

What is claimed is:

1. A faceplate for processing substrates, comprising:
 - a body formed from a heater layer and an electrode layer, wherein an outer diameter of the electrode layer defines a distribution portion of the body;
 - a plurality of apertures formed through the body within the distribution portion;
 - a heater disposed within the heater layer; and
 - a bridge surrounding the distribution portion, wherein the bridge couples the distribution portion to a coupling portion.
2. The faceplate of claim 1, further comprising an electrode disposed within the electrode layer.
3. The faceplate of claim 1, further comprising a grounding electrode disposed within the heater layer.
4. The faceplate of claim 1, wherein the body comprises a ceramic material.
5. The faceplate of claim 4, wherein the ceramic material is aluminum nitride.
6. The faceplate of claim 1, further comprising a bonding layer disposed between the heater layer and the electrode layer.
7. The faceplate of claim 1, wherein the bridge is a thermal choke and has thickness less than a thickness of the coupling portion and a thickness of the distribution portion.
8. A faceplate for processing substrates, comprising:
 - a body, wherein the body comprises:
 - an electrode layer;
 - a heater layer;
 - a grounding layer; and

a bonding layer disposed between the electrode layer and the heater layer and between the heater layer and the grounding layer;

a plurality of apertures formed through the body having a first end and a second end, wherein the first end is located at an outer surface of the body and the second end of each aperture is fluidly coupled to one or more nozzles disposed in the electrode layer; and

a thermal choke.

9. The faceplate of claim 8, further comprising a distribution volume disposed between the apertures and the nozzles.

10. The faceplate of claim 8, wherein the thermal choke comprises one or more fluid channels disposed within the body and radially outward of the plurality of apertures.

11. The faceplate of claim 8, wherein each of the electrode layer, the heater layer, and the grounding layer are formed from a ceramic material.

12. The faceplate of claim 8, wherein a heater is disposed in the heater layer, and wherein the thermal choke limits the heat transfer from the heater to an area proximate a seal disposed radially outward of the heater.

13. The faceplate of claim 8, wherein a cross-sectional area of the apertures is about twice the cross-sectional area of the nozzles.

14. A gas distribution apparatus for processing substrates, comprising:
a ceramic body, wherein the body is formed from a first layer, a second layer, and a third layer;
a plurality of apertures formed through the ceramic body;
a heater disposed in the first layer;
an electrode disposed in the second layer; and

a bridge portion extending perpendicularly from the third layer, wherein a coupling portion is disposed at an end of the bridge portion opposite the third layer, wherein the bridge portion is a thermal choke which limits heat transfer from the heater to the coupling portion.

15. The gas distribution apparatus of claim 14, wherein the apertures are arranged in a honeycomb array, wherein a center-to-center distance between adjacent apertures is between about 2mm and about 6mm.