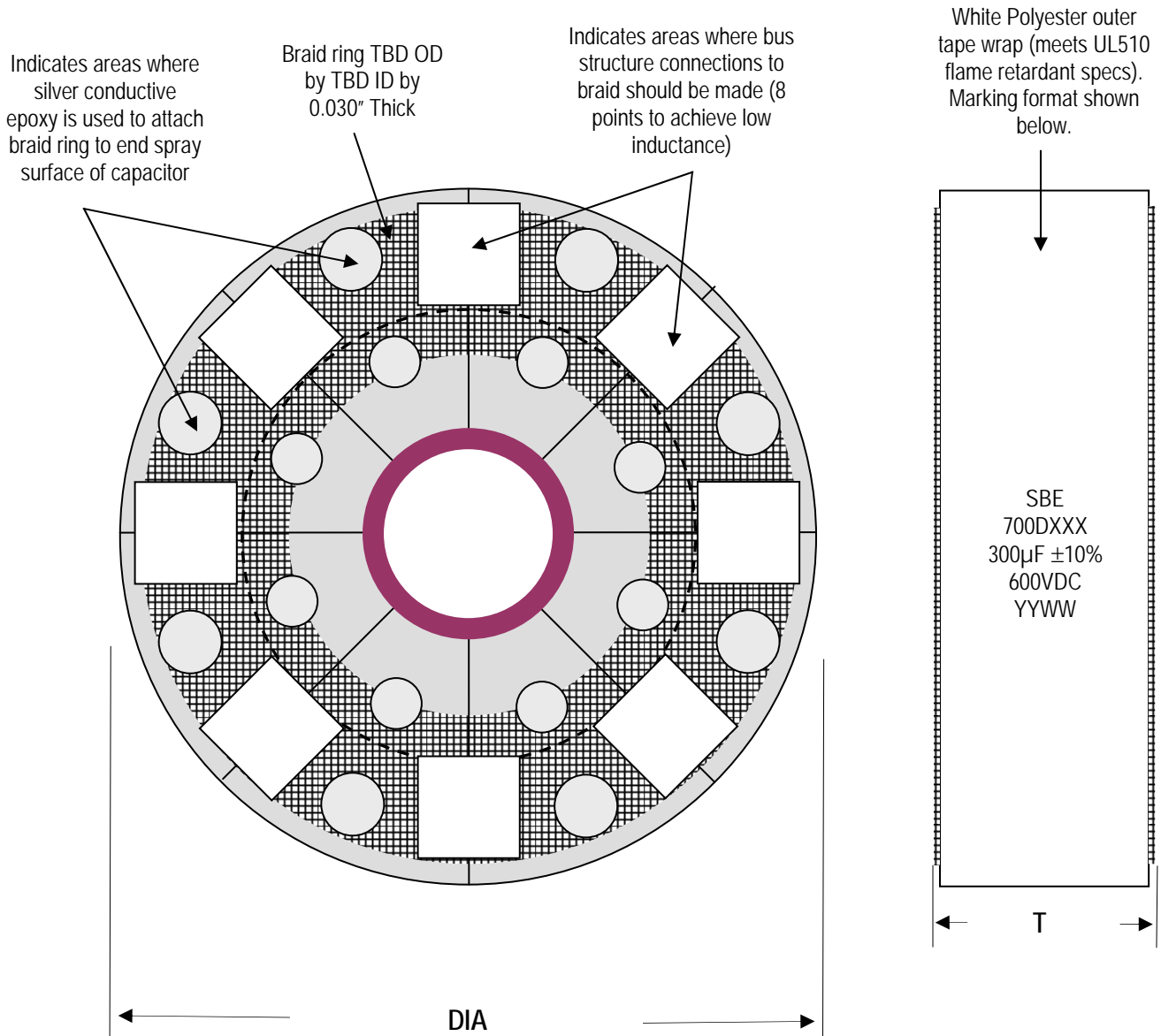




# Power Ring Film Capacitor™

SBE Part #: 700D-300μF Example

## 600 VDC, 300 μF



Bus structure considerations:

Attachment points should be made near outer circumference to achieve low inductance.

Attachment points should not be made directly over where conductive epoxy attaches braid to end spray.

The areas indicated by the squares above illustrate the connection areas which are offset from where the conductive epoxy attachments of the braid to the end spray are made.

8 connection points to braid ring should be made to achieve low inductance.

SBE can perform assembly of bus structure to Power Ring.

# Specifications

<b>Capacitance:</b>	300 $\mu$ F
<b>DC Voltage Rating:</b>	600 VDC
<b>Diameter (DIA):</b>	115mm maximum
<b>Thickness (T)</b>	35mm max (braid surface to braid surface) 33 – 34mm typical
<b>Core:</b>	Hollow phenolic core with 1.0” I.D. Meets UL-94HB specifications
<b>Core extension:</b>	None as shown above.
<b>Terminals:</b>	None
<b>Encapsulation:</b>	None
<b>Braid Ring:</b>	TBD OD/ID Tinned Copper, 0.030” Thick
<b>Dielectric/Construction:</b>	Metallized Polypropylene film, non-inductively wound, single-section design.
<b>Dielectric</b>	
<b>Withstand Voltage:</b>	Units shall withstand a DC potential of 800 Volts for two minutes.
<b>Insulation Resistance:</b>	250 M $\Omega$ Min at +25°C
<b>ESR @ 100 KHz.:</b>	< 0.125 m $\Omega$
<b>ESL:</b>	~15 nH. Minimal loop inductance. If a 4-wire measurement is made at the terminals (end spray surfaces) it would indicate an ESL of ~10 nH. However this measurement may vary slightly and is NOT a realistic indication of what the capacitor’s actual resonant frequency will be. The actual capacitor loop inductance will depend on the application interconnect design. We would be happy to discuss this in further detail.
<b>Operating Temperature:</b>	-40°C to +90°C. +105°C is the maximum internal hot spot of the capacitor.
<b>Dissipation/</b>	
<b>Temperature Rise:</b>	Less than 17°C - Will be cooled at 90C max
<b>RMS Current Rating:</b>	150 Amps RMS using 20khz switching frequency

This design utilizes a patent pending segmented end spray pattern. Terminal/interconnect attachment is a critical aspect to achieving maximum reliability of this design. To achieve the greatest performance, this design should be closely integrated with the bus structure. The interconnect is an important part of the total losses.

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