

**PRELIMINARY VERSION**
**Power Ring Film Capacitor™  
500 μF, 500 Vdc**

The 700A50795-205 Power Ring assembly is a 500 μF, 500 Vdc dual-winding DC Link Capacitor integrated with a laminar bus. The assembly has an ESR of 410 μΩ at 20 kHz, an ESL less than 12 nH, and a life of more than 10,000 hours at a typical drive cycle for an 80-120 kW inverter.


**Electrical Specifications**

**SBE Part #:** 700A50795-205

**Capacitance/Tolerance:** 500 μF ±10%

**Dielectric:** Metallized polypropylene film

**ESL at IGBT Terminals:** Less than 12 nH

**Typical ESR vs. Frequency:** 410 μΩ at 20 kHz

**Continuous DC Voltage Rating:** 500 Vdc up to 85°C (de-rate linearly from 500 Vdc to 300 Vdc from 85°C to 105°C)

**Maximum DC Voltage:** Units 100% tested at DC voltage of 600 Vdc for 2 minutes at 25°C

**Operating Temperature:** -40°C to +105°C

**Maximum Peak Current:** 250 Arms (not to exceed 2 minutes and 85°C hotspot at 500 Vdc)

**Operating Ranges (Greater than 10,000 Hour Life For Typical Drive Cycle):**  
 450 Vdc < Vdc < 550 Vdc  
 75 Arms < I<sub>ripple</sub> < 125 Arms  
 50°C < T<sub>coolant</sub> < 85°C

**Mechanical Specifications**

**Dimensions:** See layout drawing for details

**Bus:** Tin plated copper, 1.50 mm thick

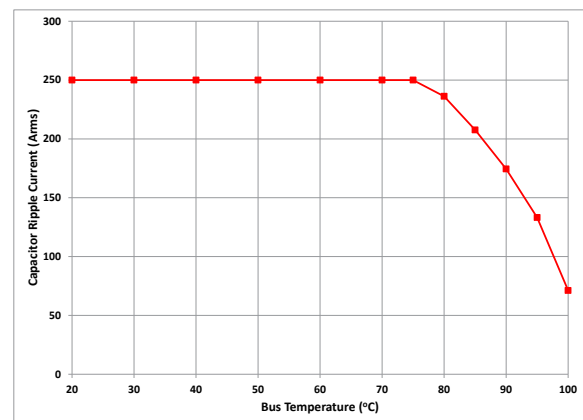
**Encapsulated:** Un-encapsulated

**IGBT Connection Type:** Thru-hole connections for Infineon HP Drive

**Construction:** Dual windings integrated to a laminar bus

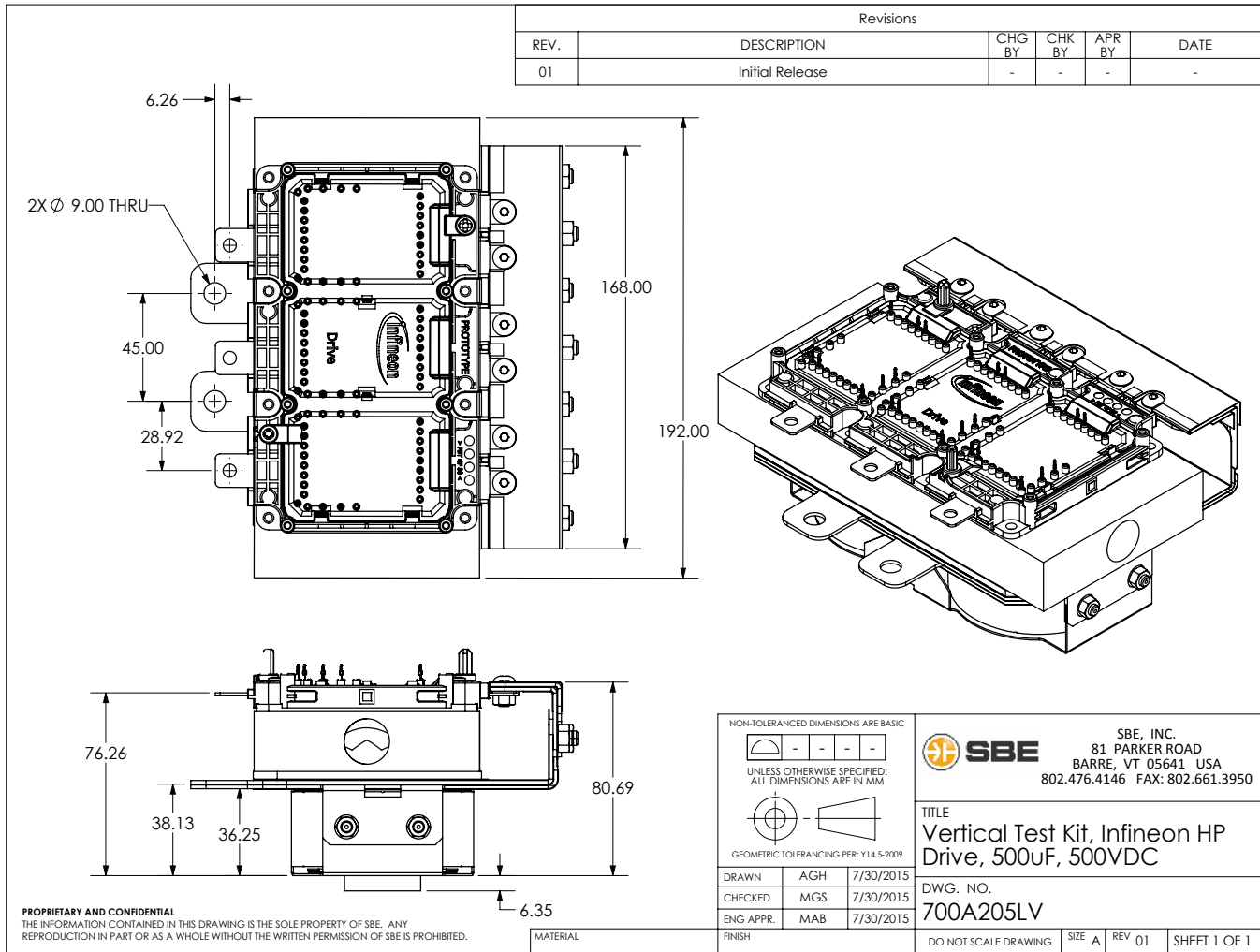
**Marking:**

SBE	SBE company identification
700A205	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)

**Rating Curve:**


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

## Layout Details:



**Note:** HP Drive Module and Cooling Plate Not Included

Contact SBE Inc. to discuss your specific requirements.