$$V_{ID} = V_{I1} - V_{I2} \qquad V_{OD} = V_{O1} - V_{O2}$$

$$V_{IC} = \frac{V_{I1} + V_{I2}}{2} \qquad V_{OC} = \frac{V_{O1} + V_{O2}}{2}$$

$$V_{O1} = (1 + \varepsilon_1) V_{I1} + V_{OS1}$$

$$V_{O2} = (1 + \varepsilon_2) V_{I2} + V_{OS2}$$

$$V_{OD} = \left(1 + \frac{\varepsilon_1 + \varepsilon_2}{2}\right) V_{ID} + (\varepsilon_1 - \varepsilon_2) V_{IC} + (V_{OS1} - V_{OS2}) \cong \left(1 + \frac{\varepsilon_1 + \varepsilon_2}{2}\right) V_{ID}$$

$$V_{OC} = \left(\frac{\varepsilon_1 - \varepsilon_2}{4}\right) V_{ID} + \left(1 + \frac{\varepsilon_1 + \varepsilon_2}{2}\right) V_{IC} + \left(\frac{V_{OS1} + V_{OS2}}{2}\right) \cong \left(1 + \frac{\varepsilon_1 + \varepsilon_2}{2}\right) V_{IC} + \left(\frac{V_{OS1} + V_{OS2}}{2}\right)$$