014) | 4.00<br>(0.157) | 0.10<br>(0.004) | 10.0<br>(0.394) | 0.20<br>(0.008) | 2.00<br>(0.078) | 0.10<br>(0.004) |         |         | 4.00<br>(0.157) | 0.10<br>(0.004) | 14.0<br>(0.551) | 0.30<br>(0.012) |                       |                 |                      |                 |
| E-2216B                 | 21.8<br>(0.858) | 0.40<br>(0.016) | 5.70<br>(0.224) | 0.10<br>(0.004) | 15.8<br>(0.622) | 0.30<br>(0.012) | 3.20<br>(0.126) | 0.10<br>(0.004) |         |         | 5.00<br>(0.197) | 0.10<br>(0.004) | 16.8<br>(0.661) | 0.40<br>(0.016) |                       |                 |                      |                 |
| E-1405B<br>+<br>IE1405B | 14.0<br>(0.551) | 0.30<br>(0.012) | 3.50<br>(0.138) | 0.10<br>(0.004) | 5.00<br>(0.197) | 0.10<br>(0.004) | 2.00<br>(0.078) | 0.10<br>(0.004) |         |         | 3.00<br>(0.118) | 0.05<br>(0.002) | 11.0<br>(0.433) | 0.25<br>(0.010) | 1.50<br>(0.708)       | 0.10<br>(0.004) | 1.80<br>(0.070)      | 0.10<br>(0.004) |
| E-1810B<br>+<br>IE1810B | 18.0<br>(0.708) | 0.35<br>(0.014) | 4.00<br>(0.157) | 0.10<br>(0.004) | 10.0<br>(0.394) | 0.20<br>(0.008) | 2.00<br>(0.078) | 0.10<br>(0.004) |         |         | 4.00<br>(0.157) | 0.10<br>(0.004) | 14.0<br>(0.551) | 0.30<br>(0.012) | 2.00<br>(0.078)       | 0.10<br>(0.004) | 2.40<br>(0.094)      | 0.10<br>(0.004) |
| E-2216B<br>+<br>IE2216B | 21.8<br>(0.858) | 0.40<br>(0.016) | 5.70<br>(0.224) | 0.10<br>(0.004) | 15.8<br>(0.622) | 0.30<br>(0.012) | 3.20<br>(0.126) | 0.10<br>(0.004) |         |         | 5.00<br>(0.197) | 0.10<br>(0.004) | 16.8<br>(0.661) | 0.40<br>(0.016) | 2.50<br>(0.098)       | 0.10<br>(0.004) | 2.90<br>(0.114)      | 0.10<br>(0.004) |

### EFFECTIVE CORE PARAMETERS

millimeters (inches)

| P/N                     | Permeance Factor C (nH) | Core Constant C mm <sup>-1</sup> (in. <sup>-1</sup> ) | Effective Length l <sub>e</sub> mm (in.) | Effective Area A <sub>e</sub> mm <sup>2</sup> (in. <sup>2</sup> ) | Min. Area A min. mm <sup>2</sup> (in. <sup>2</sup> ) | Effective Volume V <sub>e</sub> mm <sup>3</sup> (in. <sup>3</sup> ) | Weight Per Set W g (oz.) |
|-------------------------|-------------------------|-------------------------------------------------------|------------------------------------------|-------------------------------------------------------------------|------------------------------------------------------|---------------------------------------------------------------------|--------------------------|
| E-1405B                 | 0.87                    | 1.45 (36.34)                                          | 20.7 (0.814)                             | 14.3 (0.058)                                                      | 13.9 (0.054)                                         | 296 (0.116)                                                         | 1.58 (0.055)             |
| E-1810B                 | 2.03                    | 0.62 (16)                                             | 24.3 (0.956)                             | 39.3 (0.153)                                                      | 38.9 (0.154)                                         | 955 (0.376)                                                         | 5 (0.175)                |
| E-2216B                 | 3.03                    | 0.41 (10.65)                                          | 32.5 (1.28)                              | 78.3 (0.308)                                                      | 77.9 (0.306)                                         | 2540 (1)                                                            | 13.1 (0.46)              |
| E-1405B<br>+<br>IE1405B | 1.09                    | 1.15 (29.2)                                           | 16.7 (0.657)                             | 14.5 (0.057)                                                      | 13.9 (0.054)                                         | 242 (0.095)                                                         | 1.32 (0.046)             |
| E-1810B<br>+<br>IE1810B | 2.45                    | 0.51 (12.95)                                          | 20.3 (0.8)                               | 39.5 (0.155)                                                      | 38.9 (0.153)                                         | 805 (0.317)                                                         | 4.22 (0.147)             |
| E-2216B<br>+<br>IE2216B | 3.79                    | 0.33 (8.38)                                           | 26.2 (1.027)                             | 78.5 (0.309)                                                      | 77.9 (0.306)                                         | 2050 (0.807)                                                        | 10.7 (0.374)             |

