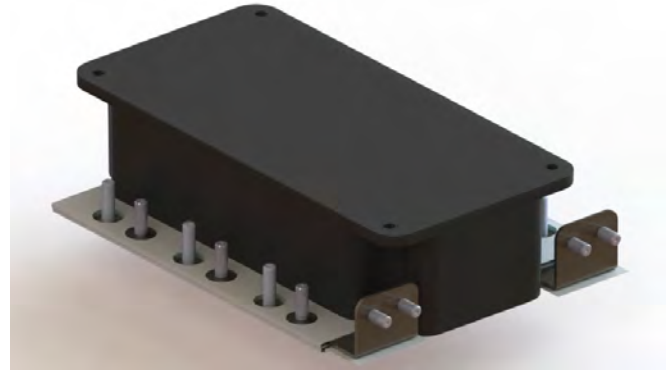


## PRELIMINARY VERSION

### Power Ring Film Capacitor™ 500µF, 500 Vdc

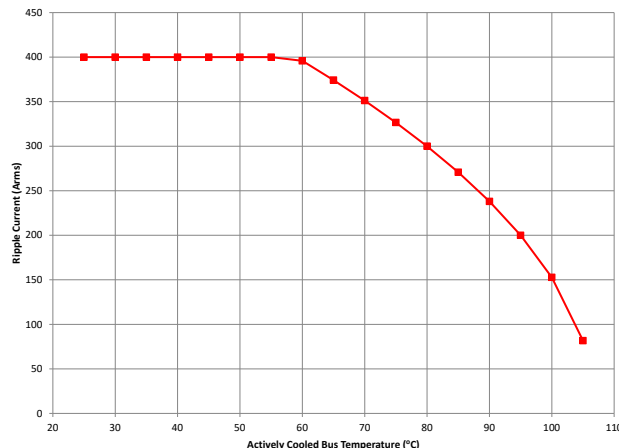
The 700A50795-243 Power Ring assembly is a 500 µF, 500 Vdc dual-winding DC Link Capacitor integrated with a laminated bus that connects with two Infineon HybridPACK™ Drive modules. The assembly has an ESR of 410 µΩ at 20kHz, an ESL of less than 8nH and a life of more than 10,000 hours at a typical drive cycle running two 80-120kW inverter stages. With bus side cooling, the assembly can support up to 1000 Arms peak current for 10 seconds.



#### Electrical Specifications

<b>SBE Part #:</b>	700A50795-243
<b>Capacitance/Tolerance:</b>	500 µF ±10%
<b>Dielectric:</b>	Metallized polypropylene film
<b>ESL at IGBT Terminals:</b>	Less than 8 nH
<b>Continuous DC Voltage:</b>	500 Vdc up to 85°C (derate linearly from 500 Vdc to 300 Vdc from 85°C to 105°C)
<b>Typical ESR vs. Frequency:</b>	410 µΩ at 20 kHz
<b>Maximum DC Voltage:</b>	Units 100% tested at DC voltage of 600 Vdc for 2 minutes at 25°C
<b>Operating Temperature:</b>	-40°C to +105°C
<b>Maximum Peak Current:</b>	1000 Arms (not to exceed 10 seconds and 85°C hotspot at 500 Vdc with active bus cooling)

