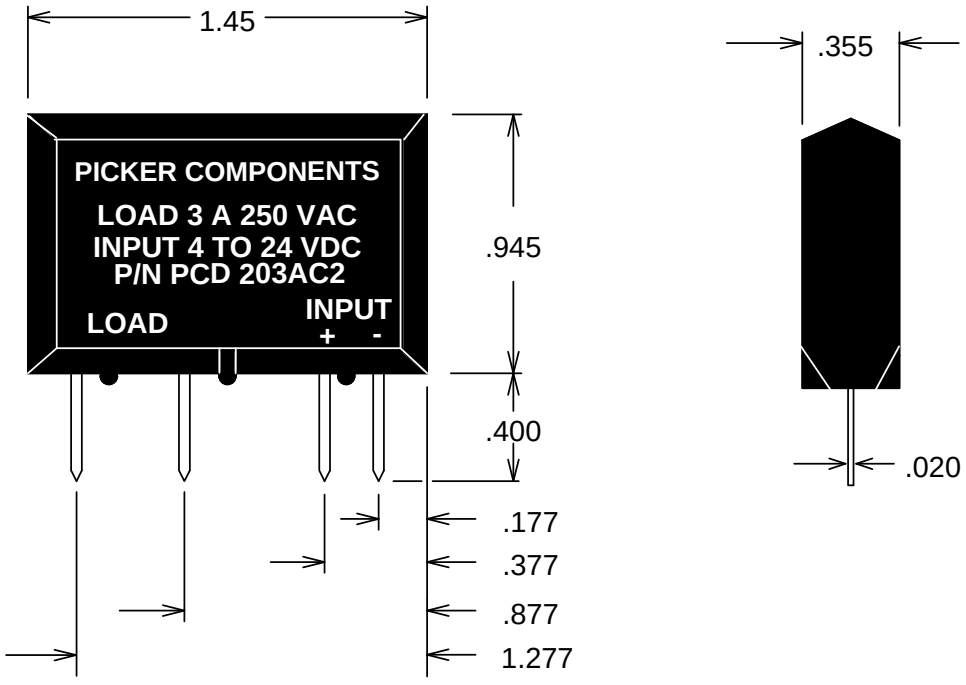
Printed Circuit Board Solid State Relay — PCD203AC2

FEATURES

- Narrow profile for high density spacing
- Solid Epoxy Body Resistant to the environment
- 4,000 Volt isolation between input and output
- 4 to 24 Volt DC input
- Completely sealed, Immersion cleanable
- 3 Amp AC Output
- 50 to 250 AC Volt Output
- Zero crossing switching
- Built in snubber network
- Very high surge resistance

Dimensions in Inches

Drawing is 2 X Scale



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Absolute Maximum Ratings at 25 Degrees C

	Parameter	Symbol	Rating	Unit
Input	Input signal voltage	V_{IN}	4 - 24	V DC
	Drop out voltage	V_{do}	1	V DC
Output	RMS on state current	I_T	3	A rms
	Peak one cycle surge current	I_{surge}	30	A
	Repetitive peak off state voltage	V_{DRM}	600	V
	Operating frequency	f	47 - 70	Hz
	Critical rate of rise on state current	di/dt	50	A/μS
	Load supply voltage	V_{out}	250	Vrms AC
	Isolation voltage input to output	V_{iso}	4000	Vrms
	Operating temperature	T_{opr}	-30 - 100	℃
	Storage temperature	T_{stg}	-30 - 125	℃
	Soldering temperature 10 seconds	T_{sol}	260	℃

Electrical Characteristics at 25 Degrees C

	Parameter	Symbol	Conditions	Unit
Input	Pick up voltage	V_{pu}	It = 1Arms	4V DC MAX
	Input current	I_{in}	V in = 4 - 24V	5 TO 12 mA
Output	On state voltage	V_T	It = 1Arms	1.5V rms MAX
	Operating current	I_{op}	V out = 240 Vrms	50 mArms MIN
	Leakage current	I_{leak}	V out = 240 Vrms	7 mArms MAX
	Critical rate of rise of off state voltage	dv/dt	See Note 1	50 TO 200V/μS
	Zero cross voltage	V_{ox}	I_{in} = 7mA	35 VAC MAX
	Load voltage rating	V_{out}	I_T = 50 mArms Min.	50 TO 280VAC
	Minimum trigger current	I_{FT}	V_{DRM} = 600 V	10 mA MAX
	Isolation resistance input to circuit	R_{iso}	DC 500 V	10^{10} OHMS MIN
	Turn on time	T_{on}	60 Hz AC	8.3 ms MAX
	Turn off time	T_{off}	60 Hz AC	8.3 ms MAX
	Thermal resistance (between junction and case)	Rth(j-c)I		1.3 ℃/W

NOTES: 1. Output (dv/dt) protection is provided on all models. They are designed to switch resistive or inductive loads to 0.2 power factor. The dv/dt rating is based on a source impedance of 50 ohms.

