



Safety Edge Circuit

V_{REF} (V)	2.5		V_{TH} for R₄ calc (V)	1.250
R₁ (Ω)	1000	Std 1%	R₄ calc (Ω)	24759
R₂ (Ω)	10000	Std 1%	V_{TH} Short (V)	1.018
R₃ (Ω)	6040	Std 1%	V_{TH} Min (V)	1.246
R₄ (Ω)	24900	Std 1%	V_{TH} 8K (V)	1.257
R_{MON} Short (Ω)	50		V_{TH} 10K (V)	1.302
R_{MON} Min (Ω)	7719		V_{TH} Max (V)	1.313
R_{MON} 8K (Ω)	8125		I_{MON} Max (μA)	50
R_{MON} 10K (Ω)	10000		V_{ER} Max (V)	1.025
R_{MON} Max (Ω)	10500			

Eq1
$$V_{TH} = \frac{R_{MON} + R_1 + R_2 + R_3}{R_{MON} + R_1 + R_2 + R_3 + R_4} V_{REF}$$

Eq2
$$V_{ER} = \frac{R_{MON} + R_1 + R_2}{R_{MON} + R_1 + R_2 + R_3 + R_4} V_{REF}$$

From Eq1
$$R_4 = \left(\frac{V_{REF}}{V_{TH}} - 1 \right) (R_{MON} + R_1 + R_2 + R_3)$$