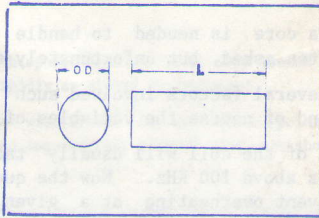
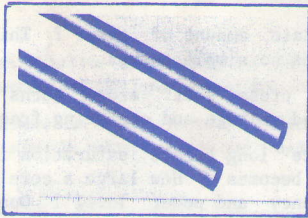


## Ferrite Rods



Part number	Material	Permeability	Diameter (in)	Length (in)	Al value mh/1000 t	Ampere turns
R61-025-400	61	125	.25	4.0	26	110
R61-033-400	61	125	.50	4.0	32	185
R61-050-400	61	125	.50	4.0	43	575
R61-050-750	61	125	.50	7.5	49	260
R33-037-400	33	800	.37	4.0	62	290
R33-050-200	33	800	.50	2.0	51	465
R33-050-400	33	800	.50	4.0	59	300
R33-050-750	33	800	.50	7.5	70	200

FERRITE RODS are available in various sizes of both the #33 and #61 materials, which are standard stock items here at Amidon. The most common use of a ferrite rods is for antennas and choke applications.

ANTENNAS: The #61 material rods are widely used for commercial AM radio antennas and on up to 10 MHz. The #33 material rods are more suitable for the VLF frequency range.

CHOKE APPLICATIONS; Both the #33 and the #61 material rods are extensively used in choke applications. The #33 material should be selected for the 40 and 80 meter bands and the #61 material is most suitable for 10 through 40 meters. The #33 material rods are also often used in speaker cross-over networks. Due to the open magnetic structure of the rod configuration, considerable current can be tolerated before it will saturate.

There are several factors that have a direct bearing on the effective permeability of a ferrite rod, which in turn will effect inductance and 'Q', as well as the  $A_L$  value of the rod and its ampere-turns rating. These are: (1) Length to diameter ratio of the rod, (2) Placement of the coil on the rod, (3) Spacing between turns and, (4) Air space between the coil and the rod. In some cases the effective permeability of the rod will be influenced more by a change in the length to diameter ratio than by a change in the initial permeability of the rod. At other times, just the reverse will be true.

Greatest inductance and  $A_L$  value will be obtained when the winding is centered on the rod, rather than placed at either end. The best 'Q' will be obtained when the winding covers the entire length of the rod.

Because of all of the above various conditions it is very difficult to provide workable  $A_L$  values, however we have attempted to provide a set of  $A_L$  and NI values for various types of rods in our stock. These figures are based on a closely wound coil of #22 wire, placed in the center of the rod and covering nearly the entire length. Keep in mind that there are many variables and that the inductance will vary according to winding technique.