### MATERIALS

| P/N                                                                            | F2                                                                     |                      | F4                                                                     |                       |
|--------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------|------------------------------------------------------------------------|-----------------------|
|                                                                                | AI (nH) ±25%                                                           | Loss W (300kHz-50mT) | AI (nH) ±25%                                                           | Loss W (1000kHz-50mT) |
| E-1405B<br><i>codif. without notch</i><br><i>codif. with notches</i>           | 1050                                                                   | <0.035               | 800                                                                    | <0.21                 |
|                                                                                | F2E1405B-----<br>F2E1405B----R-                                        |                      | F4E-1405B-----<br>F4E-1405B----R-                                      |                       |
| E-1810B<br><i>codif. without notch</i><br><i>codif. with notches</i>           | 2550                                                                   | 0.11                 | 1950                                                                   | <0.65                 |
|                                                                                | F2E-1810B-----<br>F2E-1810B----R-                                      |                      | F4E-1810B-----<br>F4E-1810B----R-                                      |                       |
| E-2216B<br><i>codif. without notch</i><br><i>codif. with notches</i>           | 4150                                                                   | <0.30                | 3150                                                                   | <1.80                 |
|                                                                                | F2E-2216B-----<br>F2E-2216B----R-                                      |                      | F4E-2216B-----<br>F4E-2216B----R-                                      |                       |
| E-1405B + IE1405B<br><i>codif. without notch</i><br><i>codif. with notches</i> | 1200                                                                   | <0.028               | 940                                                                    | <0.17                 |
|                                                                                | F2E-1405B----- + F2IE1405B-----<br>F2E-1405B----R- + F2IE1405B----R-   |                      | F4E-1405B----- + F4IE1405B-----<br>F4E-1405B----R- + F4IE1405B----R-   |                       |
| E-1810B + IE1810B<br><i>codif. without notch</i><br><i>codif. with notches</i> | 2900                                                                   | <0.093               | 2250                                                                   | <0.55                 |
|                                                                                | F2E-1810B----- + F2IE-1810B-----<br>F2E-1810B----R- + F2IE-1810B----R- |                      | F4E-1810B----- + F4IE-1810B-----<br>F4E-1810B----R- + F4IE-1810B----R- |                       |
| E-2216B + IE2216B<br><i>codif. without notch</i><br><i>codif. with notches</i> | 4900                                                                   | <0.24                | 3700                                                                   | <1.40                 |
|                                                                                | F2E-2216B----- + F2IE-2216B-----<br>F2E-2216B----R- + F2IE-2216B----R- |                      | F4E-2216B----- + F4IE-2216B-----<br>F4E-2216B----R- + F4IE-2216B----R- |                       |



