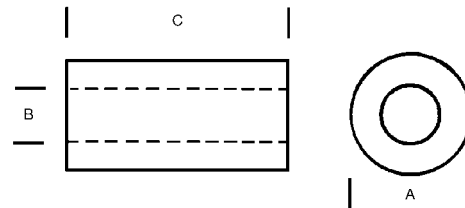


2000 Series Ferrites for EMI Suppression



Cylindrical Ferrites



| A | B | C | Imp@100Mhz | Part No. |
|--------------|-------------|-------------|------------|-------------|
| 2.03 | 0.89 | 2.67 | 23 | 28B0080-000 |
| 6.78 ± .15 | 4.00 ± .13 | 14.22 ± .25 | 96 | 28B0268-000 |
| 9.53 ± .20 | 5.08 ± .15 | 14.48 ± .25 | 112 | 28B0375-100 |
| 9.53 ± .20 | 5.08 ± .15 | 19.05 ± .51 | 140 | 28B0375-300 |
| 9.53 ± .20 | 5.08 ± .15 | 4.83 ± .13 | 39 | 28B0375-400 |
| 9.91 ± .20 | 6.35 ± .15 | 13.46 ± .25 | 76 | 28B0390-000 |
| 12.70 ± .25 | 7.92 ± .15 | 6.35 ± .18 | 38 | 28B0500-100 |
| 14.27 ± .25 | 6.35 ± .15 | 10.16 ± .25 | 93 | 28B0562-000 |
| 14.27 ± .25 | 6.35 ± .15 | 13.46 ± .25 | 123 | 28B0562-100 |
| 14.27 ± .25 | 6.35 ± .15 | 28.57 ± .76 | 275 | 28B0562-200 |
| 14.27 ± .25 | 7.26 ± .15 | 15.24 ± .30 | 120 | 28B0563-000 |
| 14.27 ± .25 | 7.26 ± .15 | 28.57 ± .76 | 228 | 28B0563-200 |
| 14.48 ± .25 | 8.51 ± .152 | 5.51 ± .13 | 38 | 28B0570-000 |
| 14.99 ± .25 | 6.99 ± .15 | 27.94 ± .76 | 253 | 28B0590-000 |
| 14.99 ± .25 | 6.99 ± .15 | 28.57 ± .76 | 259 | 28B0590-200 |
| 15.24 ± .30 | 3.38 ± .13 | 6.35 ± .18 | 110 | 28B0600-000 |
| 15.65 ± .30 | 6.99 ± .15 | 28.57 ± .76 | 273 | 28B0616-000 |
| 15.88 ± .30 | 7.87 ± .15 | 14.27 ± .25 | 121 | 28B0625-000 |
| 15.88 ± .30 | 7.87 ± .15 | 28.57 ± .76 | 238 | 28B0625-100 |
| 16.00 ± .30 | 9.50 ± .20 | 6.35 ± .20 | 42 | 28B0630-100 |
| 16.00 ± .30 | 9.09 ± .20 | 11.99 ± .25 | 88 | 28B0631-000 |
| 16.00 ± .30 | 9.09 ± .20 | 27.99 ± .76 | 201 | 28B0631-100 |
| 16.99 ± .36 | 7.01 ± .20 | 24.99 ± .64 | 262 | 28B0669-000 |
| 17.07 ± .36 | 8.76 ± .20 | 25.40 ± .76 | 215 | 28B0672-000 |
| 17.42 ± .36 | 9.52 ± .20 | 6.35 ± .18 | 49 | 28B0686-000 |
| 17.42 ± .36 | 9.52 ± .20 | 12.70 ± .25 | 97 | 28B0686-100 |
| 17.42 ± .36 | 9.52 ± .20 | 28.57 ± .76 | 200 | 28B0686-200 |
| 18.67 ± .36 | 11.18 ± .20 | 28.57 ± .76 | 173 | 28B0734-000 |
| 18.67 ± .36 | 10.16 ± .20 | 28.57 ± .76 | 201 | 28B0735-000 |
| 18.67 ± .36 | 10.16 ± .20 | 14.27 ± .25 | 108 | 28B0735-300 |
| 18.67 ± .36 | 11.18 ± .20 | 17.02 ± .64 | 111 | 28B0736-200 |
| 20.95 ± .40 | 13.21 ± .25 | 6.35 ± .18 | 37 | 28B0825-000 |
| 22.10 ± .46 | 13.72 ± .25 | 6.35 ± .18 | 35 | 28B0870-000 |
| 22.10 ± .46 | 13.72 ± .25 | 12.70 ± .25 | 70 | 28B0870-100 |
| 25.40 ± .46 | 15.49 ± .30 | 12.70 ± .25 | 80 | 28B0999-000 |
| 25.40 ± .46 | 15.49 ± .30 | 6.35 ± .18 | 40 | 28B0999-100 |
| 25.40 ± .46 | 12.70 ± .25 | 12.70 ± .25 | 109 | 28B1000-000 |
| 25.40 ± .46 | 12.70 ± .25 | 6.35 ± .18 | 56 | 28B1000-400 |
| 25.91 ± .46 | 12.83 ± .25 | 28.57 ± .76 | 238 | 28B1020-100 |
| 28.50 ± .46 | 13.77 ± .25 | 28.57 ± .76 | 247 | 28B1122-100 |
| 29.01 ± .51 | 19.00 ± .38 | 7.49 ± .25 | 40 | 28B1142-000 |
| 29.01 ± .51 | 19.00 ± .38 | 13.84 ± .25 | 78 | 28B1142-100 |
| 31.12 ± .61 | 19.05 ± .41 | 15.93 ± .30 | 99 | 28B1225-000 |
| 31.12 ± .61 | 19.05 ± .41 | 7.92 ± .25 | 49 | 28B1225-100 |
| 31.75 ± .61 | 19.05 ± .41 | 22.22 ± .51 | 144 | 28B1250-000 |
| 31.75 ± .61 | 19.05 ± .41 | 15.93 ± .30 | 102 | 28B1250-100 |
| 35.23 ± .66 | 22.40 ± .46 | 12.70 ± .25 | 73 | 28B1387-000 |
| 36.00 ± .71 | 22.99 ± .46 | 12.70 ± .25 | 72 | 28B1417-200 |
| 38.86 ± .76 | 26.16 ± .51 | 28.58 ± .76 | 148 | 28B1531-000 |
| 60.96 ± 1.14 | 35.56 ± .64 | 12.70 ± .38 | 87 | 28B2400-000 |

