

# MAGNETIC PROPERTIES OF FERRITE MATERIALS

| Material type                    | 77                                | 83                               | F                               | J                                | K                              | W                              | H                               |
|----------------------------------|-----------------------------------|----------------------------------|---------------------------------|----------------------------------|--------------------------------|--------------------------------|---------------------------------|
| Initial Perm.                    | 2000                              | 300                              | 3000                            | 5000                             | 290                            | 10,000                         | 15,000                          |
| Max. Perm.                       | 6000                              | 3600                             | 4300                            | 9500                             | 400                            | 20,000                         | 23,000                          |
| Max Flux den. @ 10 oer, (gauss)  | 4600                              | 3900                             | 4700                            | 4300                             | 330                            | 4300                           | 4200                            |
| Residual Flux density, (gauss)   | 1150                              | 3450                             | 900                             | 500                              | 250                            | 800                            | 800                             |
| Vol. Resist. (ohms-cm)           | $1 \times 10^2$                   | $1.5 \times 10^3$                | $1 \times 10^2$                 | $1 \times 10^2$                  | $20 \times 10^7$               | $.15 \times 10^2$              | $.1 \times 10^2$                |
| Temp. Coeff. -20°C - 70°C (%/°C) | .25%                              | .4%                              | .25%                            | .4%                              | .15%                           | .4%                            | .4%                             |
| Loss Factor                      | $4.5 \times 10^{-6}$<br>@ 0.1 MHz | $50 \times 10^{-6}$<br>@ 0.1 MHz | $4 \times 10^{-6}$<br>@ 0.1 MHz | $15 \times 10^{-6}$<br>@ 0.1 MHz | $28 \times 10^{-6}$<br>@ 1 MHz | $7 \times 10^{-6}$<br>@ 10 KHz | $15 \times 10^{-6}$<br>@ 10 KHz |
| Coercive Force (Oersteds)        | .22                               | .45                              | .20                             | .10                              | 1                              | .04                            | .04                             |
| Curie Temp. °C                   | 200                               | 300                              | 250                             | 140                              | 280                            | 125                            | 120                             |
| Resonant Cir. Freq. (MHz)        | 1 KHz to 2 MHz                    | 1 KHz to 5 MHz                   | 1 KHz to 1 MHz                  | 1 KHz to 1 MHz                   | 0.1 to 30 MHz                  | 1 KHz to 250 KHz               | 1 KHz to 150 KHz                |
| Wideband Freq. (MHz *)           | .5 to 30 MHz                      | 1 to 15 MHz                      | .5 to 30 MHz                    | 1 to 15 MHz                      | 50 to 500 MHz                  | 1 KHz to 1 MHz                 | 1KHz to 1 MHz                   |
| Attenuation RF Noise, (MHz)      | 1 to 40 MHz                       | 0.5 to 20 MHz                    | 1 to 20 MHz                     | 0.5 to 10 MHz                    | 200 to 5,000 MHz               | 100 KHz to 1 MHz               | 1 KHz to 500 KHz                |

\* Based on low power, small core application. Listed frequencies will be lower with higher power.