## E- Planar Cores

### DIMENSIONS

| P/N               | A                |                 | B                |                 | C                |                 | D               |                 | G                |                 | H                |                 | J1              |                 |
|-------------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|-----------------|-----------------|------------------|-----------------|------------------|-----------------|-----------------|-----------------|
|                   | dimens.          | Tol.(±)         | dimens.          | Tol.(±)         | dimens.          | Tol.(±)         | dimens.         | Tol.(±)         | dimens.          | Tol.(±)         | dimens.          | Tol.(±)         | dimens.         | Tol.(±)         |
| E-3220A           | 31.75<br>(1.250) | 0.65<br>(0.025) | 6.35<br>(0.250)  | 0.15<br>(0.006) | 20.32<br>(0.800) | 0.41<br>(0.016) | 3.20<br>(0.126) | 0.20<br>(0.008) | 6.35<br>(0.250)  | 0.15<br>(0.006) | 25.5<br>(1.004)  | 0.60<br>(0.023) |                 |                 |
| E-3825A           | 38.10<br>(1.500) | 0.80<br>(0.031) | 8.25<br>(0.325)  | 0.15<br>(0.006) | 25.40<br>(1.000) | 0.55<br>(0.022) | 4.45<br>(0.175) | 0.15<br>(0.006) | 7.60<br>(0.299)  | 0.20<br>(0.008) | 30.8<br>(1.212)  | 0.60<br>(0.023) |                 |                 |
| E-4328A           | 43.20<br>(1.700) | 0.90<br>(0.035) | 9.50<br>(0.374)  | 0.15<br>(0.006) | 27.90<br>(1.098) | 0.60<br>(0.024) | 5.40<br>(0.213) | 0.15<br>(0.006) | 8.10<br>(0.319)  | 0.20<br>(0.008) | 35.5<br>(1.398)  | 0.80<br>(0.031) |                 |                 |
| E-5838A           | 58.40<br>(2.300) | 1.20<br>(0.047) | 10.55<br>(0.415) | 0.15<br>(0.006) | 38.10<br>(1.500) | 0.80<br>(0.031) | 6.50<br>(0.256) | 0.15<br>(0.006) | 8.10<br>(0.319)  | 0.20<br>(0.008) | 51.10<br>(2.012) | 1.10<br>(0.043) |                 |                 |
| E-6450A           | 64.00<br>(2.520) | 1.30<br>(0.051) | 10.20<br>(0.402) | 0.15<br>(0.006) | 50.80<br>(2.000) | 1.10<br>(0.043) | 5.10<br>(0.201) | 0.15<br>(0.006) | 10.20<br>(0.402) | 0.20<br>(0.008) | 53.60<br>(2.110) | 1.10<br>(0.043) |                 |                 |
| E-3220A + IE3220A | 31.75<br>(1.250) | 0.65<br>(0.025) | 6.35<br>(0.250)  | 0.15<br>(0.006) | 20.32<br>(0.800) | 0.41<br>(0.016) | 3.20<br>(0.126) | 0.20<br>(0.008) | 6.35<br>(0.250)  | 0.15<br>(0.006) | 25.5<br>(1.004)  | 0.60<br>(0.023) | 3.15<br>(0.124) | 0.15<br>(0.006) |
| E-3825A + IE3825A | 38.10<br>(1.500) | 0.80<br>(0.031) | 8.25<br>(0.325)  | 0.15<br>(0.006) | 25.40<br>(1.000) | 0.55<br>(0.022) | 4.45<br>(0.175) | 0.15<br>(0.006) | 7.60<br>(0.299)  | 0.20<br>(0.008) | 30.8<br>(1.212)  | 0.60<br>(0.023) | 3.80<br>(0.150) | 0.15<br>(0.006) |
| E-4328A + IE4328A | 43.20<br>(1.700) | 0.90<br>(0.035) | 9.50<br>(0.374)  | 0.15<br>(0.006) | 27.90<br>(1.098) | 0.60<br>(0.024) | 5.40<br>(0.213) | 0.15<br>(0.006) | 8.10<br>(0.319)  | 0.20<br>(0.008) | 35.5<br>(1.398)  | 0.80<br>(0.031) | 4.10<br>(0.161) | 0.15<br>(0.006) |
| E-5838A + IE5838A | 58.40<br>(2.300) | 1.20<br>(0.047) | 10.55<br>(0.415) | 0.15<br>(0.006) | 38.10<br>(1.500) | 0.80<br>(0.031) | 6.50<br>(0.256) | 0.15<br>(0.006) | 8.10<br>(0.319)  | 0.20<br>(0.008) | 51.10<br>(2.012) | 1.10<br>(0.043) | 4.05<br>(0.160) | 0.20<br>(0.008) |
| E-6450A + IE6450A | 64.00<br>(2.520) | 1.30<br>(0.051) | 10.20<br>(0.402) | 0.15<br>(0.006) | 50.80<br>(2.000) | 1.10<br>(0.043) | 5.10<br>(0.201) | 0.15<br>(0.006) | 10.20<br>(0.402) | 0.20<br>(0.008) | 53.60<br>(2.110) | 1.10<br>(0.043) | 5.10<br>(0.200) | 0.15<br>(0.006) |

