

PRELIMINARY VERSION

Power Ring Film Capacitor 160 μ F, 900 Vdc

The 700A386 Power Ring assembly is a 160 μ F, 900 Vdc dual-winding DC Link Capacitor integrated with a laminar bus. The assembly has an ESR of 605 $\mu\Omega$ at 20 kHz, an ESL of <6 nH, and a life of more than 10,000 hours at a typical drive cycle for an 150-200 kW inverter.



Electrical Specifications

Part #:	700A386
Capacitance/Tolerance:	160 μ F \pm 10%
DC Voltage Rating:	900 Vdc
Dielectric:	Metallized polypropylene film
ESL at Module Terminals:	<6 nH
Typical ESR vs. Frequency:	605 $\mu\Omega$ at 20 kHz
Continuous DC Voltage Rating:	900 Vdc up to 85°C (de-rate linearly from 900 Vdc to 700 Vdc from 85°C to 105°C)
Maximum DC Voltage:	Units 100% tested at DC voltage of 1125 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 900 Vdc)

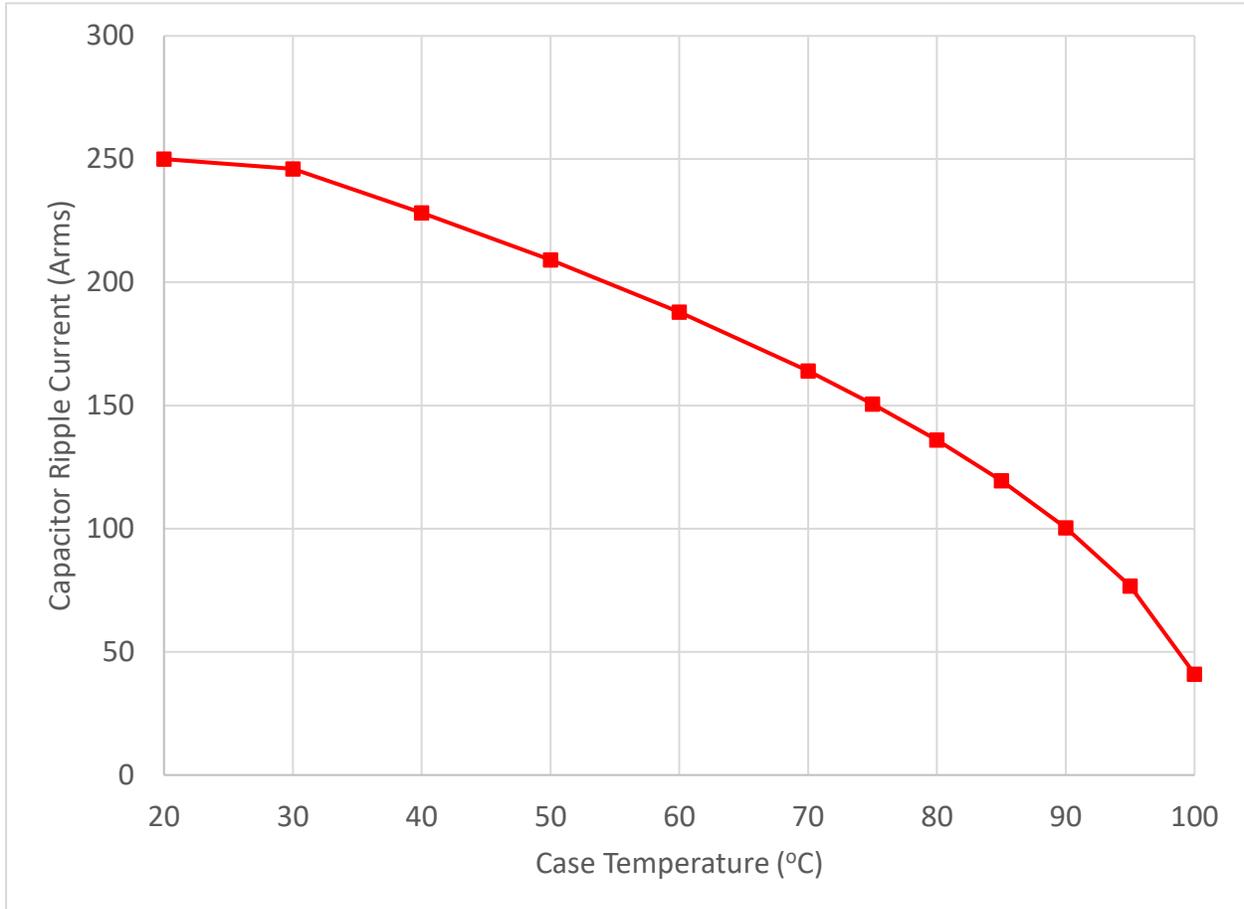
Mechanical Specifications

Dimensions:	See layout drawing for details
Bus:	Tin plated copper, 0.060" (1.50 mm) thick
Packaging:	Polycarbonate enclosure encapsulated with RTV
Connection Type:	Thru-hole bushing connections for 3 Hitachi RoadPak modules
Construction:	Dual windings integrated to a laminar bus
Marking:	
APCS	APCS company identification
700A386	Part number
160 μ F \pm 10%	Capacitance value and tolerance
900 Vdc	DC voltage rating
yyww-lot#-unit	Serial number (date code, lot number, unit number)

