Abstracts

An Octave - Wide Matched Impedance Step and - Quarterwave Transformer

F.C. de Ronde. "An Octave - Wide Matched Impedance Step and - Quarterwave Transformer." 1986 MTT-S International Microwave Symposium Digest 86.1 (1986 [MWSYM]): 151-154.

An impedance step can now be matched - Gamma <= 0.02 - over a frequency band corresponding to at least an octave in wavelength by using a shunt inductor before and - capacitor behind, but almost a quarterwavelength apart. A shortened quarterwave impedance transformer could be matched with the shunt capacitor only. For high transformer ratios, part of a taper was used. Ultra-short X-band transformers and-transducers could be realized from rectangular w.g. to flat-square-, circular-, ridge w.g., finline and partly or fully dielectric-filled w.g. Although realized in X-band w.g., its principle is very general and can be applied to any dominant-mode transmission line.

❑ Return to main document.