Kemtron Ltd represent and distribute Ferrites for Steward Inc. Established in 1876 Steward is a leading producer of ferrite and related materials used in the electronics, copier, telecommunications, military and automotive industries. Ferrite for EMI suppressor products is nickel zinc and exhibit magnetic properties that are dependent on the frequency at which they are excited. In electronic applications the relation of the magnetic loss to frequency is utilised to attenuate interference frequencies where the materials losses are high, yet pass lower bands where data is carried.

By changing the ferrite composition, it is possible to alter the loss tangent so that attenuation can be enhanced in selected frequency ranges. Steward offers a family of ferrites with varying compositions to allow the user to select the optimum type for the application.

The product line:

- Cylindrical EMI suppression ferrites
- Rectangular EMI suppression ferrites
- EMI suppression ferrites for connectors
- EMI suppression ferrites for DIL IC's
- Common mode power/data line EMI ferrites
- Power/data line EMI suppression ferrites
- Split ferrites for round cables
- Split ferrites for flat cables
- Multiple turn devices
- Axial lead ferrites
- Surface mount EMI ferrites

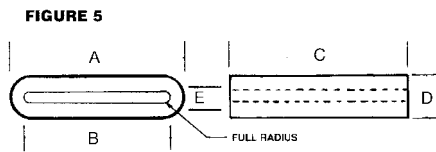
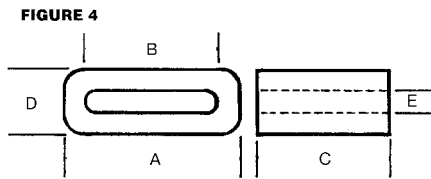
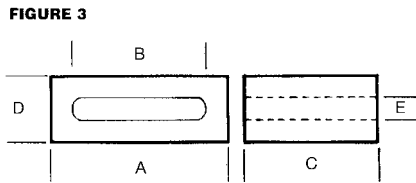
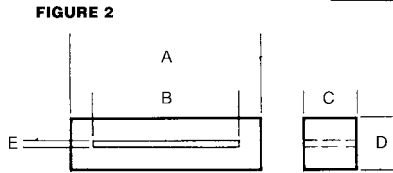
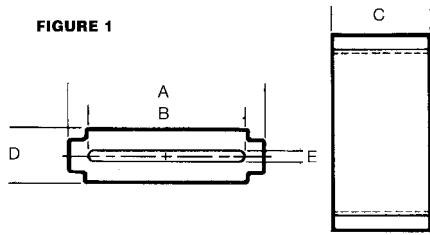
Shown are the more common parts, for a full Steward Catalogue please contact us.

Large stocks of most parts are held at our warehouse and available for next day delivery.

All impedance values are Net; they are based on the ferrite cores only.

