



**COIL TECHNOLOGY
CORPORATION**

15 W DC/DC CONVERTERS

SERIES	DESCRIPTION	Page
PC15WR	2:1 Input Range 2" x 1" Metal Can Package 2kv Isolation	2
PC15WR4	4:1 Input Range 2" x 1" Metal Can Package 2kv Isolation	6

Features

- 15 Watts Output Power (PWM Design)
- 2 : 1 Wide Input Voltage Range
- 2000VDC Isolation ("H" means 3000VDC)
- Remote On/Off control
- Continuous Short Circuit Protection
- UL1950 Component Recognized
- Standard 2" * 1" Metal Package
- High Efficiency up to 87%
- ROHS Compliant



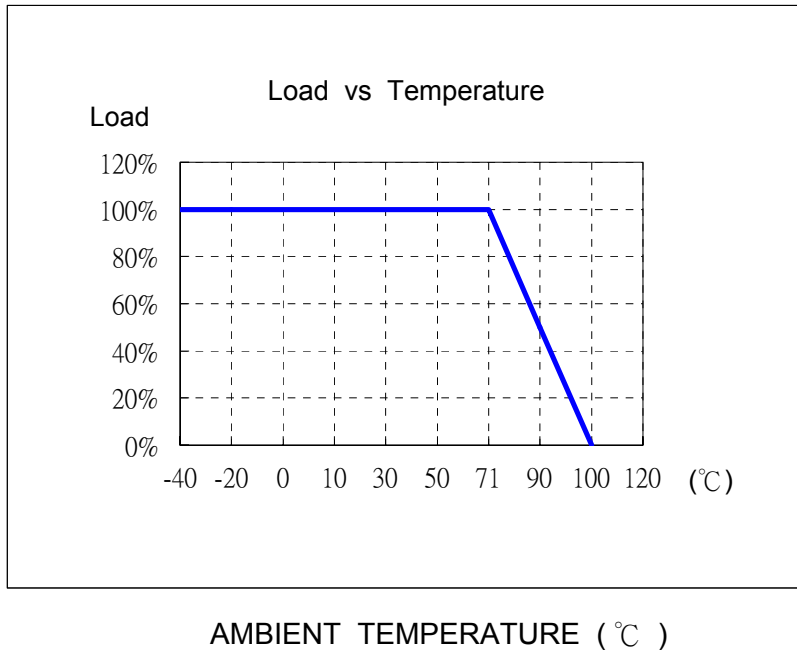
Selection Guide

Model Number	Input		Output		Efficiency (typical)
	Voltage	Current	Voltage	Current	
PC15WR - 123.3	9 - 18 VDC	982 mA	3.3 VDC	3000 mA	84%
PC15WR - 1205		1453 mA	5.0 VDC	3000 mA	86%
PC15WR - 1212		1471 mA	12 VDC	1250 mA	85%
PC15WR - 1215		1471 mA	15 VDC	1000 mA	85%
PC15WR - 1205D		1506 mA	± 5.0 VDC	± 1500 mA	83%
PC15WR - 1212D		1471 mA	± 12 VDC	± 625 mA	85%
PC15WR - 1215D		1471 mA	± 15 VDC	± 500 mA	85%
PC15WR - 243.3	18 - 36 VDC	485 mA	3.3 VDC	3000 mA	85%
PC15WR - 2405		718 mA	5.0 VDC	3000 mA	87%
PC15WR - 2412		727 mA	12 VDC	1250 mA	86%
PC15WR - 2415		727 mA	15 VDC	1000 mA	86%
PC15WR - 2405D		744 mA	± 5.0 VDC	± 1500 mA	84%
PC15WR - 2412D		727 mA	± 12 VDC	± 625 mA	86%
PC15WR - 2415D		727 mA	± 15 VDC	± 500 mA	86%
PC15WR - 483.3	36 - 75 VDC	246 mA	3.3 VDC	3000 mA	84%
PC15WR - 4805		363 mA	5.0 VDC	3000 mA	86%
PC15WR - 4812		368 mA	12 VDC	1250 mA	85%
PC15WR - 4815		368 mA	15 VDC	1000 mA	85%
PC15WR - 4805D		376 mA	± 5.0 VDC	± 1500 mA	83%
PC15WR - 4812D		368 mA	± 12 VDC	± 625 mA	85%
PC15WR - 4815D		368 mA	± 15 VDC	± 500 mA	85%

