

# **A Reconfigurable Sattin/Sigmoid/Gaussian/Triangular Basis**

## **Functions**

### **Computation Circuit**

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### **Summary**

A CMOS Sattin/Sigmoid/Gaussian/Triangular Basis functions computation circuit suitable for analog neural networks is proposed. The circuit can be configured to realize any of the four functions. The circuit can approximate these functions with relative root-mean-square error less than 1%. It is shown that the center, width, and peak amplitude of the dc transfer characteristic can be independently controlled. HSPICE simulation results using 0.18um CMOS process model parameters of TSMC technology are included.

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