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标题: Enhancement of free spectral range using pentuple microresonator
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摘要: The work addresses the issues of the ever-expanding demand of wide free spectral range (FSR) compatible integrated optic passive devices used in commercial communication systems like dense wavelength division multiplexing and a host of other applications. FSR expansion has been achieved by using the Vernier principle. The analysis has been carried out using Mason's rule and the delay line signal processing approach. Performances of two resonator structures made of silicon-on-insulator-based waveguides with two different effective refractive indices, viz., 1.7 and 2.811, have been compared. The maximum FSR of 3527 THz with finesse of 4409 has been obtained from the first architecture. (C) 2012 Optical Society of America
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