Specifications

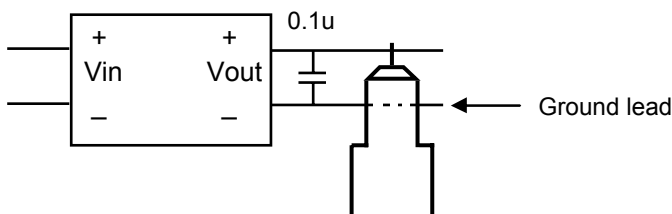
Input Specifications		
Input Filter		Pi type
Input Voltage Range		2 : 1
Start up Times (at Nominal Vin)		300 ms typ
Remote ON / OFF (Note 1)	DC-DC ON	Open or $3.5V < V_r < 12V$
	DC-DC OFF	Short or $0V < V_r < 1.2V$
Output Specifications		
Voltage Accuracy (Full Load & Nominal Vin)		$\pm 2\%$ max
Minimum Load (Note 2)		10% of Full Load
Line Regulation (Low line to Hi line at Full Load)		$\pm 1\%$ max
Load Regulation (25% to 100% Load)	Single output	$\pm 1\%$ max
	Dual output	$\pm 2\%$ max
Cross Regulation (25% to 100% Load) (Note 3)		$\pm 5\%$ max
Ripple & Noise @ 20MHZ BW (Note 4)		100 mVp-p max
Temperature Coefficient		$\pm 0.05\% / ^\circ C$ max
Over Load Protection (Full Load & Nominal Vin)		140 % typ
Short Circuit Protection		Continuous , Automatic recovery
General Specifications		
Efficiency (at Nominal Vin)		See the table
Isolation Voltage (1 second)	Input to Output	2000VDC min
Isolation Resistance		1G Ω min
Isolation Capacitance		1200 pF max
Operating Frequency		300 KHz typ
MTBF (25 $^\circ C$)		>700K hours
Conducted Emissions (Note 5)	EN55022	CLASS A
Radiated Emissions	EN55022	CLASS A
Vibration		10-55Hz , 2G , 30 Min along X,Yand Z
Environment Specifications		
Operating Temperature Range		- 40 $^\circ C$ to + 71 $^\circ C$
Storage Temperature Range		- 55 $^\circ C$ to + 105 $^\circ C$
Maximum Case Temperature		100 $^\circ C$ max
Relative Humidity		5 % to 95 % RH max
Physical Specifications		
Case Material		Nickel plated copper
Base Material		Non-Conductive black plastic
Potting Material		Epoxy (UL94V-0)
Dimension		50.80 * 25.40 * 10.20
Weight		27g typ

Power Derating Curve



NOTE :

1. The ON/OFF control pin voltage is referenced to negative input.
2. The dc/dc converter requires a minimum of 10% loading , the output to maintain specified regulation .
3. One load is 25% to 100% load, the other load is 100% load , the output voltage variable rate is within $\pm 5\%$.
4. Measured with 20MHz bandwidth and 0.1uF ceramic capacitor .
5. Requires External Filter to meet EN55022 Class A.



MODEL NUMBER STRUCTURE

PC15WR-2405

PC15WR-2405D

PC15WR-2405DH

PC : 2" * 1" Package

15 : 15 Watts

WR : Wide Range (2 : 1)