### EFFECTIVE CORE PARAMETERS

| P/N               | Permeance Factor C (nH) | Core Constant C1 mm <sup>-1</sup> (in. <sup>-1</sup> ) | Effective Length l <sub>e</sub> mm (in.) | Effective Area A <sub>e</sub> mm <sup>2</sup> (in. <sup>2</sup> ) | Min. Area A min. mm <sup>2</sup> (in. <sup>2</sup> ) | Effective Volume V <sub>e</sub> mm <sup>3</sup> (in. <sup>3</sup> ) | Weight Per Set W g (oz.) |
|-------------------|-------------------------|--------------------------------------------------------|------------------------------------------|-------------------------------------------------------------------|------------------------------------------------------|---------------------------------------------------------------------|--------------------------|
| E-3220A           | 3.95                    | 0.32 (8.128)                                           | 41.4 (1.623)                             | 130 (0.201)                                                       | 128 (0.198)                                          | 5390 (0.329)                                                        | 27.5 (0.971)             |
| E-3825A           | 4.65                    | 0.27 (6.858)                                           | 52.4 (2.062)                             | 194 (0.300)                                                       | 192 (0.298)                                          | 10200 (0.622)                                                       | 51.5 (1.818)             |
| E-4328A           | 4.71                    | 0.27 (6.858)                                           | 61.1 (2.405)                             | 229 (0.355)                                                       | 225 (0.349)                                          | 14000 (0.854)                                                       | 70.3 (2.481)             |
| E-5838A           | 4.83                    | 0.26 (6.604)                                           | 80.7 (3.177)                             | 310 (0.480)                                                       | 308 (0.477)                                          | 25000 (1.525)                                                       | 123 (4.342)              |
| E-6450A           | 8.17                    | 0.15 (3.81)                                            | 79.9 (3.145)                             | 519 (0.804)                                                       | 518 (0.803)                                          | 41500 (2.531)                                                       | 210 (7.413)              |
| E-3220A + IE3220A | 4.66                    | 0.27 (6.858)                                           | 35.1 (1.382)                             | 130 (0.201)                                                       | 128 (0.198)                                          | 4560 (0.278)                                                        | 23.6 (0.833)             |
| E-3825A + IE3825A | 5.59                    | 0.22 (5.588)                                           | 43.5 (1.712)                             | 194 (0.300)                                                       | 192 (0.298)                                          | 8440 (0.515)                                                        | 43.4 (1.532)             |
| E-4328A + IE4328A | 5.72                    | 0.22 (5.588)                                           | 50.4 (1.984)                             | 229 (0.355)                                                       | 225 (0.349)                                          | 11500 (0.701)                                                       | 58.9 (2.079)             |
| E-5838A + IE5838A | 5.75                    | 0.22 (5.588)                                           | 67.7 (2.665)                             | 310 (0.480)                                                       | 308 (0.477)                                          | 21000 (1.281)                                                       | 105 (3.706)              |
| E-6450A + IE6450A | 9.36                    | 0.13 (3.302)                                           | 69.7 (2.744)                             | 519 (0.804)                                                       | 518 (0.803)                                          | 36200 (2.208)                                                       | 185 (6.530)              |

### MATERIALS

| P/N                         | F1           |                       | F2           |                      |
|-----------------------------|--------------|-----------------------|--------------|----------------------|
|                             | AI (nH) ±25% | Loss W (100kHz-200mT) | AI (nH) ±25% | Loss W (300kHz-50mT) |
| E-3220A<br>codif.           | 6500         | < 3.2                 | 5700         | < 0.62               |
| E-3825A<br>codif.           | 7700         | < 6                   | 6700         | < 1.2                |
| E-4328A<br>codif.           | 8100         | < 8.2                 | 7000         | < 1.7                |
| E-5838A<br>codif.           | 8800         | < 15                  | 7600         | < 2.9                |
| E-6450A<br>codif.           | 13000        | < 25                  | 13000        | < 4.8                |
| E-3220A + IE3220A<br>codif. | 7300         | < 2.7                 | 6400         | < 0.63               |
| E-3825A + IE3825A<br>codif. | 6700         | < 4.9                 | 7800         | < 0.98               |
| E-4328A + IE4328A<br>codif. | 9300         | < 6.7                 | 8100         | < 1.4                |
| E-5838A + IE5838A<br>codif. | 10000        | < 13                  | 8700         | < 2.5                |
| E-6450A + IE6450A<br>codif. | 16500        | < 21                  | 14500        | < 4.2                |