DIMENSIONS ARE IN MILLIMETRES

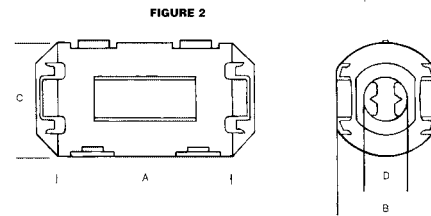
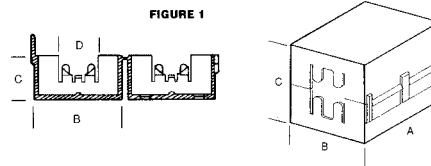
Solid Flat Ribbon Ferrites



| Fig | A | B | C | D | E | Imp@100MHz | Part No. |
|-----|-------------|------------|------------|---------------|--------------|------------|-------------|
| 4 | 10.00±.20 | 7.01±.15 | 10.00±.25 | 7.01±.15 | 4.01±.15 | 50 | 28R0393-000 |
| 4 | 10.00±.20 | 7.01±.15 | 20.02±.51 | 7.01±.15 | 4.01±.15 | 100 | 28R0393-100 |
| 3 | 22.35±.51 | 14.00±.15 | 19.05±.64 | 7.75±.38 | 1.50±.25 | 145 | 28R0880-000 |
| 1 | 27.97±.64 | 22.94±.50 | 14.66±.38 | 7.75±.38 | 1.50±.25 | 95 | 28R1101-000 |
| 1 | 27.97±.64 | 22.94±.50 | 6.81±.20 | 7.75±.38 | 1.50±.25 | 44 | 28R1101-100 |
| 5 | 28.58±.51 | 23.51±.51 | 31.00±1.0 | 7.70±.51 | 1.68±.38 | 193 | 28R1127-000 |
| 5 | 31.12±.51 | 24.76±.51 | 6.35±.38 | 8.26±.38 | 1.90±.38 | 46 | 28R1227-000 |
| 5 | 32.00±.51 | 27.58±.51 | 2.98±.20 | 5.00±.30 | .51±.13 | 21 | 28R1260-000 |
| 5 | 37.01±.64 | 33.00±.51 | 13.46±.25 | 4.50±.38-13 | .50±.20-13 | 42 | 28R1457-400 |
| 3 | 38.53±.76 | 26.77±.76 | 25.40±.76 | 12.07±.51 | 1.91±.51 | 206 | 28R1517-000 |
| 1 | 38.60±.76 | 26.92±.64 | 25.40±.76 | 12.19±.51 | 1.88±.46 | 206 | 28R1518-000 |
| 5 | 15.50±.38 | 13.50±.38 | 10.00±.25 | 3.40±.50 | 1.40±.51 | 32 | 28R1550-000 |
| 2 | 45.80±.89 | 34.42±.64 | 28.58±.64 | 12.45±.51 | 1.52±.51 | 249 | 28R1775-000 |
| 2 | 63.50±1.27 | 52.07±1.02 | 28.58±.64 | 12.70±.51 | 1.68±.51 | 264 | 28R1779-000 |
| 2 | 63.50±1.27 | 52.07±1.02 | 12.98±.38 | 12.70±.51 | 1.68±.51 | 120 | 28R1779-100 |
| 2 | 60.81±.76 | 50.80±1.02 | 15.49±.41 | 17.63±1.14-38 | 7.62±1.14-38 | 74 | 28R2002-100 |
| 3 | 55.12±1.27 | 43.69±1.02 | 25.40±.76 | 12.70±.51 | 1.27±.38 | 262 | 28R2170-000 |
| 3 | 55.12±1.27 | 43.69±1.02 | 12.70±.51 | 12.70±.38 | 1.27±.38 | 141 | 28R2170-100 |
| 5 | 56.90±1.02 | 52.32±1.02 | 5.00±.20 | 5.59±.38 | 1.02±.25 | 34 | 28R2240-000 |
| 3 | 60.81±1.27 | 50.80±1.02 | 15.49±.030 | 13.61±1.02-64 | 7.52±.64 | 60 | 28R2393-000 |
| 3 | 80.00±1.397 | 68.58±1.27 | 12.70±.51 | 12.00±.64 | 1.91±.51 | 93 | 28R3149-000 |

All impedance values are Net; they are based on the ferrite cores only.

Split Round Cable Ferrites with Plastic Case



| Fig | A | B | C | D | Imp@100MHz | Part No. |
|-----|------|------|------|------|------------|-------------|
| 2 | 25.0 | 11.2 | 12.8 | 5.0 | 130 | 28A0392-0A* |
| 1 | 32.5 | 29.0 | 29.6 | 13.0 | 240 | 28A2024-0A* |
| 1 | 32.5 | 17.9 | 18.4 | 7.0 | 279 | 28A2025-0A* |
| 1 | 32.5 | 21.5 | 22.3 | 10.0 | 209 | 28A2029-0A* |

All impedance values are Net; they are based on the ferrite cores only.

