

**Power Ring Film Capacitor
10µF, 8,000Vdc**

The 775D106980-103 Power Ring is a 8,000Vdc, 10µF high voltage pulse capacitor.



Electrical Specifications

Part #: 775D106980-103

Capacitance/Tolerance: 10µF ±10%

DC Voltage Rating: 8,000Vdc

NOTE: This capacitor is specifically designed to withstand repetitive pulse discharges at high pulse currents with longer life than exhibited by more typical metallized High Voltage film capacitors. However, this capacitor is not recommended for applications requiring continuous voltage (constant charge) unless de-rated to 4,000Vdc Maximum. For a technical explanation and further information on the intended uses for this design please contact Advanced Conversion engineering.

Dielectric/Construction: Patented pulse technology Metallized Polypropylene film. Series-section design, non-inductively wound.

Dielectric Withstand Voltage: Units 100% tested at DC potential of 9,000Vdc for two minutes at 25°C.

Peak-to-Peak Voltage: 10,000 V Max

When operated at this peak-to-peak voltage the capacitor can be expected to withstand ~5,000 discharges.

Further reducing this value to 7,500 V peak-to-peak will increase discharge life on the order of 10 times.

Further reducing this value to 5,600 V peak-to-peak will increase this discharge life more than 1,000 times.

Reducing the Q of the discharge circuit will improve shot life for all cases. End of life for the above estimates is 10% capacitance reduction.

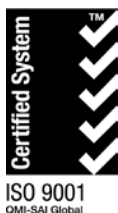
Insulation resistance: 10,000 MΩ Min at +25°C

ESR @ 10 kHz: < 1 mΩ Min at +25°C, typical

ESL: ~ 50 nH, minimum inductance connection. The actual capacitor loop inductance will depend on the application interconnect design.

Operating Temperature: -40°C to +85°C

Peak Current Rating: 20,000 Amps repetitive



Mechanical Specifications

- Diameter:** 6.35" (161.3 mm)
- Height:** 3.35" (85 mm)
- Core:** Hollow phenolic core with 1.0" I.D. Meets UL-94HB Specs.
- Terminals:** Tin plated copper strap, 1/16" thick by 1" wide.
- Encapsulation:** Outer tape wrap of flame retardant polyester tape (meets UL510 specifications). Potted with white epoxy (meets UL94V-0 specs).

Mechanical Mounting: If possible mounting of this unit using the core will help to provide stress relief for the terminals.

- Marking:**
- | | |
|----------------------|--|
| APCS | company identification |
| 775D103 | "short form" part number |
| 10 μ F \pm 10% | Capacitance value and tolerance |
| 8,000Vdc | DC voltage rating |
| yyww-lot#-unit | Serial number (date code, lot number, unit number) |

Layout Details:

Revisions					
REV.	DESCRIPTION	CHG BY	CHK BY	APR BY	DATE
01	Initial Release	-	-	-	-

Technical drawing showing top, side, and detail views of the capacitor. Dimensions include: ϕ 6.350 MAX, ϕ 1.000 THRU, 1.000 NOMINAL, 3.350 MAX, 3.000 NOMINAL, .400, .500, 1.000, ϕ .281 THRU, .062, and .100.

DETAIL A and **DETAIL B** provide close-up views of the terminal and core features.

NON-TOLERANCED DIMENSIONS ARE BASIC
UNLESS OTHERWISE SPECIFIED:
ALL DIMENSIONS ARE IN INCHES

GEOMETRIC TOLERANCING PER: Y14.5-2009

Advanced Conversion	
81 PARKER ROAD, BARRE, VT 05641 USA Tel: 802.661.3450 ext. 104	
TITLE Power Ring Capacitor, 10μF, 8000VDC	
DWG. NO. 775D103LV	
DRAWN	MGS 7/26/2013
CHECKED	AGH 7/29/2013
ENG APPR.	MSB 7/29/2013
MATERIAL	FINISH
DO NOT SCALE DRAWING	
SIZE A	REV 01
SHEET 1 OF 1	

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Contact Advanced Conversion to discuss your specific requirements.

Advanced Conversion reserves the right to amend design data