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## S-251-43-2P

### Features

NiZn ferrite with a range of 20 to 250 MHz for suppression of conducted EMI, that is used for inductive applications (ex: high frequency common-mode chokes)

Broadband frequency range of 25-300 MHz. Suppressing frequencies up to 500 MHz. Multi-strand cable common mode filtering and single conductor differential mode filtering.

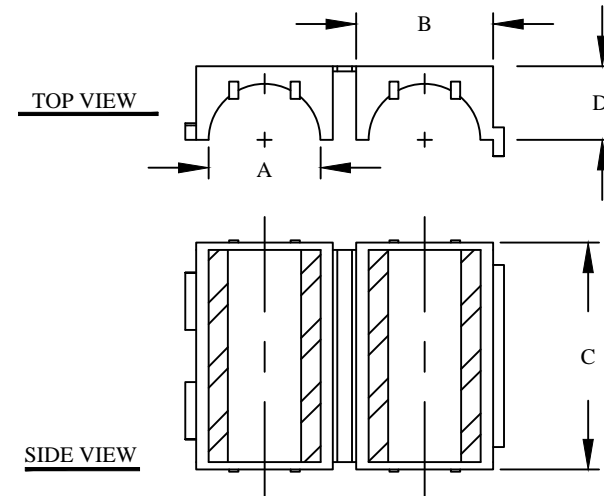
#### Electrical Specifications

| Item                                 | Unit/Symbol                             | Condition                     | Value           | Tol.       |
|--------------------------------------|---|-------------------------------|-----------------|------------|
| Typical Impedance                    | $\Omega$                                | 10 MHz                        | 100             | Typ.       |
| Typical Impedance                    | $\Omega$                                | 25 MHz                        | 163             | 130 Min.   |
| Typical Impedance                    | $\Omega$                                | 100 MHz                       | 275             | $\pm 20\%$ |
| Typical Impedance                    | $\Omega$                                | 250 MHz                       | 275             | Typ.       |
| Initial Permeability                 | $\mu_0$                                 | @ B < 10 gauss                | 800             | Nom.       |
| Temp. Coeff. Of initial Permeability | %, °C                                   | 20 - 70 °C                    | 1.25            | Typ.       |
| Coercive Force                       | H <sub>c</sub>                          | oersted                       | 0.45            | Typ.       |
| Residual Flux Density                | Gauss, B <sub>r</sub>                   | N/A                           | 1300            | Typ.       |
| Flux Density                         | Gauss, B                                | Initial (B), oersted          | 2900            | Typ.       |
|                                      | Gauss, H                                | @ Field Strength (H), oersted | 10              | Typ.       |
| Curie temperature                    | °C                                      | T <sub>c</sub>                | > 130           | Nom.       |
| Resistivity                          | $\Omega$ cm, $\rho$                     | @ Field Strength              | 10 <sup>5</sup> | Typ.       |
| Loss Factor                          | 10 <sup>-6</sup> , tan $\delta$ / $\mu$ | Initial                       | 250             | Typ.       |
|                                      | MHz                                     | @ Frequency                   | 1               | Typ.       |

#### Dimensions

|        | Cable Diameter | A     | B<br>(Core Dimension) | C     | D     | E   |
|--------|----------------|-------|-----------------------|-------|-------|-----|
| In     | 0.250          | 0.275 | 0.705                 | 1.272 | 0.362 | N/A |
| Tol.   | Max.           | Nom.  | Nom.                  | Nom.  | Nom.  | N/A |
| mm     | 6.40           | 7.00  | 17.90                 | 32.30 | 9.20  | N/A |
| Tol.   | Max.           | Nom.  | Nom.                  | Nom.  | Nom.  | N/A |
| Weight | 31.00 g        |       |                       |       |       |     |

| REVISION HISTORY |     |                    |             |         |     |         |
|------------------|-----|--------------------|-------------|---------|-----|---------|
| REV              | ECN | DESCRIPTION        | SIGN & DATE |         |     |         |
|                  |     |                    | BY          | DATE    | AP. | DATE    |
| A                |     | Production release | EO          | 9/27/13 | JL  | 9/27/13 |
|                  |     |                    |             |         |     |         |



**For additional detail, specifications and charts see:**

[http://www.bytemark.com/products/ferrite\\_matl.htm](http://www.bytemark.com/products/ferrite_matl.htm)

| CODE IDENT   | MFG. P/N   | DESCRIPTION  | ITEM NO.                              |
|--------------|------------|--|---------------------------------------|
|              |            |  |                                       |
| PARTS LIST   |            |  |                                       |
| AUTOCAD      | X          |  |                                       |
| SOLIDWORKS   |            |  |                                       |
| SIGN         | DATE       | www.coilws.com   | CWSBYTEMARK                           |
| DRAWN        | EO 9/27/13 | www.cwsbytemark.com  | 353 West Grove Ave. Orange, CA. 92865 |
| CHECKED      | JL 9/27/13 | <b>Round Cable Snap-In RF Filter<br/>Material 43, NiZn</b> |                                       |
| ENGR.        | JL 9/27/13 |  |                                       |
| APPR.        | JL 9/27/13 |  |                                       |
| TITLE:       |            | SIZE   | DWG. NO.                              |
|              |            | B  | S-251-43-2P                           |
| SCALE        |            | REV  |                                       |
| N/A          |            | A  |                                       |
| SHEET 1 OF 1 |            |  |                                       |

UNLESS OTHERWISE SPECIFIED  
 DIMENSIONING AND TOLERANCE PER ANSI Y14.5M  
 ALL DIMENSIONS ARE IN INCHES AND [MILLIMETERS].  
 TOLERANCE INCHES:  
 .XXX=±.005 .XX=±.015 <math>\angle=±0°30'</math>  
 TOLERANCE METRICS:  
 .XXX=±.127 .XX=±.38 <math>\angle=±0°30'</math>  
 ANGLE PROJECTION   
 DO NOT SCALE DRAWING