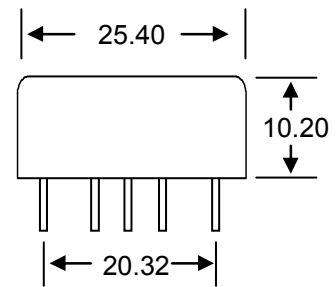
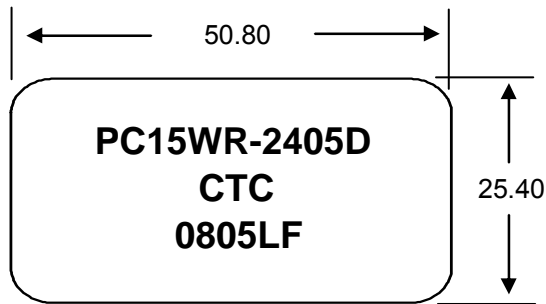
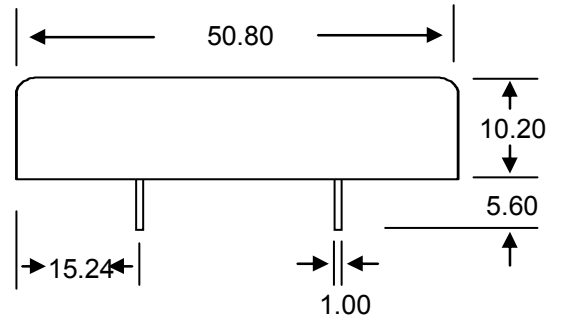
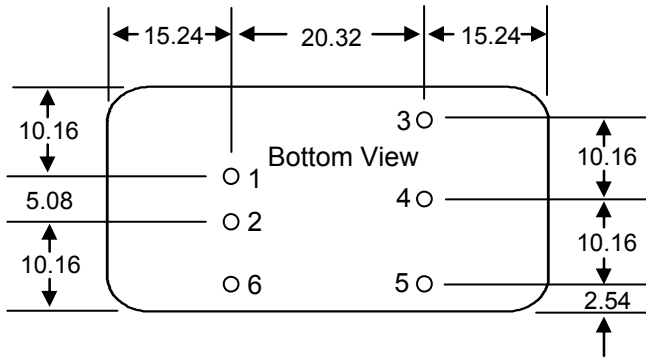
24 : Input Voltage Range . 12 (9 ~ 18) , 24 (18 ~ 36) , 48 (36 ~ 75)

05 : Output Voltages . (3.3 : 3.3V) (05 : 5V) (12 : 12V) (15 : 15V)

D : Dual Output

H : 3KVDC Isolation

Mechanical Dimensions & Pin Connections



Pin	Single	Dual
1	+Vin	+Vin
2	- Vin	- Vin
3	+Vout	+Vout
4	No Pin	Com
5	- Vout	- Vout
6	Remote	Remote

Tol : ± 0.35 mm
 Pin : ± 0.05 mm
 Case Tolerance: ± 0.5 mm

Features

- 15 Watts Output Power (PWM Design)
- 4 : 1 Wide Input Voltage Range
- 2000VDC Isolation ("H" means 3000VDC)
- Remote On/Off control
- Continuous Short Circuit Protection
- UL1950 Component Recognized
- Standard 2" * 1" Metal Package
- High Efficiency up to 87%
- ROHS Compliant



