

$\sigma_{t\bar{t}W} = 0.59^{+0.15}_{-0.10}(\text{scale}) \pm 0.01(\text{PDF})$ pb
Eur. Phys. J. C 80 (2020) 428
NLO(QCD+EW)+NNLL

$\sigma_{t\bar{t}Z} = 0.86^{+0.07}_{-0.08}(\text{scale}) \pm 0.02(\text{PDF})$ pb
Eur. Phys. J. C 80 (2020) 428
NLO(QCD+EW)+NNLL

$\sigma_{t\bar{t}\gamma+W\gamma} \times 20 = 0.038^{+0.001}_{-0.002}(\text{tot.})\text{pb} \times 20$
JHEP 10 (2018) 158
NLO QCD

$\sigma_{t\bar{t}\gamma} = 0.77 \pm 0.14(\text{tot.})$ pb
Madgraph5 + aMC@NLO
NLO QCD

