Of course the power consumption will also increase if any of the outputs are required to drive resistive loads; in such cases it is necessary to invoke Ohm's Law (and the duty cycle) to determine the mean current in the load. The output resistance of buffered 4000 Series output stages is quite high and varies with both supply voltage and temperature (TC = –0.4%/°C). Typical characteristics are shown in Figure 3.

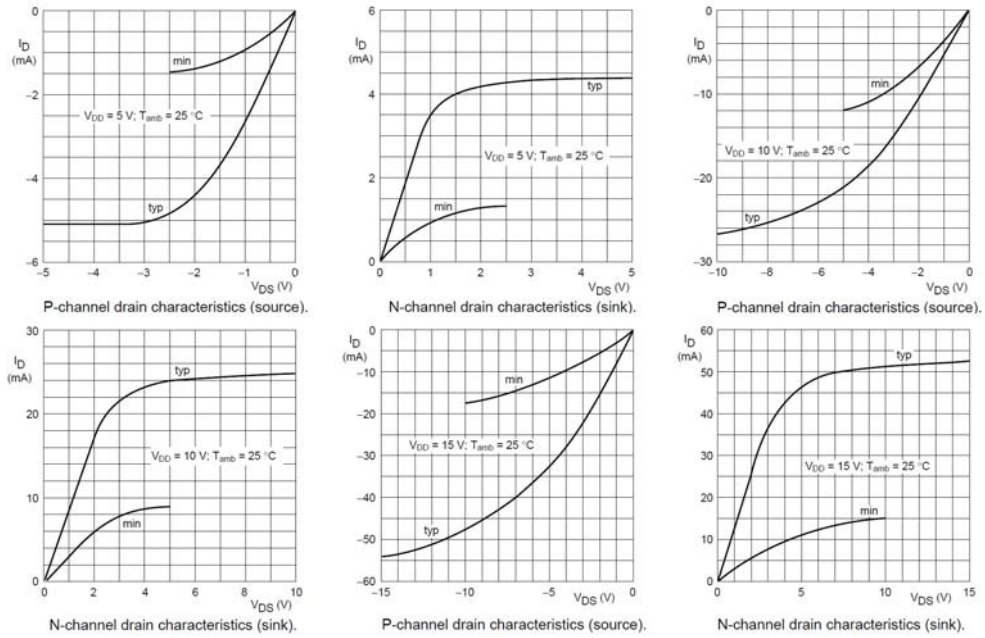

Figure 3. 4000 Series output characteristics.

At lower supply voltages, certainly below V_{DD} = 10V, the output resistance will be high enough that a single output may be short-circuited to either supply without exceeding the absolute maximum output current of 50 mA or the package dissipation of 500 mW. Short-circuits should be avoided when V_{DD} > 10 V as either or both ratings may be exceeded. At V_{DD} = 5 V, several outputs may be short-circuited without risk.