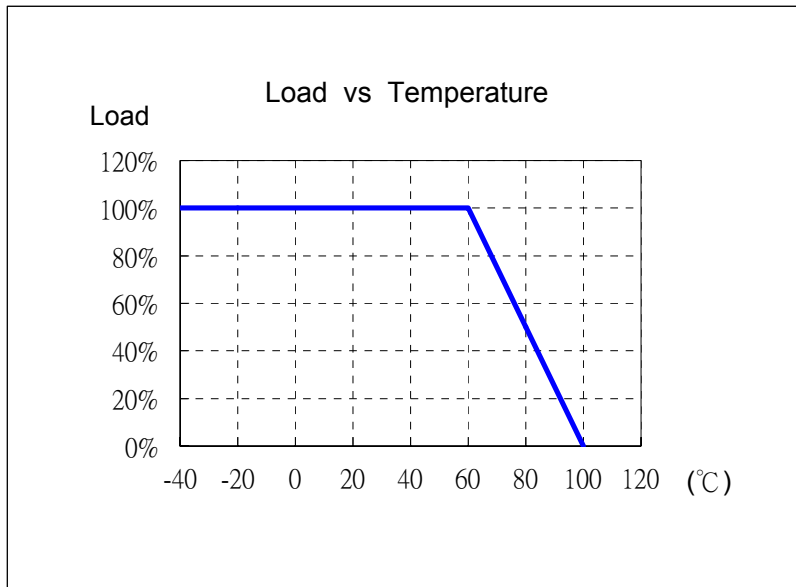
Selection Guide

Model Number	Input		Output		Efficiency (typical)
	Voltage	Current	Voltage	Current	
PC15WR4 - 243.3	9 - 36 VDC	485 mA	3.3 VDC	3000 mA	85%
PC15WR4 - 2405		718 mA	5.0 VDC	3000 mA	87%
PC15WR4 - 2412		727 mA	12 VDC	1250 mA	86%
PC15WR4 - 2415		727 mA	15 VDC	1000 mA	86%
PC15WR4 - 2412D		727 mA	± 12 VDC	± 625 mA	86%
PC15WR4 - 2415D		727 mA	± 15 VDC	± 500 mA	86%
PC15WR4 - 483.3	18 - 75 VDC	246 mA	3.3 VDC	3000 mA	84%
PC15WR4 - 4805		363 mA	5.0 VDC	3000 mA	86%
PC15WR4 - 4812		368 mA	12 VDC	1250 mA	85%
PC15WR4 - 4815		368 mA	15 VDC	1000 mA	85%
PC15WR4 - 4812D		368 mA	± 12 VDC	± 625 mA	85%
PC15WR4 - 4815D		368 mA	± 15 VDC	± 500 mA	85%

Specifications

Input Specifications		
Input Filter		Pi type
Input Voltage Range		4 : 1
Start up Times (at Nominal Vin)		300 ms typ
Remote ON / OFF (Note 1)	DC-DC ON DC-DC OFF	Open or $3.5V < V_r < 12V$ Short or $0V < V_r < 1.2V$
Output Specifications		
Voltage Accuracy (Full Load & Nominal Vin)		$\pm 1.5\%$ max
Minimum Load (Note 2)		2% of Full Load
Line Regulation (Low line to Hi line at Full Load)		$\pm 1\%$ max
Load Regulation (25% to 100% Load)	Single output Dual output	$\pm 1\%$ max $\pm 2\%$ max
Cross Regulation (25% to 100% Load) (Note 3)		$\pm 5\%$ max
Ripple & Noise @ 20MHZ BW (at Nominal Vin) (Note 4)		100 mVp-p max
Temperature Coefficient		$\pm 0.05\% / ^\circ C$ max
Over Load Protection (Full Load & Nominal Vin)		150 % typ
Short Circuit Protection		Continuous , Automatic Recovery
General Specifications		
Efficiency (at Nominal Vin)		See the table
Isolation Voltage (1 second)	Input to Output	2000VDC min
Isolation Resistance		1G Ω min
Isolation Capacitance		1200 pF max
Operating Frequency		300 KHz typ
MTBF (25 $^\circ C$)		>700K Hours
Conducted Emissions (Note 5)	EN55022	CLASS A
Radiated Emissions (Note 5)	EN55022	CLASS A
Vibration		10-55Hz , 2G , 30 Min along X,Yand Z
Environment Specifications		
Operating Temperature Range		(with Derating) - 40 $^\circ C$ to + 85 $^\circ C$
Storage Temperature Range		- 55 $^\circ C$ to + 105 $^\circ C$
Maximum Case Temperature		100 $^\circ C$ max
Relative Humidity		5 % to 95 % RH max
Physical Specifications		
Case Material		Nickel plated copper
Base Material		Non-Conductive black plastic
Potting Material		Epoxy (UL94V-0)
Dimension		50.80 * 25.40 * 10.20
Weight		27g typ

