

6 WIDE-BAND CHOKES

Wide-Band Chokes

Wide-band chokes are wound 6 hole ferrite slugs, made in 3B and 4B material, with 1.5, 2.5 or 2 × 1.5 turns of tinned copper wire. These wide-band chokes are used for interference suppression in a multitude of applications.

Figure 1 shows the performance curves of these choke types. Above approximately 60 MHz, the impedance is substantially resistive and nearly constant. The wide-band chokes may be used with small ceramic capacitors. The self resonance of the capacitor will provide additional attenuation. See Figure 2 below. The influence of a DC bias upon the performance is shown for the 2.5 turn chokes in Figures 3 and 4.

Note that where twin leads are accessible, double chokes (2 × 1.5 turns) may be used to take advantage of the mutual inductance.

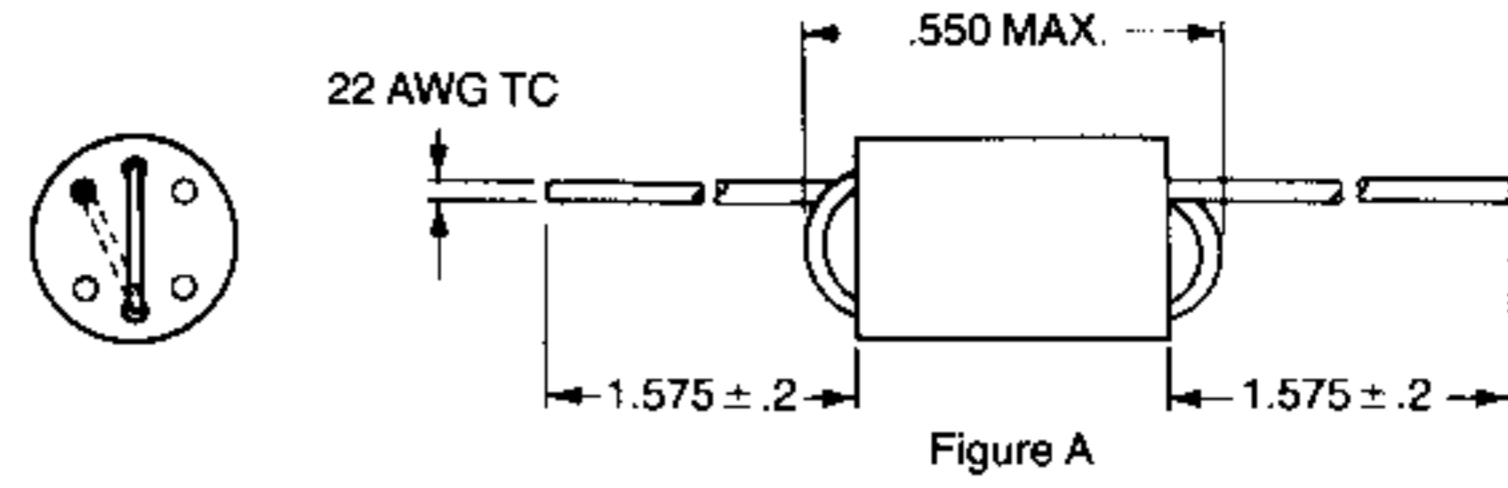


Figure A

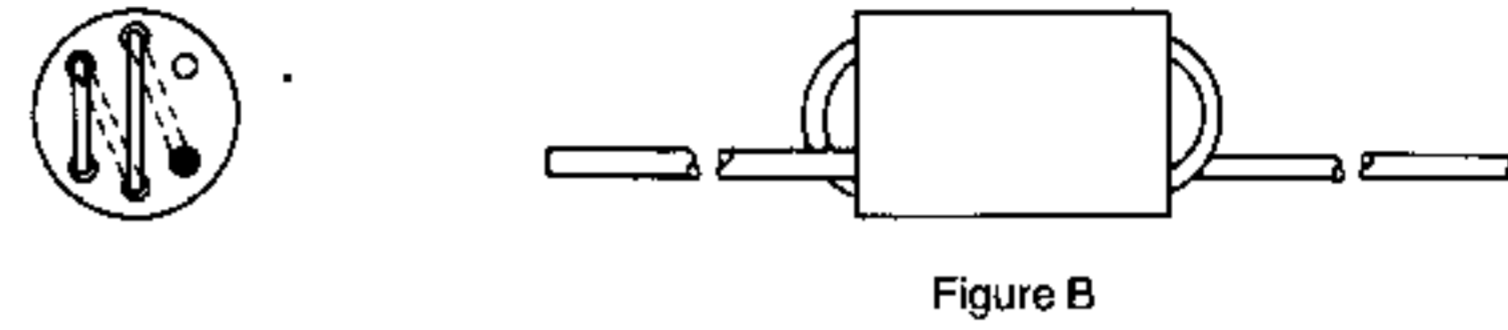


Figure B

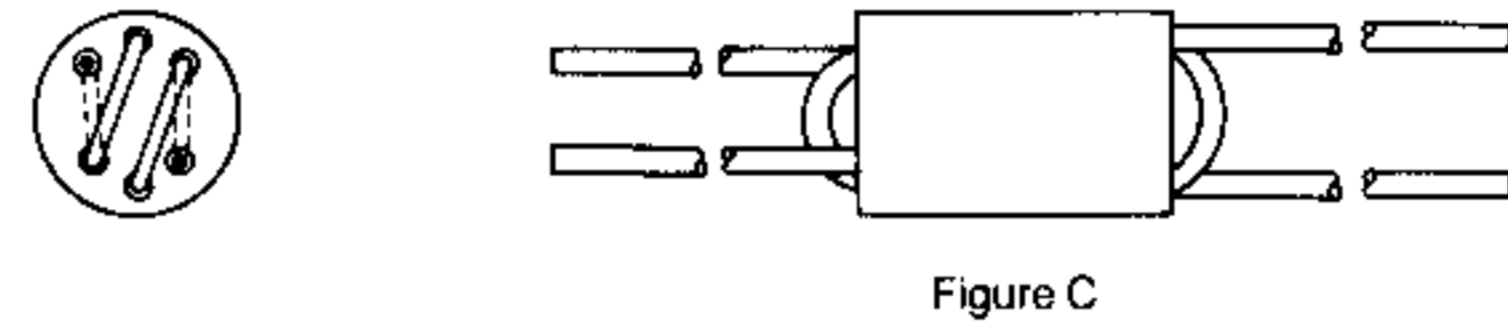


Figure C

