Table 3.2 One-sided Laplace transforms

$\delta(t)$	$1,\quad$ whole s-plane
$u(t)$	$\dfrac{1}{s},\ \mathcal{R}e[s] > 0$
$r(t)$	$\dfrac{1}{s^2},\ \mathcal{R}e[s] > 0$
$e^{-at}u(t),\ a > 0$	$\dfrac{1}{s+a},\ \mathcal{R}e[s] > -a$
$\cos(\Omega_0 t)u(t)$	$\dfrac{s}{s^2+\Omega_0^2},\ \mathcal{R}e[s] > 0$
$\sin(\Omega_0 t)u(t)$	$\dfrac{\Omega_0}{s^2+\Omega_0^2},\ \mathcal{R}e[s] > 0$
$e^{-at}\cos(\Omega_0 t)u(t),\ a > 0$	$\dfrac{s+a}{(s+a)^2+\Omega_0^2},\ \mathcal{R}e[s] > -a$
$e^{-at}\sin(\Omega_0 t)u(t),\ a > 0$	$\dfrac{\Omega_0}{(s+a)^2+\Omega_0^2},\ \mathcal{R}e[s] > -a$
$2A\ e^{-at}\cos(\Omega_0 t+\theta)u(t),\ a > 0$	$\dfrac{A\angle\theta}{s+a-j\Omega_0}+\dfrac{A\angle-\theta}{s+a+j\Omega_0},\ \mathcal{R}e[s] > -a$
$\dfrac{1}{(N-1)!}\ t^{N-1}u(t)$	$\dfrac{1}{s^N}\ \ N$ an integer, $\ \mathcal{R}e[s] > 0$