

PRELIMINARY VERSION

Integrated Capacitor/bus assembly with Kaladex® PEN HV™ film - for operation to 125°C

*These high-performance DC-Link capacitors mechanically integrate to the **Cisoid 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:

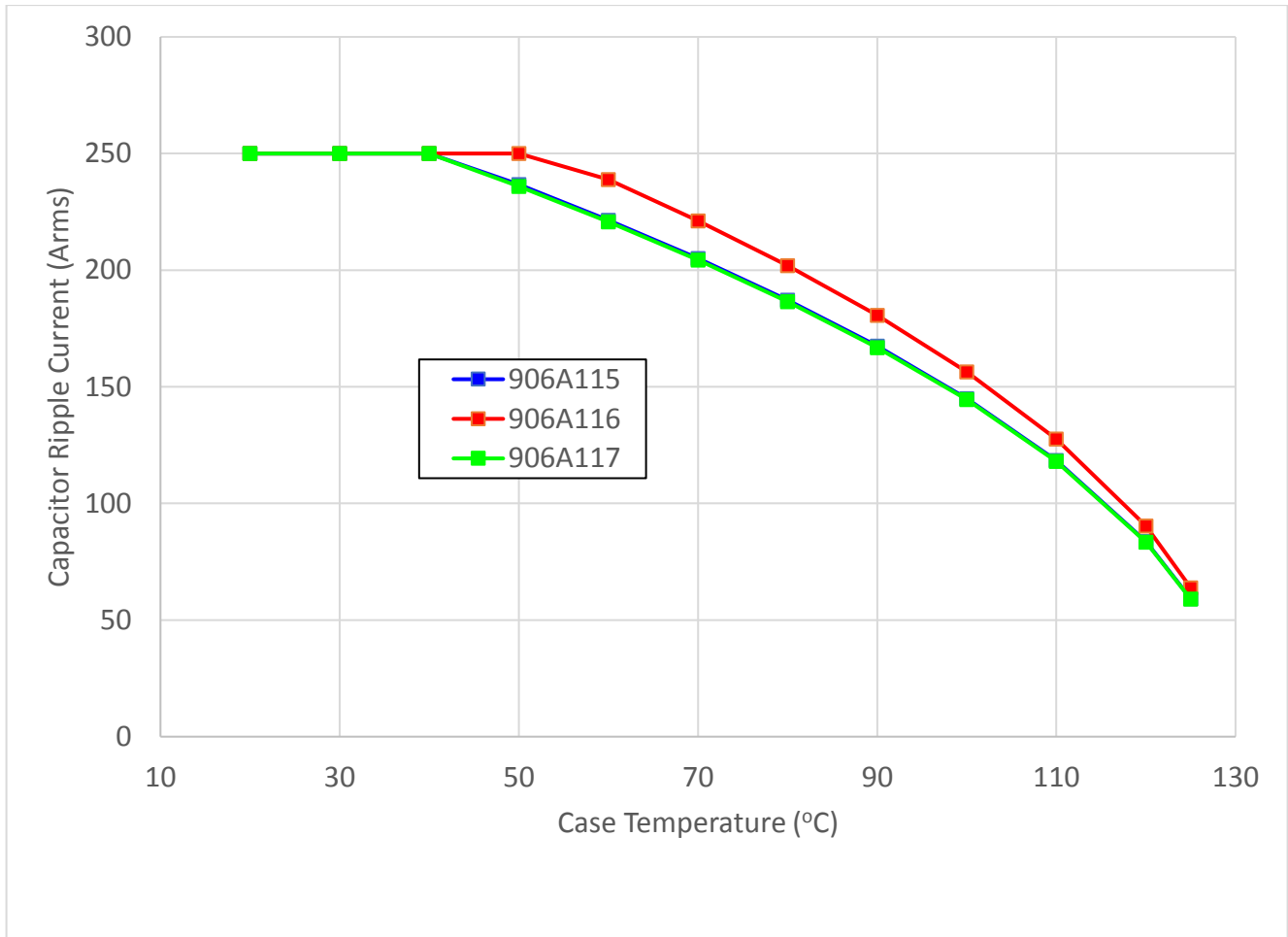
- Dimensions:** See layout drawing for details
- Bus Structure:** Tin plated copper, 0.060" (1.50mm) thick
- Packaging:** Polycarbonate enclosure encapsulated with RTV
- SiC Connection Type:** Thru-hole connections for Cisoid module
- Construction:** Dual windings integrated to a laminar bus

Electrical Specifications			
Part #	906A115	906A116	906A117
Capacitance/Tolerance	320µF ±10%	550µF ±10%	135µF ±10%
DC Voltage Rating	750 Vdc	500 Vdc	900 Vdc
Dielectric	Kaladex® PEN HV™	Kaladex® PEN HV™	Kaladex® PEN HV™
ESL at SiC Terminals	Less than 8 nH	Less than 8 nH	Less than 8 nH
Typical ESR vs. Frequency	840µΩ at 20 kHz	635µΩ at 20 kHz	850µΩ at 20 kHz
Continuous DC Voltage Rating	750 Vdc up to 125°C (de-rate linearly from 750 Vdc to 450 Vdc from 125°C to 150°C hotspot)	500 Vdc up to 125°C (de-rate linearly from 500 Vdc to 300 Vdc from 125°C to 150°C hotspot)	900 Vdc up to 125°C (de-rate linearly from 900 Vdc to 540 Vdc from 125°C to 150°C hotspot)
Dielectric Withstand Test Voltage	Units 100% tested at DC voltage of 940 Vdc for 2 minutes at 25°C	Units 100% tested at DC voltage of 625 Vdc for 2 minutes at 25°C	Units 100% tested at DC voltage of 1125 Vdc for 2 minutes at 25°C