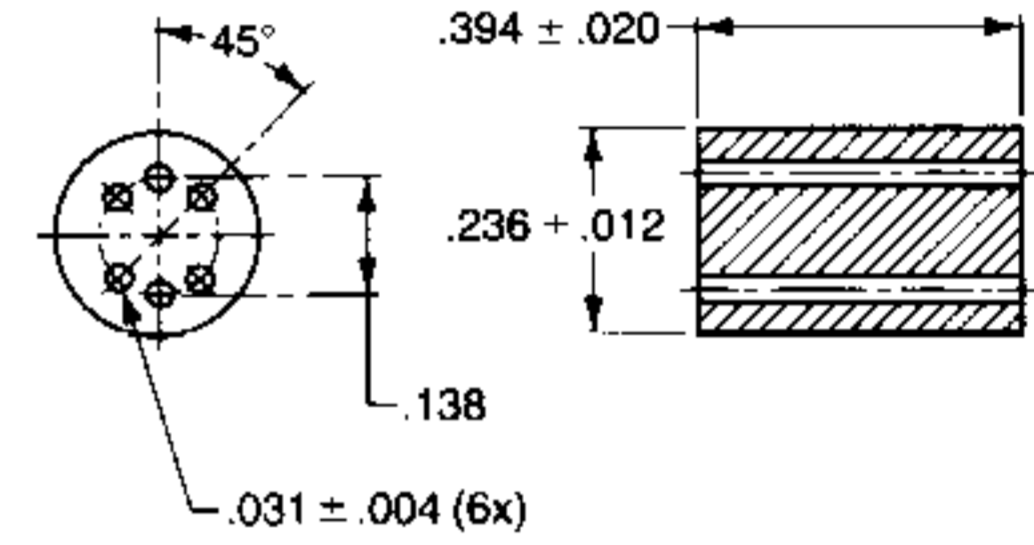


Figure D

PART NO.	CORE MATERIAL	NO. OF TURNS	MIN. Z (Ω)	FREQ. (MHz)	FIG.
VK 21107-3B	3B	—	—	—	D
VK 21117-4B	4B	—	—	—	D
VK 20009-3B	3B	1½	300	120	A
VK 20019-4B	4B	1½	350	250	A
VK 20010-3B	3B	2½	600	50	B
VK 20020-4B	4B	2½	700	180	B
VK 20011-3B	3B	2 × 1½	700*	50	C
VK 20021-4B	4B	2 × 1½	800*	110	C

*Measured with the two 1½ turn windings in series.

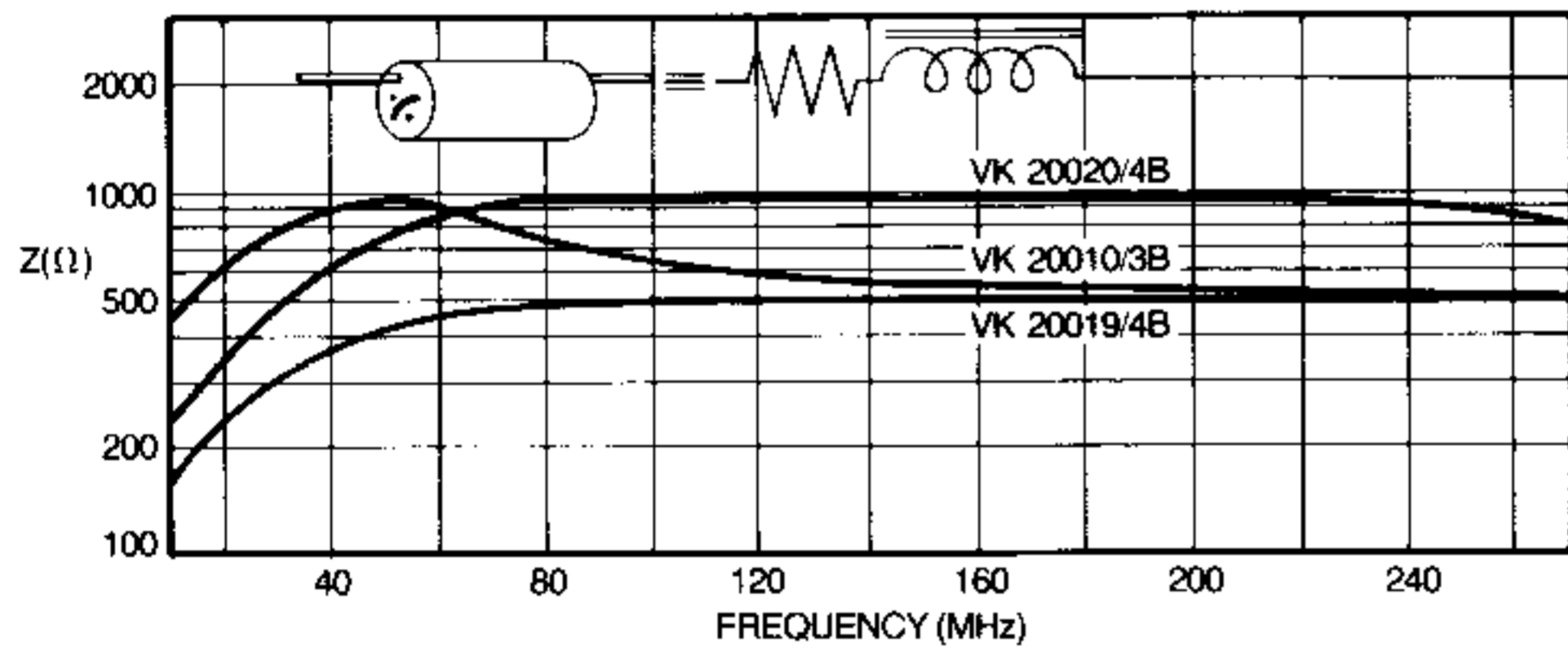


Figure 1. Impedance curves of wide-band chokes.

