A voltage reference circuit based on threshold-voltage-summation (Σ -V_{TH}) architecture is proposed. Its output (V_{REF}) is not affected by the input offset of the feedback amplifier in the circuit. Thus, its V_{REF} dispersion is considerably reduced. A prototype circuit fabricated in fully depleted CMOS/SIMOX technology can operate at a supply voltage as low as 0.6 V. The measured V_{REF} is 530 mV ± 16.8 mV (3 σ) and the measured temperature coefficient is 0.02 mV/ $^{\circ}$ C ± 0.06 mV/ $^{\circ}$ C (3 σ).