



INTEGRATE OVER A CYCLE

$$I_{IDC} = \frac{1}{2\pi} \frac{V_{LRMS}}{R_L} \sqrt{2} \int_0^{\pi} \sin t dt = \frac{V_{LRMS} \sqrt{2}}{\pi R_L} = I_{2DC}$$

POS RAIL PWR + NEG RAIL PWR = POWER FROM PWR SUPPLY

$$= \frac{V_{PS}}{2} \cdot I_{IDC} + \frac{V_{PS}}{2} I_{2DC}$$

$$= V_{PS} \cdot \frac{V_{RMS} \sqrt{2}}{R_L \pi} = V_{PS} \cdot V_{RMS} \cdot \frac{0.45}{R_L} \Rightarrow \text{POWER FROM PWR SUPPLY}$$

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