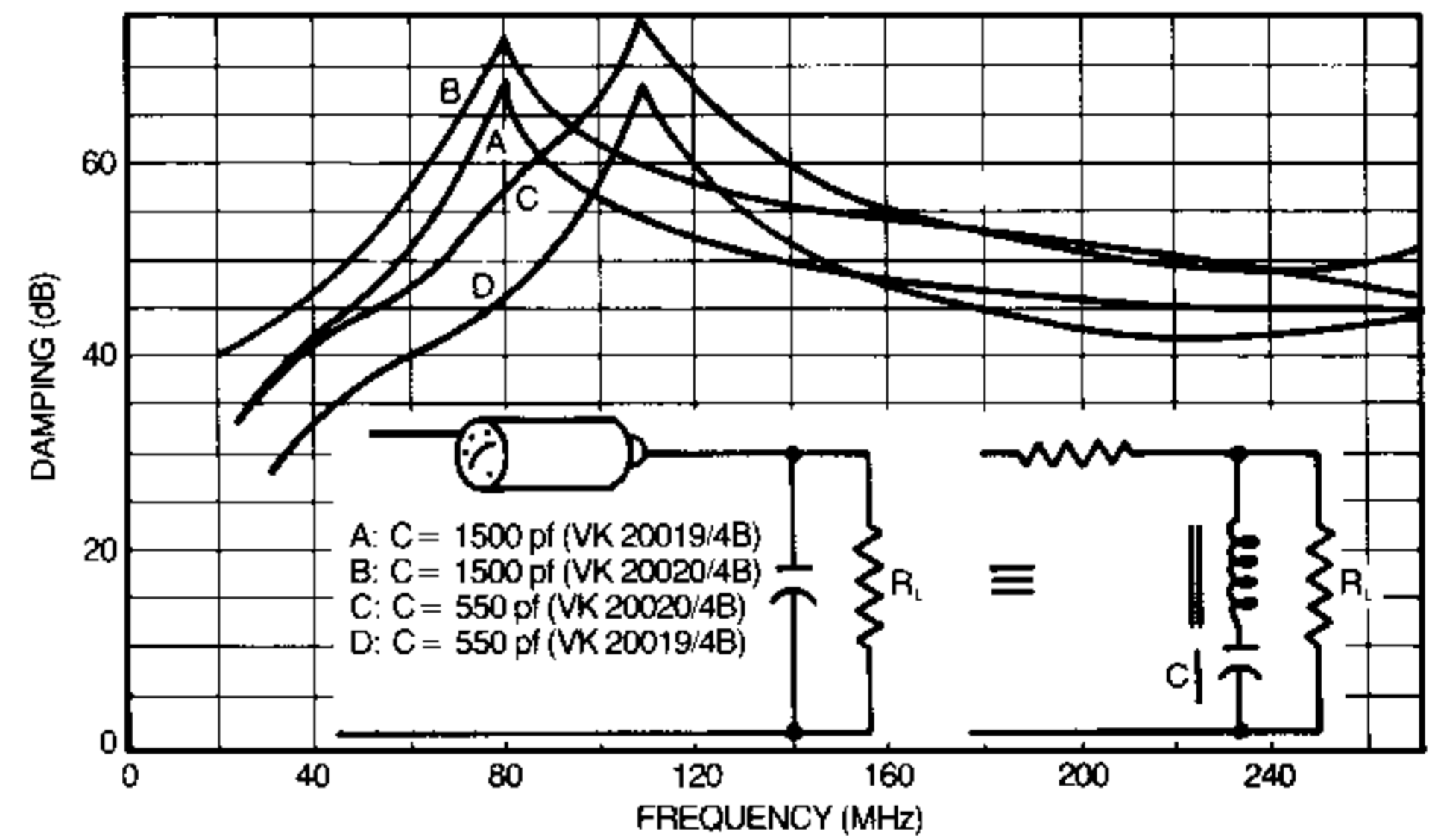


Figure 2. Typical damping curves for VK chokes with additional parallel ceramic capacitors

Effect of DC bias upon the damping characteristics of 2½ turn chokes.