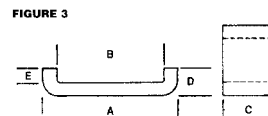
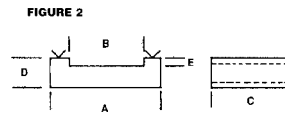
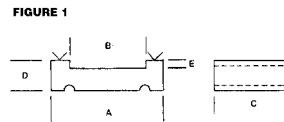
*0A0= White Plastic Snap On Case (Standard stock colour)

0A1= Gray Plastic Snap On Case

0A2= Black Plastic Snap On Case

0A3= Beige Plastic Snap On Case

Split Flat Ribbon Cable Ferrites



| Fig | A | B | C | D | E | Imp@100MHz | Part No. |
|-----|------------|------------|-----------|----------|---------|------------|-------------|
| 3 | 17.02±.25 | 12.50±.20 | 15.00±.20 | 3.40±.20 | .51±.20 | 93 | 28S0670-000 |
| 2 | 43.59±.76 | 35.00±.70 | 28.0±.58 | 5.26±.23 | .95±.25 | 153 | 28S1517-000 |
| 1 | 63.50±1.27 | 52.07±1.02 | 28.58±.64 | 6.35±.25 | .84±.25 | 250 | 28S2001-000 |
| 1 | 76.20±1.52 | 65.28±1.27 | 28.58±.64 | 6.68±.25 | .84±.25 | 232 | 28S2011-000 |
| 1 | 76.20±1.52 | 65.28±1.27 | 15.01±.64 | 6.35±.25 | .84±.25 | 122 | 28S2011-100 |
| 1 | 88.90±1.78 | 78.23±1.52 | 28.58±.76 | 6.48±.25 | .84±.25 | 240 | 28S2012-000 |
| 1 | 88.90±1.78 | 78.23±1.52 | 12.70±.76 | 6.48±.25 | .84±.25 | 106 | 28S2012-100 |
| 1 | 45.09±.89 | 34.42±.64 | 28.58±.64 | 6.35±.25 | .84±.25 | 226 | 28S2022-000 |
| 1 | 38.10±.76 | 26.67±.76 | 25.40±.51 | 6.35±.25 | .84±.25 | 217 | 28S2023-000 |

All impedance values are Net; they are based on the ferrite cores only.

Split ferrites for flat cables are sold as single sides. It is necessary to order two sides to form one set.

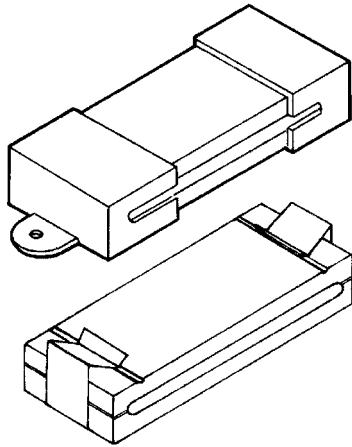
Metal or Plastic clips are available for the split ferrites.

To specify Plastic Clip, replace the second character after the dash with "P". Example: 28S2022-0P0

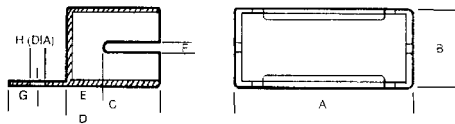
To specify Metal Clip, replace the second character after the dash with "M". Example: 28S2022-0M0

DIMENSIONS ARE IN MILLIMETRES

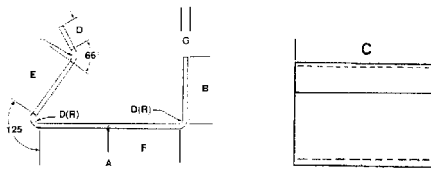
Clips for Split Ferrites for Flat Cables



Plastic End Clip



Metal End Clip



| Description | A | B | C | D | E | F | G | H |
|-------------------------------|-------|-------|-------|-------|------|------|------|------|
| Plastic End Clip ASSE001-2 | 31.50 | 15.49 | 16.51 | 26.72 | 6.73 | 2.41 | 6.35 | 3.50 |
| Metal End Clip ASSE017-2 | 15.67 | 7.11 | 12.70 | 5.08 | 7.26 | 7.82 | 0.53 | |

DIMENSIONS ARE IN MILLIMETRES