

## Output Considerations

### Ripple Vs. Temperature

The fundamental output ripple of the full featured converters is dependent on the absolute capacitance value of the output capacitors (when the output capacitors are multi-layer ceramic types), or the ESR of the output capacitors (when the output capacitors are solid tantalum types). The selection of output capacitor depends on the output voltage and type of converter. However, the following effects occur at temperature. For units using ceramic output capacitors, the capacitance falls off sharply at high and low temperature extremes. Although the low ESR of ceramic capacitors results in very low ripple voltages, it is not unusual for ripple voltage to double at the high and low temperature extremes. For units using solid tantalum output capacitors, the ESR rises sharply at low temperature extremes.

Therefore, users should assume a ripple temperature coefficient of 1% per °C increase over the 25°C base numbers.