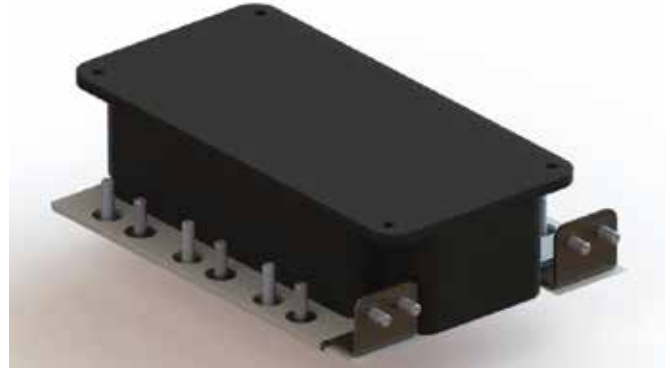


## Power Ring Film Capacitor 500 $\mu$ F, 500 Vdc

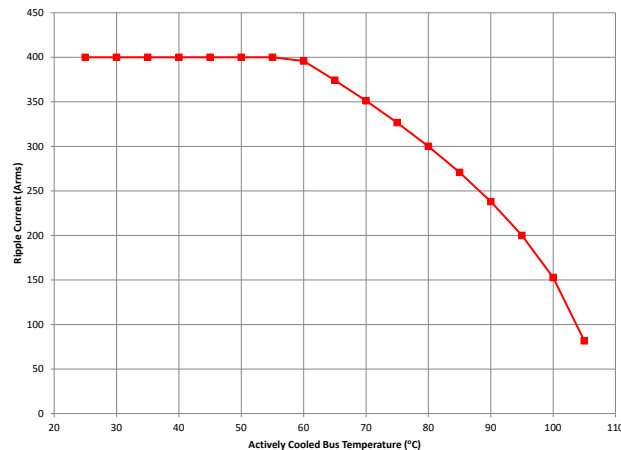
The 700A50795-243 Power Ring assembly is a 500  $\mu$ F, 500 Vdc dual-winding DC Link Capacitor integrated with a laminated bus that connects with two Infineon HybridPACK™ Drive modules. The assembly has an ESR of 410  $\mu\Omega$  at 20kHz, an ESL of less than 8nH and a life of more than 10,000 hours 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

- Part #:** 700A50795-243
- Capacitance/Tolerance:** 500  $\mu$ F  $\pm$ 10%
- Dielectric:** Metallized polypropylene film
- ESL at IGBT Terminals:** Less than 8 nH
- Continuous DC Voltage:** 500 Vdc up to 85°C (derate linearly from 500 Vdc to 300 Vdc from 85°C to 105°C)
- Typical ESR vs. Frequency:** 410  $\mu\Omega$  at 20 kHz
- 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:** 1000 Arms (not to exceed 10 seconds and 85°C hotspot at 500 Vdc with active bus cooling)

