

IRON POWDER MATERIAL

MATERIAL #0 ($\mu=1$):

Most commonly used for frequencies above 100 MHz. Available in toroidal form only. Note: Due to the nature of this material the inductance resulting from the use of the given AL value may not be as accurate as we would like. Inductance vs. number of turns will vary greatly depending upon the winding technique.

MATERIAL #1 ($\mu=20$):

A Carbonyl 'C' material, very similar to material #3 except that it has higher volume resistivity and better stability. Available in toroidal form and shielded coil form.

MATERIAL #2 ($\mu=10$):

A Carbonyl 'E' iron powder material having high volume resistivity. Offers high 'Q' for the 2 MHz to 30 MHz. frequency range. Available in toroidal form and shielded coil form.

MATERIAL #3 ($\mu=35$):

A carbonyl 'HP' material having excellent stability and good 'Q' for the lower frequencies from 50 KHz. to 500 KHz. Available in toroidal form and shielded coil form.

MATERIAL #6 ($\mu=8$):

A carbonyl 'SF' material. Offers very good 'Q' and temperature stability for the 20 MHz to 50 MHz frequency range. Available in both toroidal form and shielded coil form.

MATERIAL #7 ($\mu=9$):

A carbonyl 'TH' material. Very similar to the #2 and #6 materials but offers better temperature stability than either. Available in both toroidal form and shielded coil form. Frequency ranges from 5 MHz to 35 MHz.

MATERIAL #10 ($\mu=6$):

A powdered iron 'W' material. Offers good 'Q' and high stability for frequencies from 40 MHz to 100 MHz. Available in toroidal form and shielded coil form.

MATERIAL #12 ($\mu=4$):

A synthetic oxide material which provides good 'Q' and moderate stability for frequencies from 50 MHz to 200 MHz. If high 'Q' is of prime importance this material is a good choice. If stability is of a prime importance, consider the #17 material. The #12 material is available in all sizes up to T-94, in toroidal form. Not available in shielded coil form.

MATERIAL #15 ($\mu=25$):

A carbonyl 'GS6' material. Has excellent stability and good 'Q'. A good choice for commercial broadcast frequencies where good 'Q' and stability are essential. Available in toroidal form only.

MATERIAL #17 ($\mu=4$):

This is a new carbonyl material which is very similar to the #12 material except that it has better temperature stability. However, as compared to the #12 material, there is a slight 'Q' loss of about 10 % from 50 MHz to 100 MHz. Above 100 MHz, the 'Q' will gradually deteriorate to approximately 20% lower. It is available in both toroidal form and the shielded coil form.

MATERIAL #26 ($\mu=75$):

A Hydrogen Reduced material. Has highest permeability of all of the iron powder materials. Used for EMI filters and DC chokes. The #26 is very similar to the older #41 material but can provide an extended frequency range.