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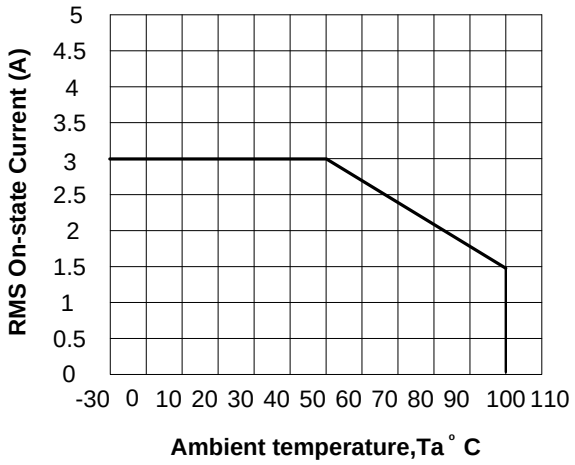
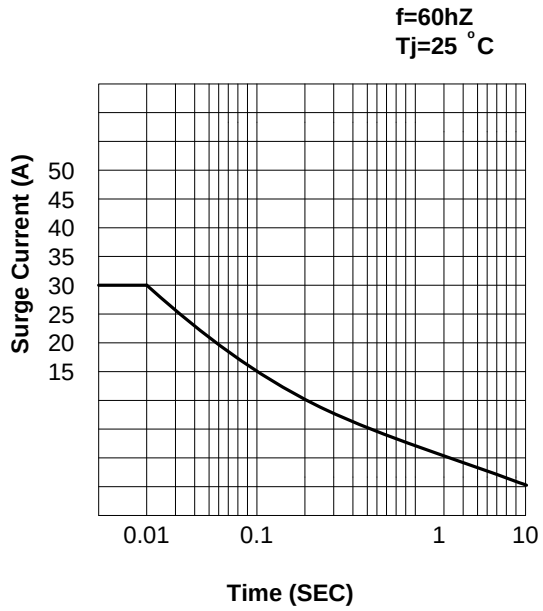
CHARACTERISTIC CURVES

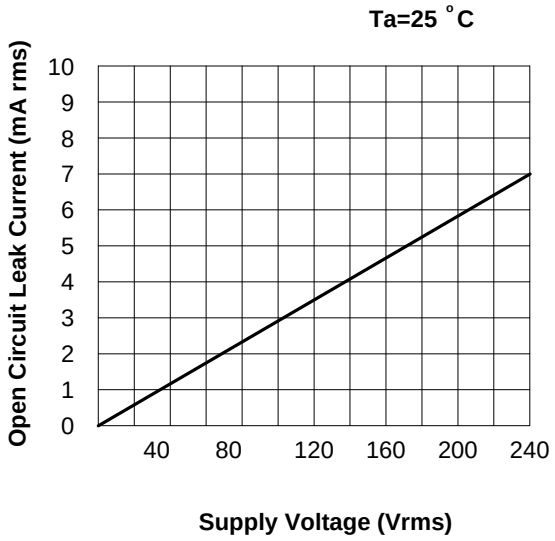
RMS On-state Current vs. Ambient Temperature



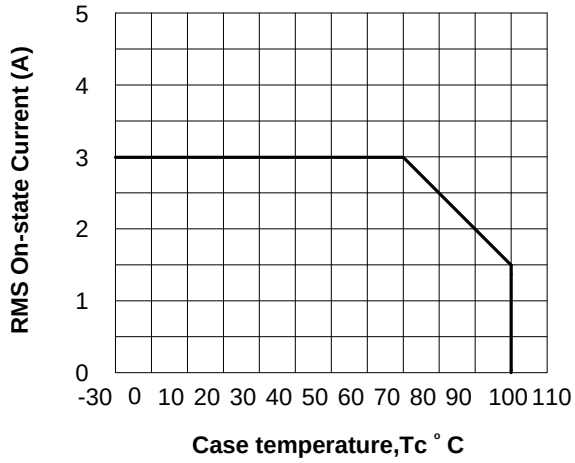
Surge Current vs. Time



Open Circuit Leak Current vs. Supply Voltage



RMS On-state Current vs. Case Temperature



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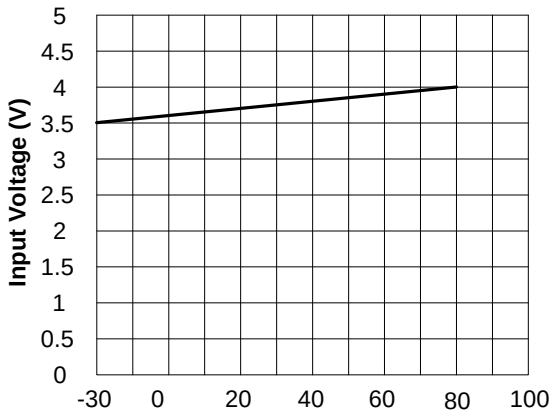
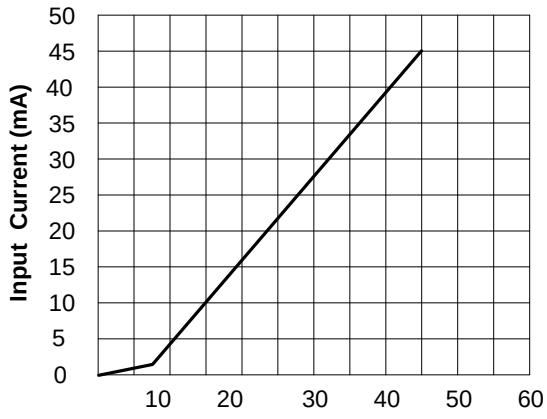
CHARACTERISTIC CURVES

Input Voltage vs. Ambient Temperature



Input Current vs. Input Voltage



NOTES:

3 AMP Rating is UL recognized and certified for Canada at 50 degrees C.

This SSR will carry up to 5 Amps at 30 Degrees C non UL.

Zero Crossing switching and 4,000 volt isolation make this relay CE compliant

.355 Inch thickness allows high density spacing

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