#### RMS Current Rating



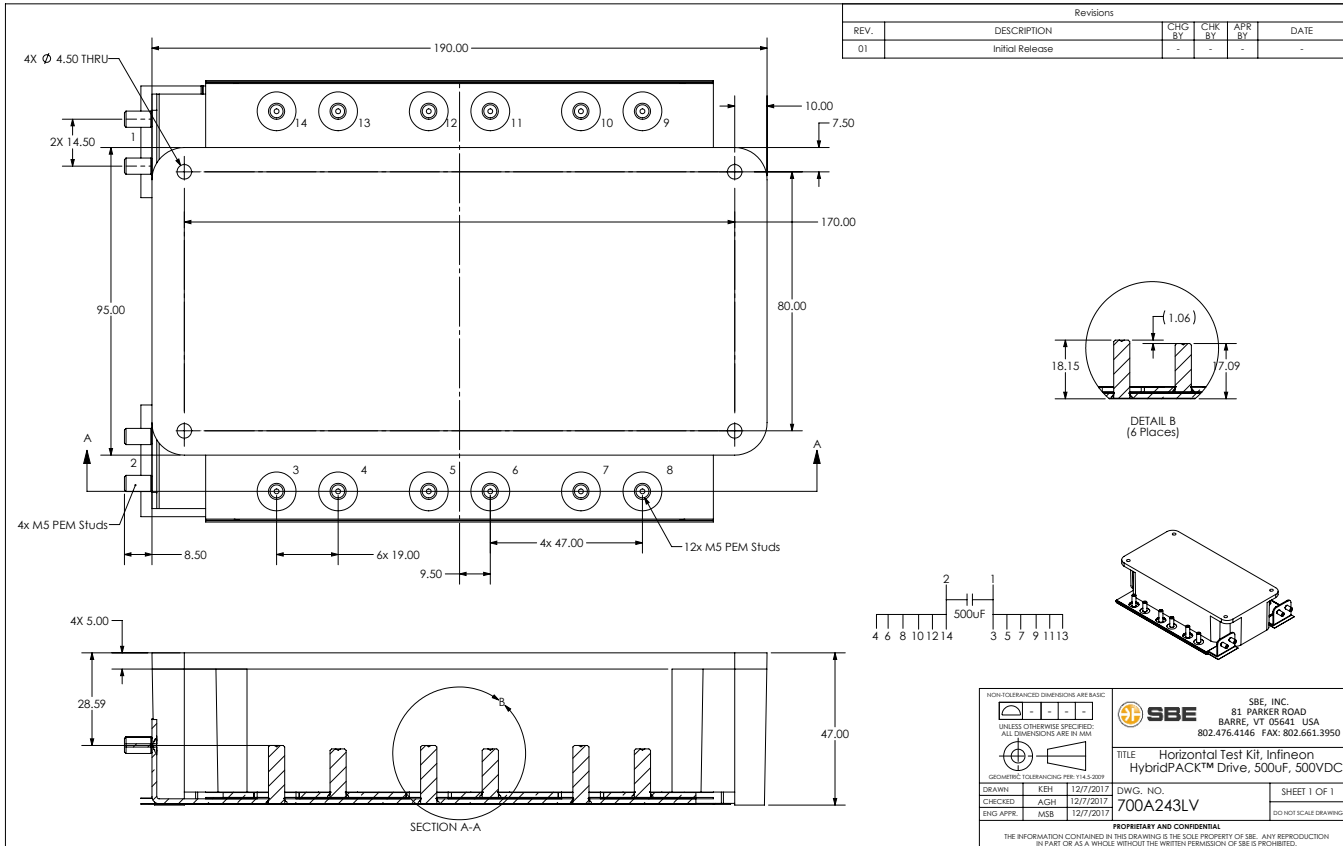
Ripple current versus actively cooled bus temperature for 10,000 hour life for continuous operation at 450V.

*SBE reserves the right to amend design data*

#### Mechanical Specifications

<b>Dimensions:</b>	See layout drawing for details										
<b>Bus Structure:</b>	Tin plated copper, 0.060" (1.50 mm) thick										
<b>Packaging:</b>	Polycarbonate enclosure encapsulated with RTV										
<b>IGBT Connection Type:</b>	Stud connections for Infineon HybridPACK™ Drive Module										
<b>Construction:</b>	Dual windings integrated to a laminar bus										
<b>Marking:</b>	<table> <tr> <td>SBE</td> <td>SBE company identification</td> </tr> <tr> <td>700A243</td> <td>SBE "short form" part number</td> </tr> <tr> <td>500 µF ±10%</td> <td>Capacitance value and tolerance</td> </tr> <tr> <td>500 Vdc</td> <td>DC voltage rating</td> </tr> <tr> <td>yyww-lot#-unit</td> <td>Serial number (date code, lot number, unit number)</td> </tr> </table>	SBE	SBE company identification	700A243	SBE "short form" part number	500 µF ±10%	Capacitance value and tolerance	500 Vdc	DC voltage rating	yyww-lot#-unit	Serial number (date code, lot number, unit number)
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## Layout Details:

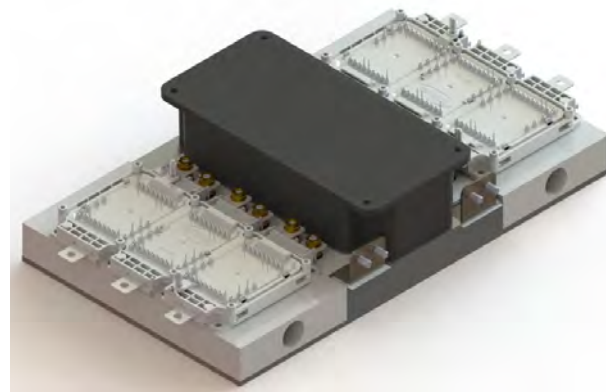
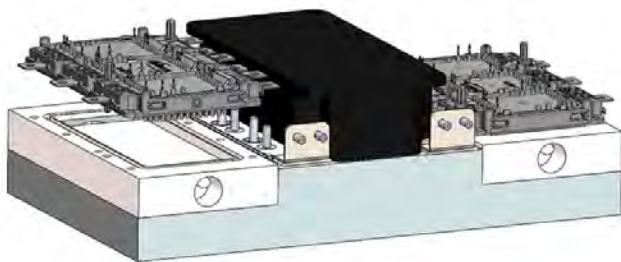


Contact SBE Inc. to discuss your specific requirements.

## Connection Scheme:

Unlike our traditional connection seen on the 700A186, where the SBE assembly drops onto the top of the IGBT, the 700A243 uses pre-installed stud connections to line up the IGBT from below.

This allows the customer to install the SBE module first onto the cold plate, which places the bus directly in contact with the plate, which is our preferred method of cooling. Spacer bushings are used to adjust height.



SBE reserves the right to amend design data