

## SOLDERING RECOMMENDATIONS

### TERMINATION SELECTION:

Nickel barrier termination is recommended for most soldering applications, which termination is recommended for reflow soldering, wave soldering, and vapor phase soldering processes.

For applications other than soldering, or when conductive epoxy is being considered, palladium silver termination is an excellent alternative.

### CAPACITOR SIZE:

Standard EIA sizes up to 1812 may be used with the three soldering systems shown in the chart below. Chip sizes 1812 and larger should not be wave soldered due to the potential for thermal shock on the larger chip sizes.

In all cases, solder processes should be properly controlled to minimize the risk of thermal shock to the devices.

**SOLDERING IRON:** Chip attachment with a soldering iron is discouraged due to process control limitations. In the event that a soldering iron must be used the following precautions should be observed.

- Preheat circuit to 100° C
- No contact between ceramic and iron
- 30 watt iron output (max)
- 280° C tip temperature (max)
- Use a fin-tip iron
- Limit soldering time to 5 seconds.

**COMPONENT COOLING:** Once the chip capacitor has completed the solder process, allow the ceramic capacitors to cool to room temperature without the use of fans, cleaning processes, or other solutions. This will help to avoid the potential for thermal shock.

### SOLDER ATTACHMENT RECOMMENDED PROFILES