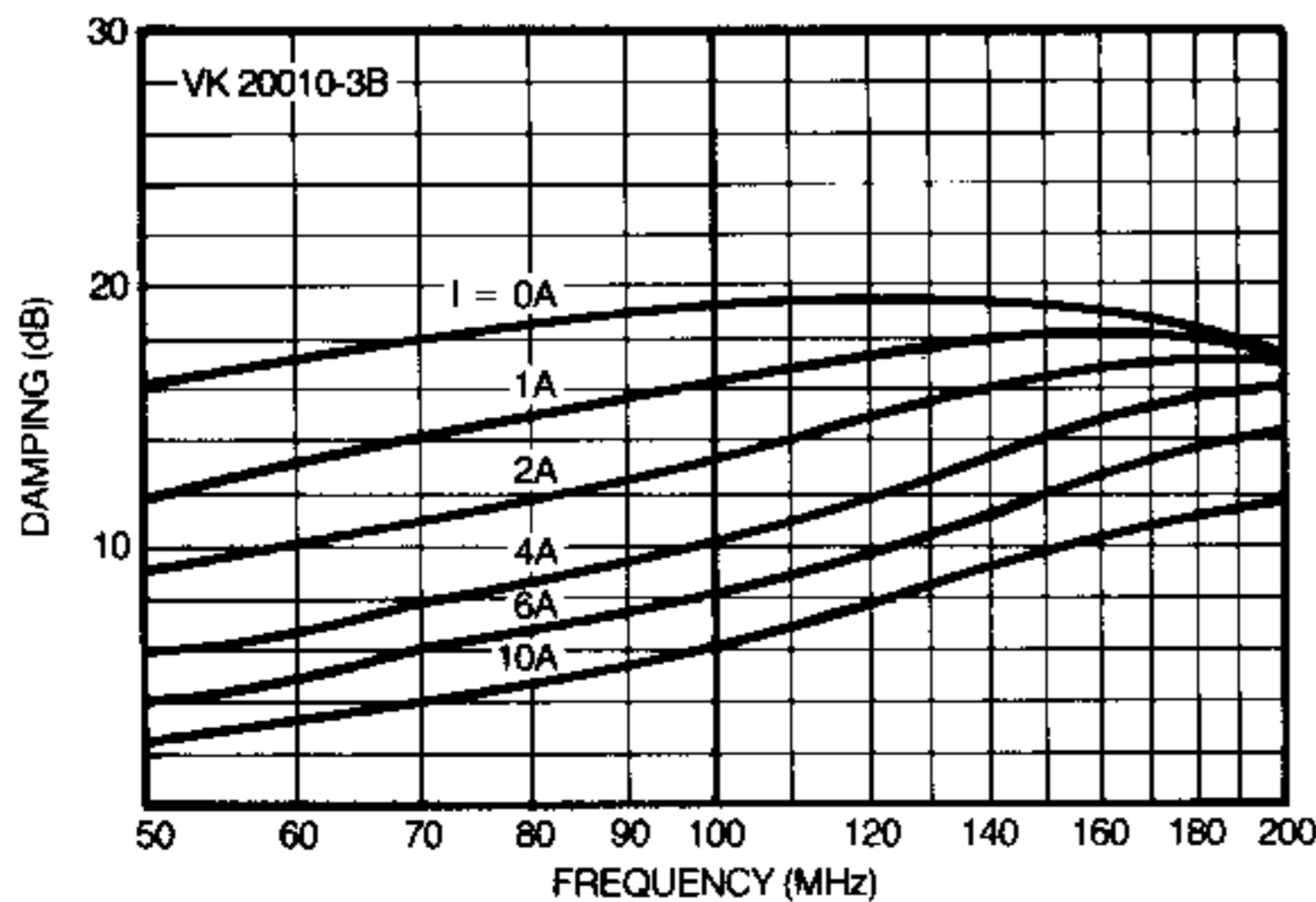


Figure 3. 2½ Turn choke, 3B material

