



SKYWORKS®

## APPLICATION NOTE

# Coaxial Resonator Dimensions and Configurations\*

Skyworks coaxial resonator components are available in the frequency range of 300 MHz to 6 GHz. Seven mechanical profiles are offered to give the designer the greatest flexibility in selecting the electrical quality factor (Q). The high profile (HP) has the highest Q and size. The enhanced Q profile (EP) offers a high Q and wide frequency offering. The standard profile (SP) offers a compromise of electrical Q and size, and should be considered the component of choice for most applications.

Skyworks offers four smaller profiles for occasions when available space is restricted. The low profile (LP), large profile (LS), miniature profile (MP), and sub-miniature profile (SM) provide the designer with a trade-off between electrical Q and compact size. Skyworks' low profile (LP) and large profile (LS) both have the same outer physical dimensions. They differ in the dimension of the inner diameter, which allows for different characteristic impedances, and increases the options available to designers. Overall comparisons can be determined from the given Q curves or by utilizing Skyworks' COAX Program.

These components are available in square configurations with dimensions shown in Figure 1.3a–1.3g.

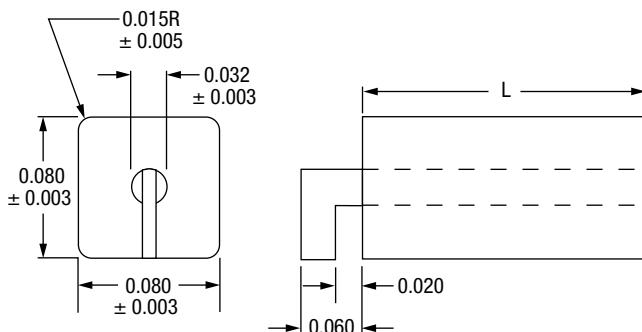


Figure 1.3a. SM – Sub-Miniature Profile (2 mm)

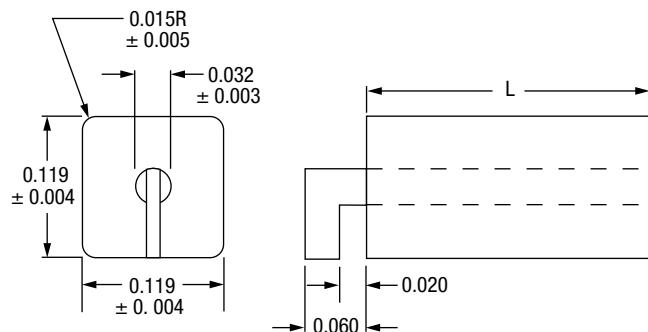


Figure 1.3b. MP – Miniature Profile (3 mm)

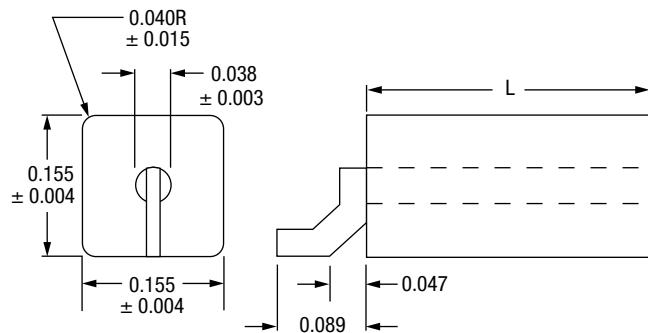


Figure 1.3c. LP – Low Profile (4 mm)

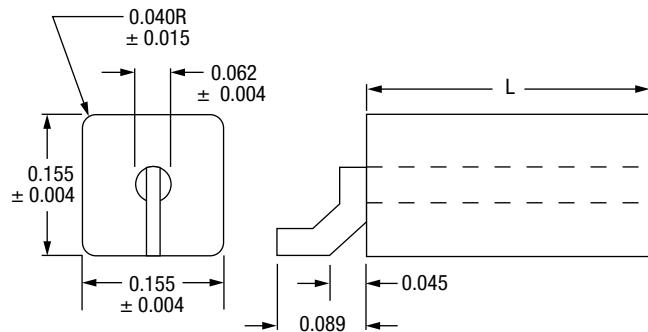


Figure 1.3d. LS – Large Diameter (4 mm)

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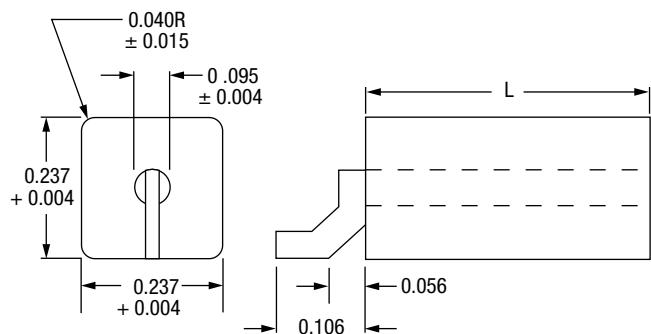


Figure 1.3e. SP – Standard Profile (6 mm)

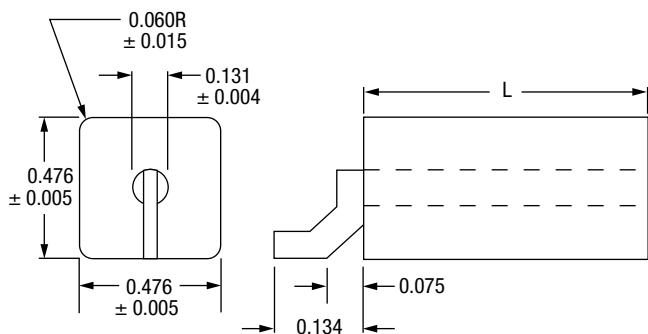


Figure 1.3g. HP – High Profile (12 mm)

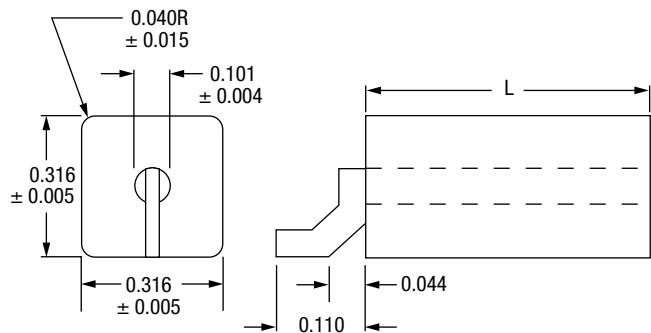


Figure 1.3f. EP – Enhanced Q Profile (8 mm)

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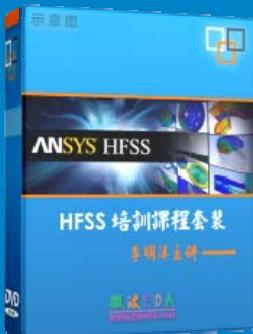
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