

$$E(t) = \int_{-\infty}^{\infty} t \cdot f(t) dt$$

$$= \int_{-\infty}^0 t \cdot f(t) dt + \int_0^{\infty} t \cdot f(t) dt$$

$$- \int_0^{\infty} t \cdot f(-t) dt + \int_0^{\infty} t \cdot f(t) dt$$

$$- \int_0^{\infty} t \cdot f(t) dt + \int_0^{\infty} t \cdot f(t) dt$$

$$\therefore f(t) - f(-t) = 0$$