Power Ring Film Capacitors

Parts 700A360 – 700A361 (Rev. 2)

PRELIMINARY VERSION

Integrated Capacitor/bus assembly with metallized polypropylene film.

*These high-performance DC-Link capacitors mechanically integrate to the **Cissoid** SiC Intelligent Power Modules (IPMs).*

The capacitors offer low ESL and low ESR for fast switching SiC transistors and for high power density. They also come with the option to mount it either way up onto the IPM.

Mechanical Specifications:

Dimensions: See layout drawing for details

Bus Structure: Tin plated copper, 0.060" (1.50mm) thick

Packaging: Polycarbonate enclosure encapsulated with RTV

SiC Connection Type: Thru-hole connections for Cissoid module

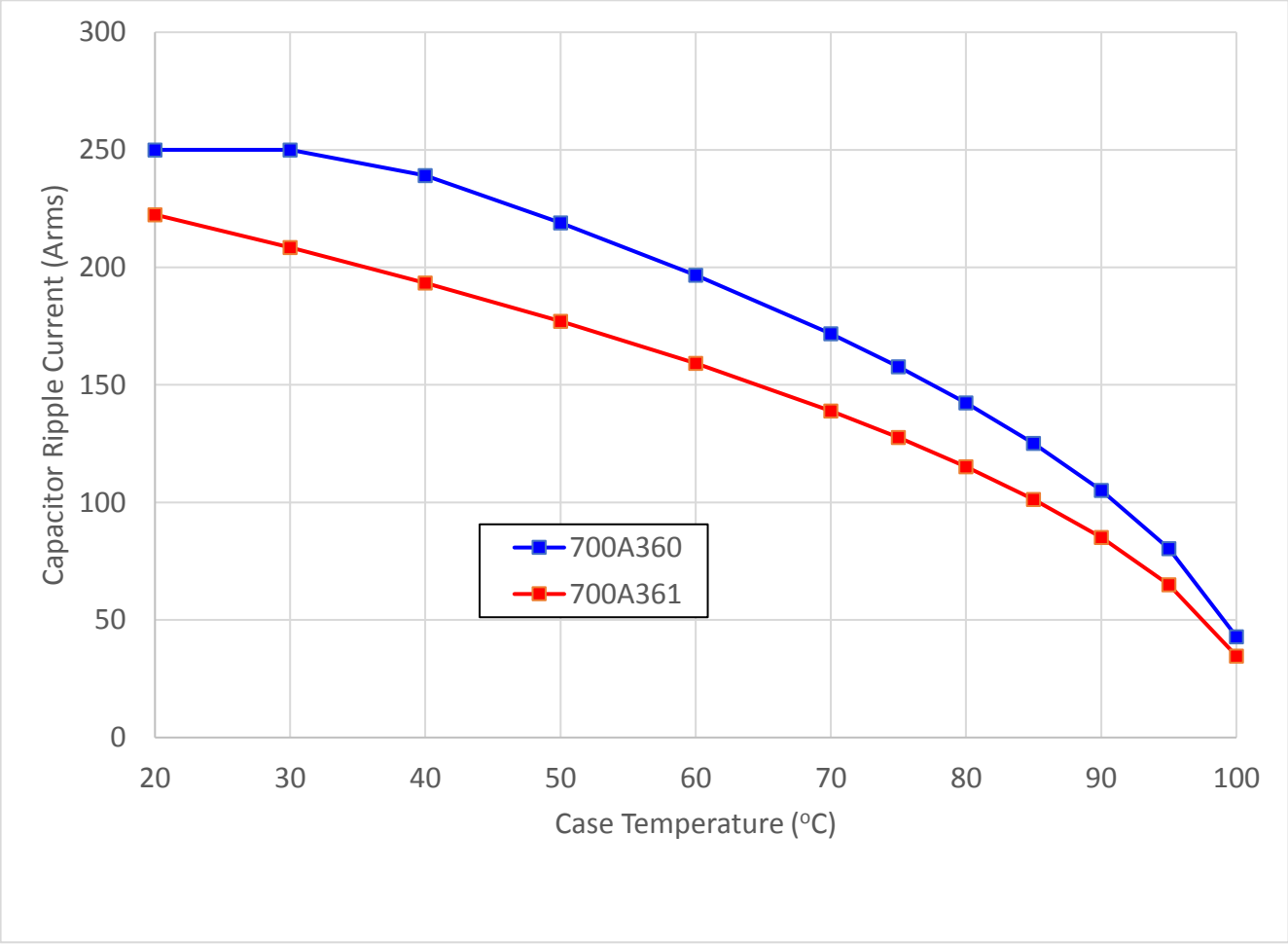
Construction: Dual windings integrated to a laminar bus