### RMS Current Rating

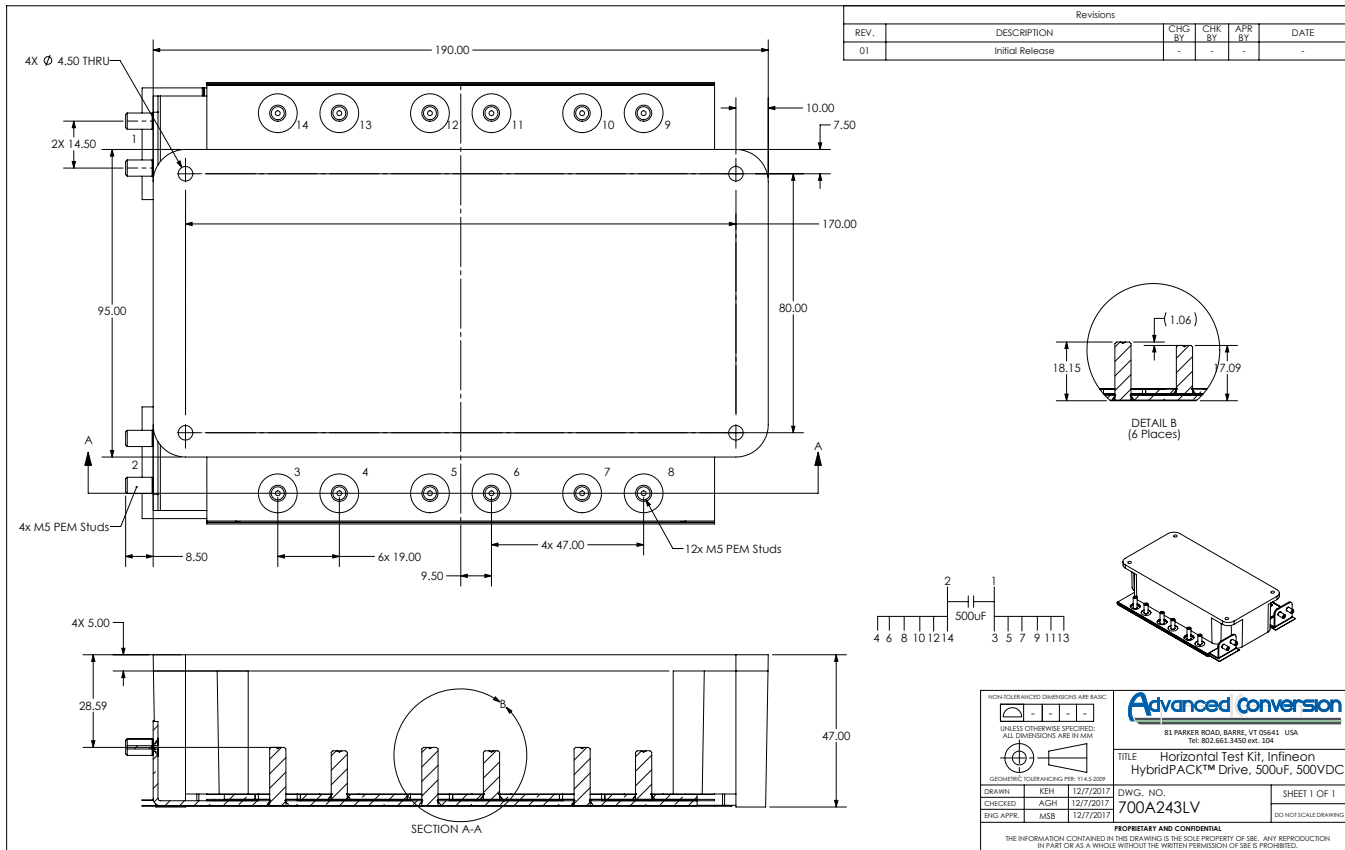


Ripple current versus actively cooled bus temperature for 10,000 hour life for continuous operation at 450V.

### Mechanical Specifications

- Dimensions:** See layout drawing for details
- Bus Structure:** Tin plated copper, 0.060" (1.50 mm) thick
- Packaging:** Polycarbonate enclosure encapsulated with RTV
- IGBT Connection Type:** Stud connections for Infineon HybridPACK™ Drive Module
- Construction:** Dual windings integrated to a laminar bus
- Marking:**
  - APCS company identification
  - 700A243 "short form" part number
  - 500  $\mu$ F  $\pm$ 10% Capacitance value and tolerance
  - 500 Vdc DC voltage rating
  - yyww-lot#-unit Serial number (date code, lot number, unit number)

### Layout Details:

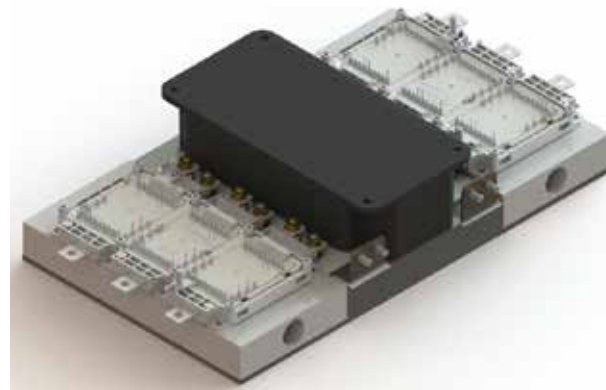
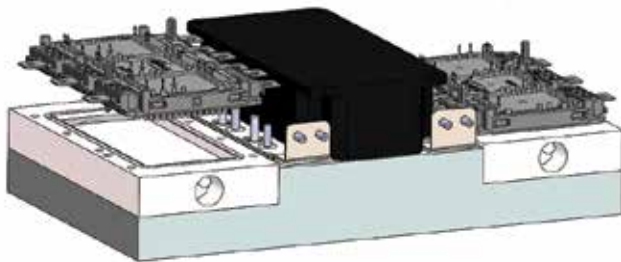


Contact Advanced Conversion to discuss your specific requirements.

### Connection Scheme:

Unlike our traditional connection seen on the 700A186, where the Advanced Conversion 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 Advanced Conversion 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.



Advanced Conversion reserves the right to amend design data