



TABLE 2-12 FOURIER TRANSFORM PAIRS

OPERATION	$V(t)$	$V(f)$
LINEARITY	$AV_1(t) + BV_2(t)$	$AV_1(f) + BV_2(f)$
SCALING	$V(at)$	$\frac{1}{ a } V\left(\frac{f}{a}\right)$
DELAY	$V(t-t_0)$	$V(f) e^{-j2\pi f t_0}$
FREQUENCY TRANSLATION	$V(t) e^{j2\pi f_0 t}$	$V(f-f_0)$
DIFFERENTIATION	$\frac{dV(t)}{dt}$	$j2\pi f V(f)$
INTEGRATION	$\int_{-\infty}^t V(\tau) d\tau$	$\frac{1}{j2\pi f} V(f) + \pi V(0) \delta(f)$

TABLE 2-13 FOURIER TRANSFORM RELATIONS