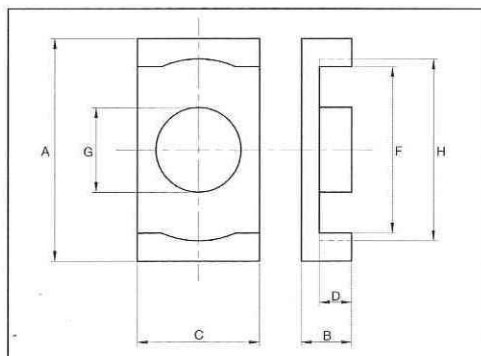


Figure 5 - ER Planar Cores

### DIMENSIONS

millimeters (inches)

| P/N     | A                |                 | B               |                 | C               |                 | D               |                 | F               |                 | G               |                 | H               |                 |
|---------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|         | dimens.          | Tol.(±)         | dimens.         | Tol.(±)         | dimens.         | Tol.(±)         | dimens.         | Tol.(±)         | dimens.         | Tol.(±)         | dimens.         | Tol.(±)         | dimens.         | Tol.(±)         |
| ER0905A | 9.35<br>(0.368)  | 0.20<br>(0.008) | 2.45<br>(0.096) | 0.07<br>(0.003) | 4.90<br>(0.192) | 0.10<br>(0.004) | 1.68<br>(0.066) | 0.07<br>(0.003) | 7.20<br>(0.283) | 0.20<br>(0.008) | 3.40<br>(0.133) | 0.15<br>(0.006) | 7.63<br>(0.300) | 0.12<br>(0.005) |
| ER1106A | 10.83<br>(0.426) | 0.17<br>(0.007) | 2.45<br>(0.096) | 0.07<br>(0.003) | 5.90<br>(0.232) | 0.10<br>(0.004) | 1.58<br>(0.062) | 0.07<br>(0.003) | 8.10<br>(0.318) | 0.20<br>(0.008) | 4.12<br>(0.162) | 0.12<br>(0.005) | 8.85<br>(0.348) | 0.15<br>(0.006) |
| ER1507A | 14.5<br>(0.570)  | 0.20<br>(0.008) | 2.95<br>(0.116) | 0.10<br>(0.004) | 6.70<br>(0.263) | 0.10<br>(0.004) | 1.65<br>(0.065) | 0.10<br>(0.004) | 11.8<br>(0.464) | 0.20<br>(0.008) | 4.70<br>(0.185) | 0.10<br>(0.004) | 11.8<br>(0.464) | 0.20<br>(0.008) |

### EFFECTIVE CORE PARAMETERS

millimeters (inches)

| P/N     | Permeance Factor C (nH) | Core Constant C1 mm <sup>-1</sup> (in. <sup>-1</sup> ) | Effective Length le mm (in.) | Effective Area Ae mm <sup>2</sup> (in. <sup>2</sup> ) | Min. Area A min. mm <sup>2</sup> (in. <sup>2</sup> ) | Effective Volume Ve mm <sup>3</sup> (in. <sup>3</sup> ) | Weight Per Set W g (oz.) |
|---------|-------------------------|--------------------------------------------------------|------------------------------|-------------------------------------------------------|------------------------------------------------------|---------------------------------------------------------|--------------------------|
| ER0905A | 0.81                    | 1.54 (39.11)                                           | 13.6 (0.535)                 | 8.81 (0.034)                                          | 7.6 (0.03)                                           | 120 (0.047)                                             | 0.67 (0.023)             |
| ER1106A | 1.10                    | 1.14 (28.95)                                           | 14.1 (0.555)                 | 12.4 (0.048)                                          | 10.3 (0.04)                                          | 174 (0.006)                                             | 1.08 (0.037)             |
| ER1507A | 1.26                    | 0.99 (25.14)                                           | 18.2 (0.716)                 | 18.3 (0.072)                                          | 17.3 (0.068)                                         | 333 (0.131)                                             | 1.85 (0.064)             |

### MATERIALS

| P/N               | F2             |                      | F4             |                       |
|-------------------|----------------|----------------------|----------------|-----------------------|
|                   | AI (nH) ±25%   | Loss W (300kHz-50mT) | AI (nH) ±25%   | Loss W (1000kHz-50mT) |
| ER0905A<br>codif. | 810            | <0.014               | 650            | <0.09                 |
|                   | F2ER0905A----- |                      | F4ER0905A----- |                       |
| ER1106A<br>codif. | 1100           | <0.021               | 895            | <0.12                 |
|                   | F2ER1106A----- |                      | F4ER1106A----- |                       |
| ER1507A<br>codif. | 1450           | <0.039               | 1100           | <0.23                 |
|                   | F2ER1507A----- |                      | F4ER1507A----- |                       |