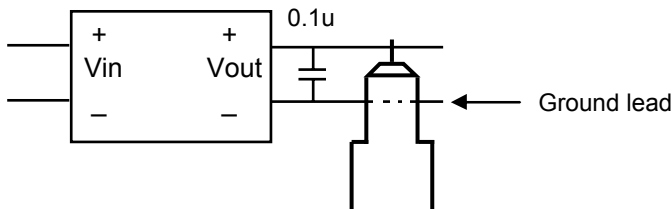
Power Derating Curve



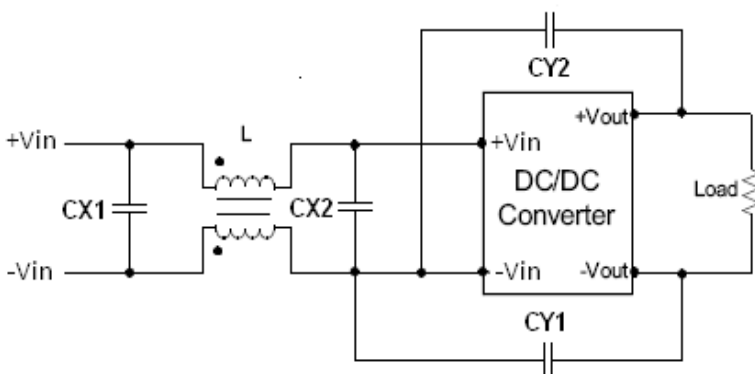
AMBIENT TEMPERATURE (° C)

NOTE :

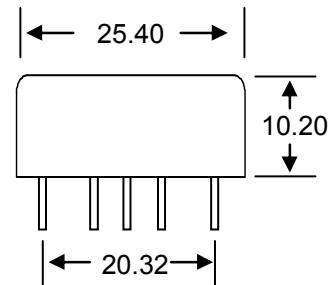
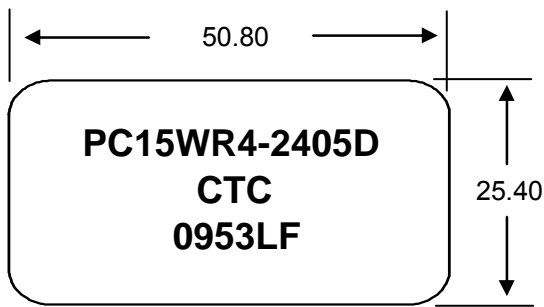
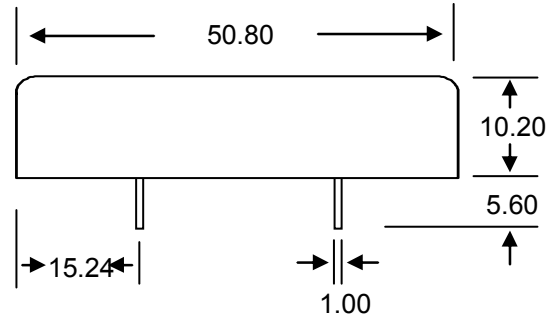
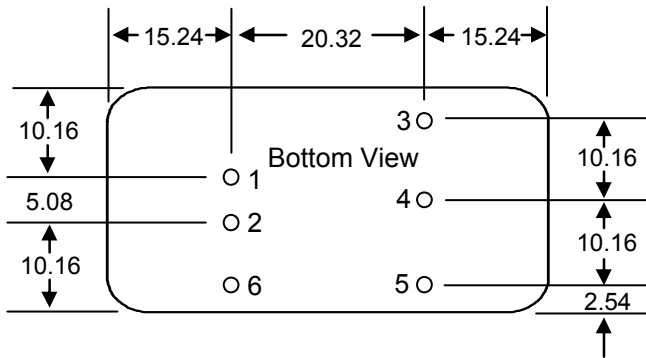
1. The ON/OFF control pin voltage is referenced to negative input.
2. The dc/dc converter requires a minimum of 2% loading , the output to maintain specified regulation .
3. One load is 25% to 100% load, the other load is 100% load , the output voltage variable rate is within $\pm 5\%$.
4. Measured with 20MHz bandwidth and 0.1uF ceramic capacitor .



5. Requires External Filter to meet EN55022 Class A.



Mechanical Dimensions & Pin Connections



1	+Vin	+Vin
2	-Vin	-Vin
3	+Vout	+Vout
4	No Pin	Com
5	-Vout	-Vout
6	Remote ON/OFF	

Tol : ± 0.35 mm
 Pin : ± 0.05 mm
 Case Tolerance: ± 0.5 mm