

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_{ripple} < 125 Arms
 50°C < T_{coolant} < 85°C

Mechanical Specifications

Dimensions: See layout drawing for details

Bus: Tin plated copper, 1.50 mm thick

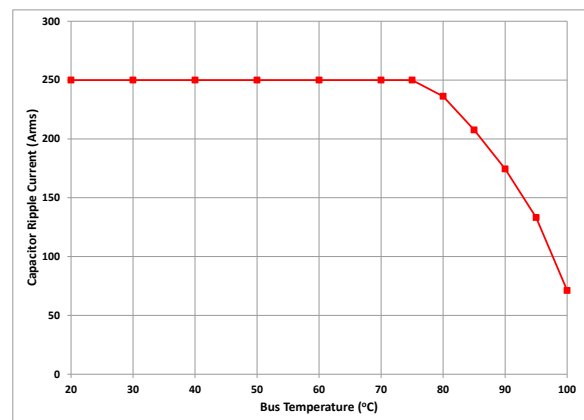
Encapsulated: Un-encapsulated

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

Construction: Dual windings integrated to a laminar bus

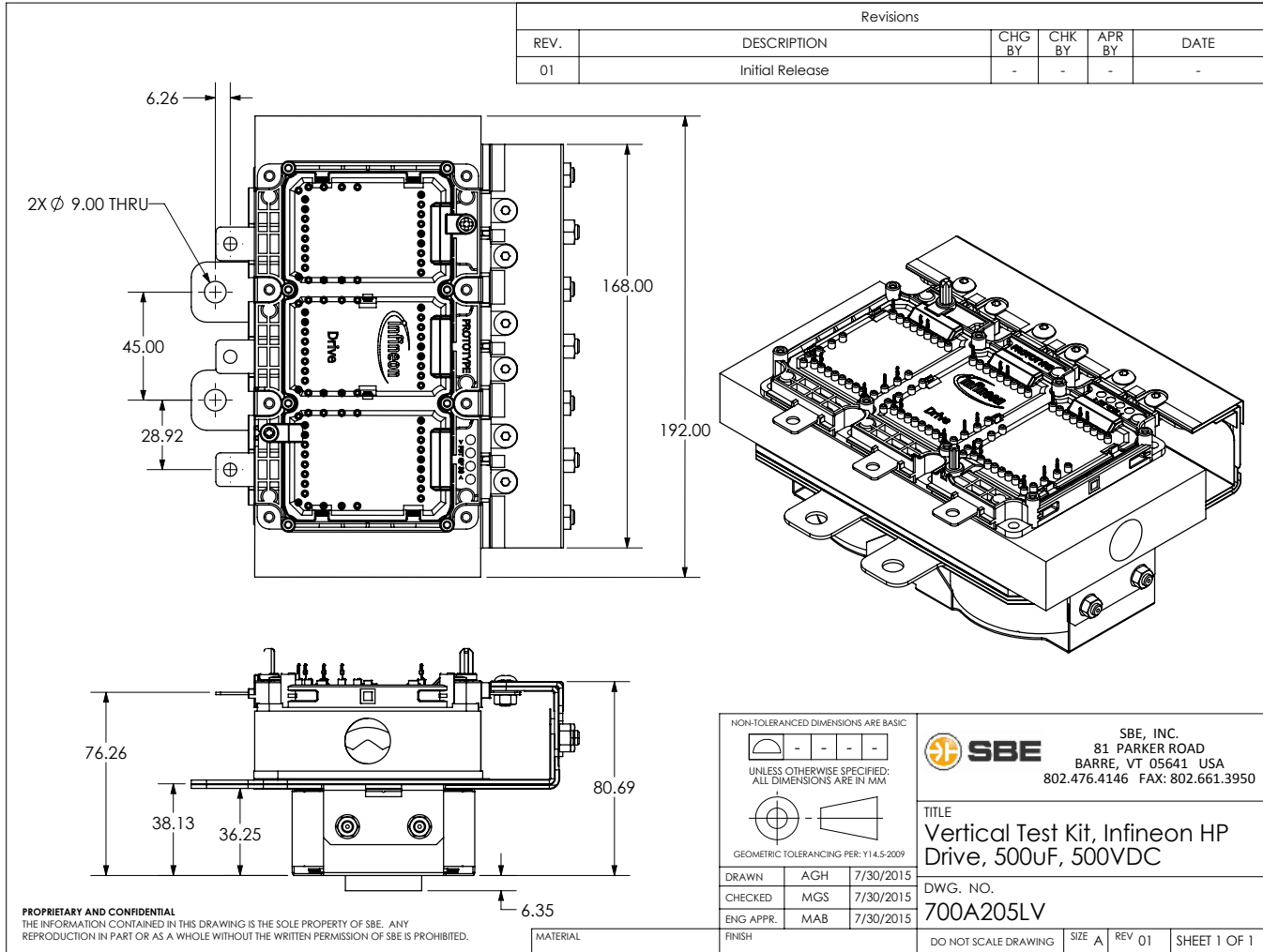
Marking:

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.