Abstracts

Maximum Measurable Distances for a Single-Mode Optical Fiber Fault Locator Using the Stimulated Raman Scattering (SRS) Effect

Y. Murakami, K. Noguchi, F. Ashiya, Y. Negishi and N. Kojima. "Maximum Measurable Distances for a Single-Mode Optical Fiber Fault Locator Using the Stimulated Raman Scattering (SRS) Effect." 1982 Transactions on Microwave Theory and Techniques 30.10 (Oct. 1982 [T-MTT] (Special Issue on Optical Guided Wave Technology)): 1461-1465.

Maximum measurable distances for a single-mode optical fiber fault locator using the stimulated Raman scattering effect were calculated. Calculations were carried out on the assumption that the light source is an Nd: YAG laser operating at 1.06 μm and the photo-detector is a germanium avalanche photodiode (Ge-APD). The fist to the seventh Stokes lights can be detected by the Ge-APD. Calculations show that a break can be measured in an up to 165km long ultra-low-loss single-mode fiber.

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