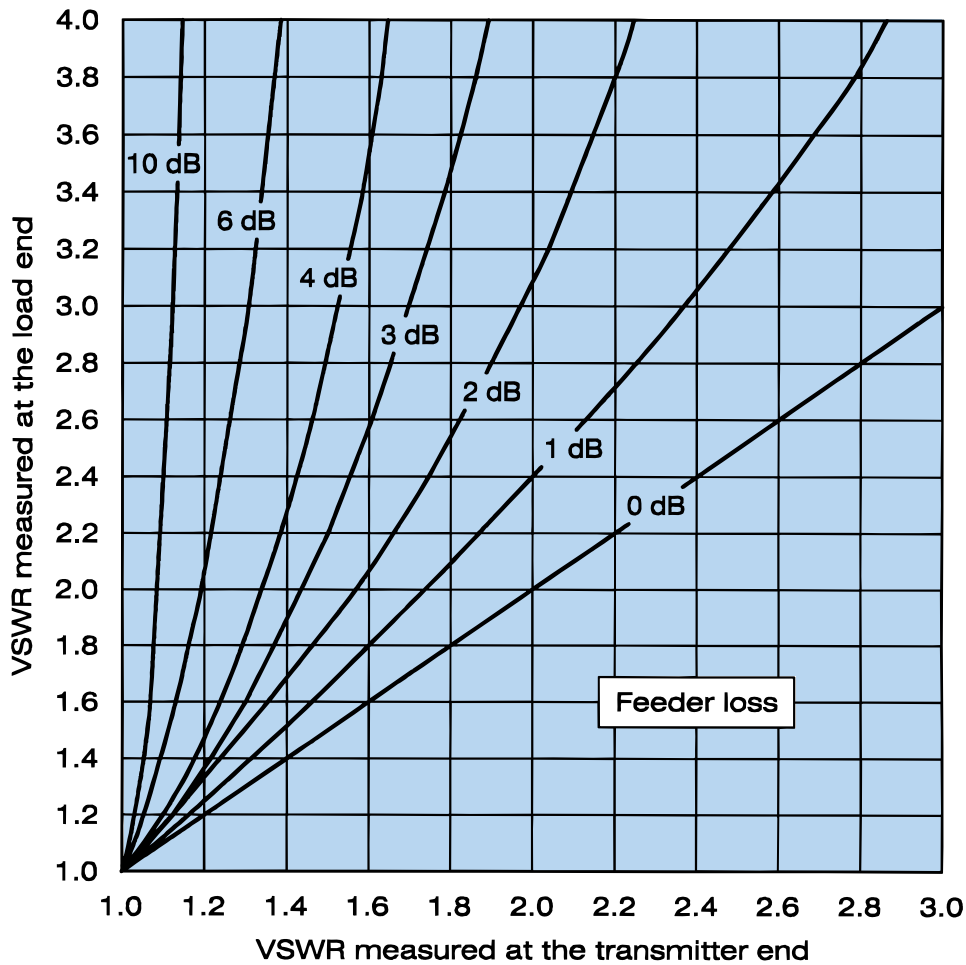


SWR including Feeder Loss



DESCRIPTION:

When transmission line losses are negligible, the VSWR may be measured at any convenient point on the line. However, when measurements are taken at the transmit end of the system, a lossy feeder will tend to mask the effects of poor VSWR at the antenna end and the VSWR will look better than it actually is.

The above graph shows how measured VSWR (at the antenna) will be greater than the VSWR measured at the transmit end and the ratio will vary with line loss.

Example:

The transmit power is 100 W, feeder losses are 3 dB. Only 50 W arrives at the load (which has a termination VSWR of 4:1). So, 36% of the 50 W (18 W) is reflected back (of which a further 9 W (50%)) is lost before reaching the measurement point. The forward and reflected (measured) powers give an apparent VSWR of 1.85:1, and not the actual value of 4:1.