Electrical Specifications		
Part #	**700A360**	**700A361**
Capacitance/Tolerance	500µF ±10%	260µF ±10%
DC Voltage Rating	500 Vdc	750 Vdc
Dielectric	Metallized polypropylene film	Metallized polypropylene film
ESL at SiC Terminals	Less than 8 nH	Less than 8 nH
Typical ESR vs. Frequency	410µΩ at 20 kHz	900µΩ 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)	750 Vdc up to 85°C (de-rate linearly from 750 Vdc to 500 Vdc from 85°C to 105°C)
Dielectric Withstand Test Voltage	Units 100% tested at DC voltage of 600 Vdc for 2 minutes at 25°C	Units 100% tested at DC voltage of 950 Vdc for 2 minutes at 25°C
Operating Temperature	-40°C to +105°C	-40°C to +105°C

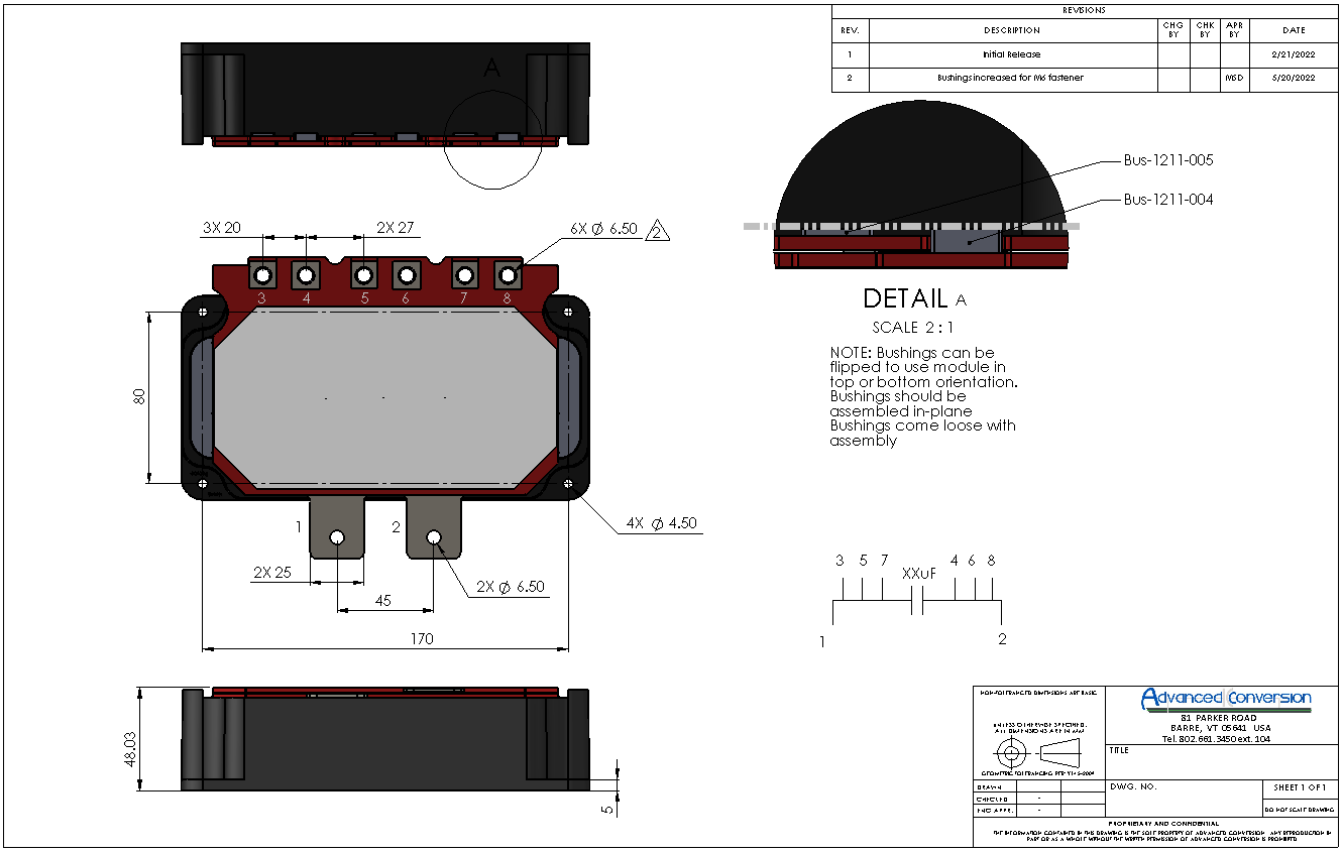
Electrical Specifications		
Part #	**700A360**	**700A361**
Maximum Peak Current	250 Arms (not to exceed 2 minutes and 85°C hotspot at 500 Vdc)	200 Arms (not to exceed 2 minutes and 85°C hotspot at 750 Vdc)

Marking		
Company Identification	APCS	APCS
Part Number	700A360	700A361
Capacitance Value and Tolerance	500µF ±10%	260µF ±10%
DC Voltage Rating	500 Vdc	750 Vdc
Serial Number (date code, lot number, unit number)	yyww-lot#-unit	yyww-lot#-unit

RMS Current Rating:



Layout Details:



Advanced Conversion reserves the right to amend design data.

Revision Table		
Revision	**Description**	**Date**
Rev 1	Initial Release	2/1/2022
Rev 2	Updated hardware with M6 bushings	6/1/2022