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Rating Curve:

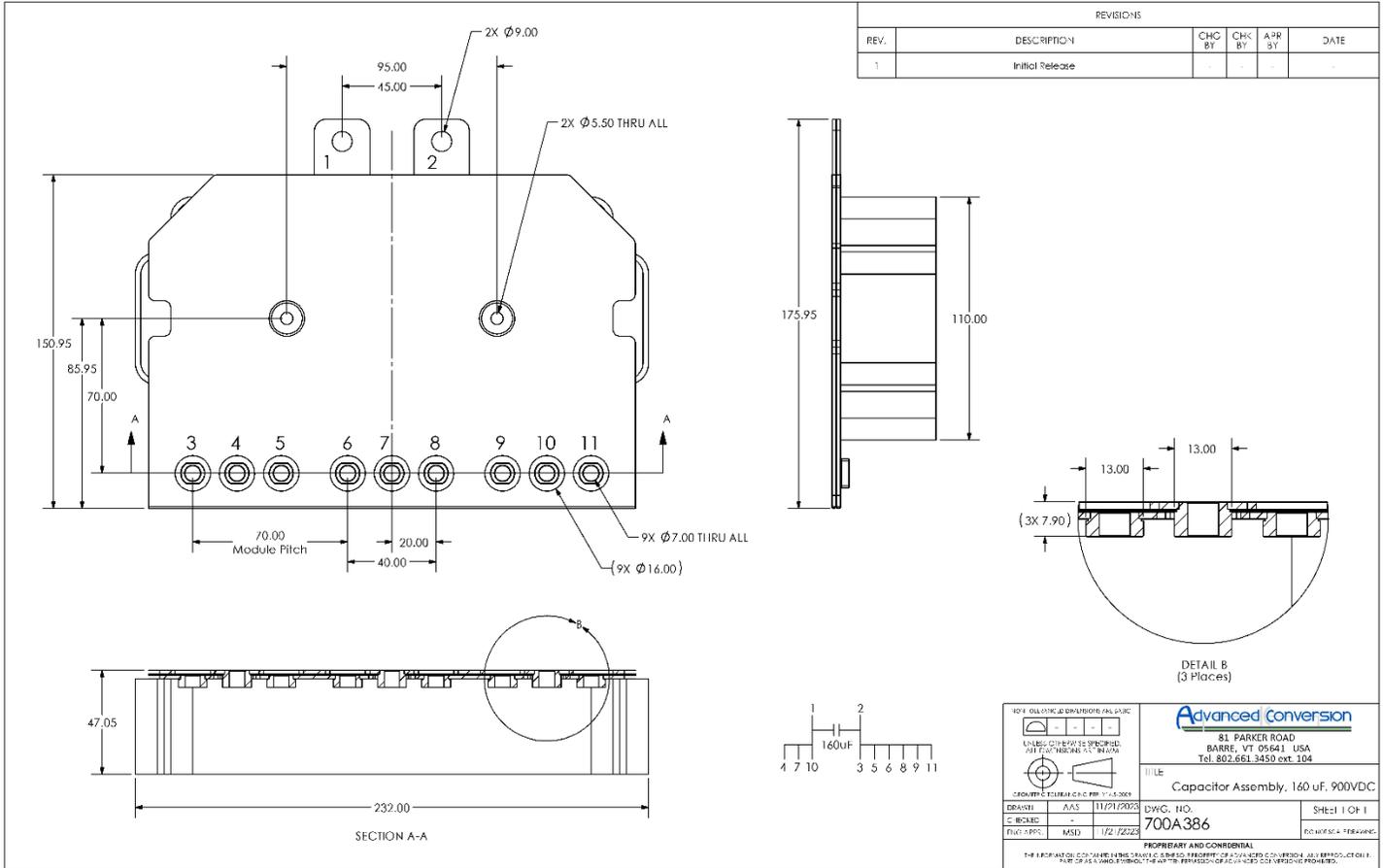


Ripple current versus case temperature for 10,000-hour life with continuous operation at 900V.

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Layout Details:



<small>UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES.</small>		<small>81 PARKER ROAD BARRE, VT 05641 USA Tel: 802.661.3450 ext. 104</small>	
<small>DESIGNED BY: JAS 11/21/2023</small>		<small>TITLE: Capacitor Assembly, 160 uF, 900VDC</small>	
<small>DATE: -</small>		<small>DWG. NO. 700A386</small>	
<small>REV. BY: JAS 1/2/2023</small>		<small>SHEET 1 OF 1</small>	
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Revision Table		
Revision	Description	Date
Rev 1	Initial release	11/21/2023

Advanced Conversion
 81 Parker Road • Barre, VT 05641 USA
 Tel: 802-661-3450
 Web: www.advanced-conversion.com

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