The Wiener-Khinchin theorem states that for a translation-invariant kernel K and its spectral density S:

$$K(x) = \frac{1}{2\pi} \int_{-\infty}^{\infty} e^{ixt} S(t)\, dt \tag{1}$$

$$S(t) = \int_{-\infty}^{\infty} e^{-ixt} K(x)\, dx \tag{2}$$

This shows the duality between stationary kernels and their spectral densities under the Fourier transform, with the $1/(2\pi)$ factor in the first equation.