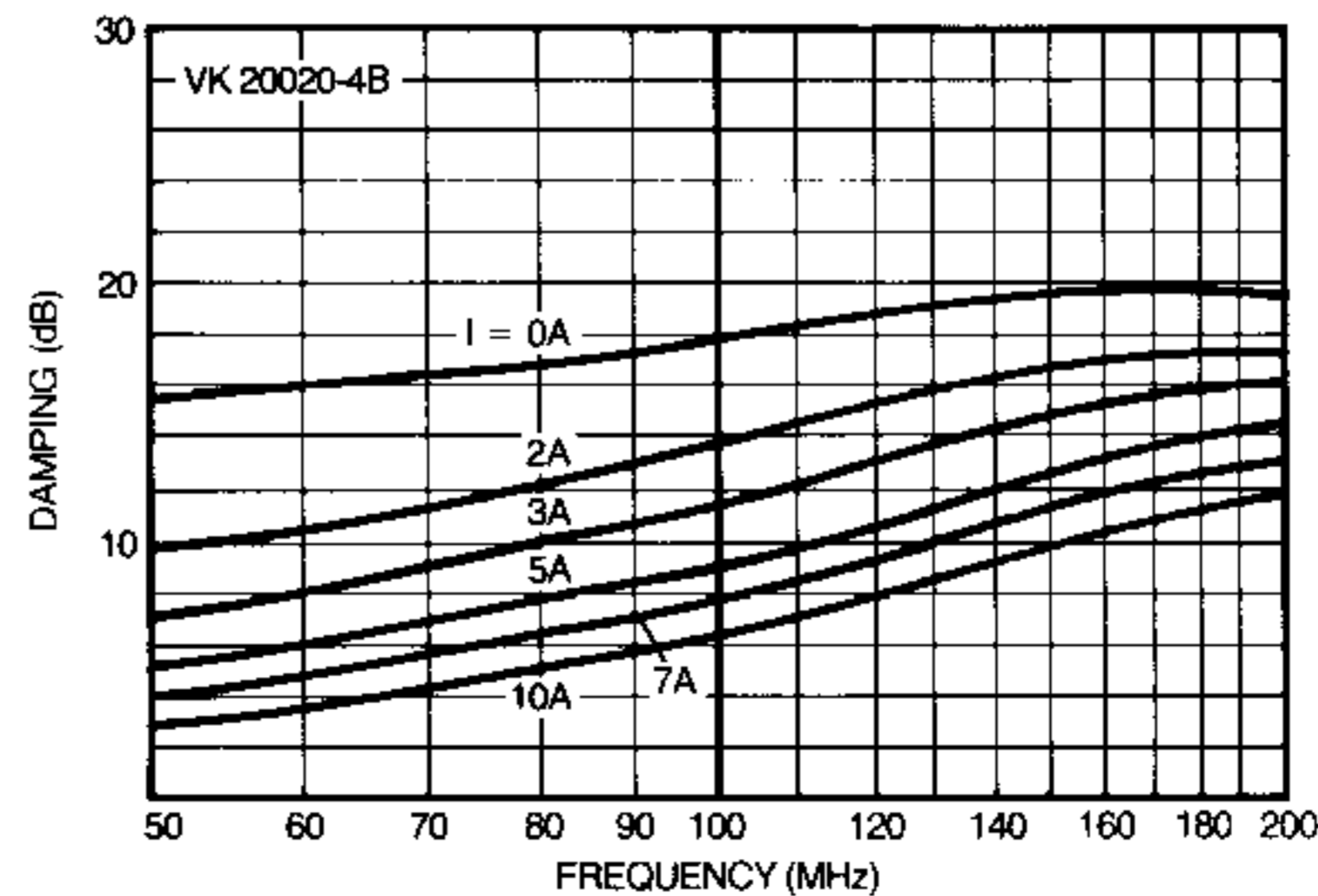


Figure 4. 2½ Turn choke, 4B material