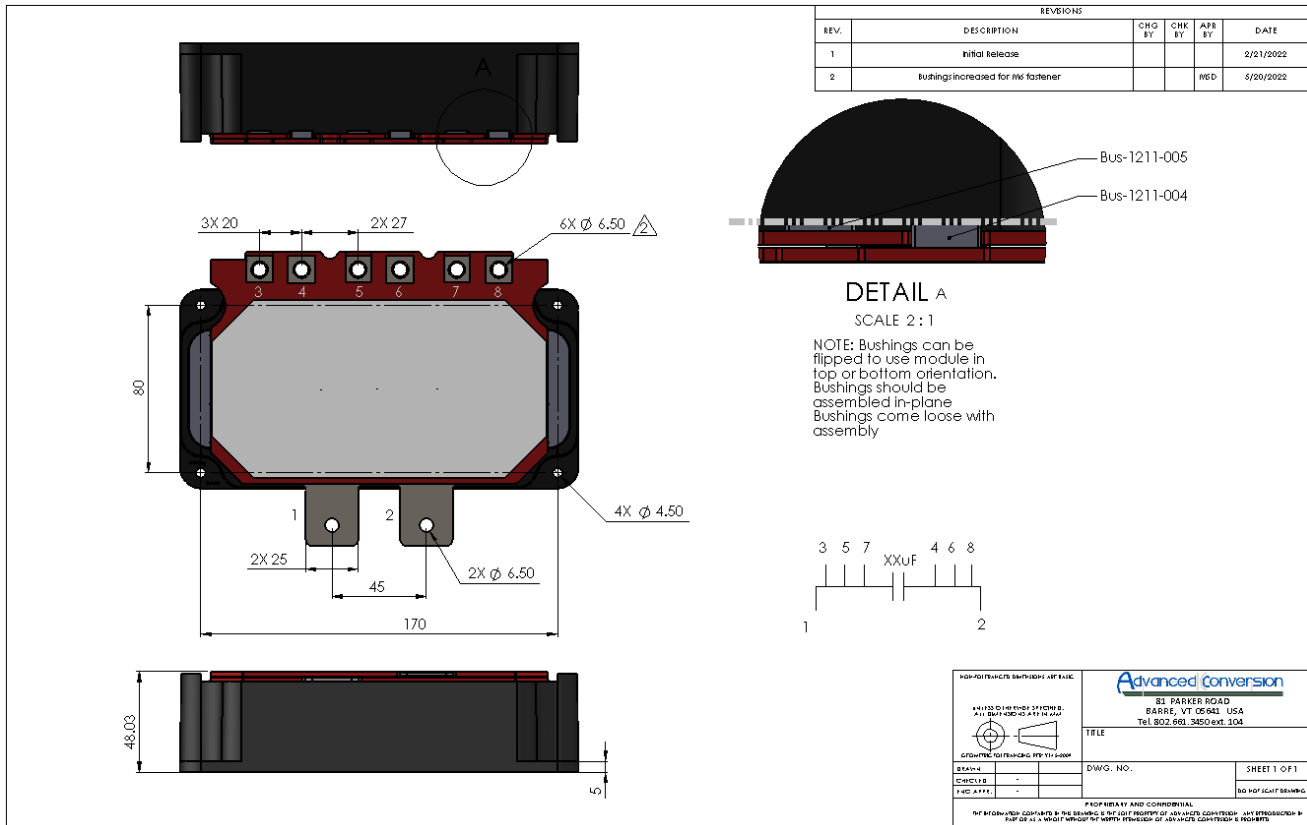
Electrical Specifications			
Part #	906A115	906A116	906A117
Operating Temperature	-40°C to +125°C	-40°C to +125°C	-40°C to +125°C
Maximum Peak Current	250 Arms (not to exceed 2 minutes and 130°C hotspot at 750 Vdc)	250 Arms (not to exceed 2 minutes and 130°C hotspot at 500 Vdc)	250 Arms (not to exceed 2 minutes and 130°C hotspot at 900 Vdc)
Operating Ranges (Typical Drive Cycle)	700 V < Vdc < 800 V 75Arms < I _{ripple} < 150Arms 50°C < T _{coolant} < 125°C	450 V < Vdc < 550 V 75Arms < I _{ripple} < 150Arms 50°C < T _{coolant} < 125°C	850 V < Vdc < 950 V 75Arms < I _{ripple} < 150Arms 50°C < T _{coolant} < 125°C

Marking			
Company Identification	APCS	APCS	APCS
Part Number	906A115	906A116	906A117
Capacitance Value and Tolerance	320µF ±10%	550µF ±10%	135µF ±10%
DC Voltage Rating	750 Vdc	500 Vdc	900 Vdc
Serial Number (date code, lot number, unit number)	yyww-lot#-unit	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