



CRS & CRD Series of 1 Watt DC/DC Converters

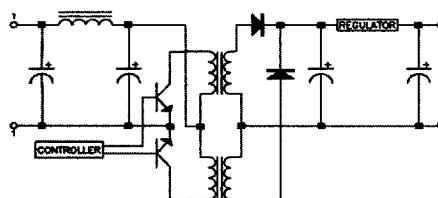


STANDARD DC/DC CONVERTERS WITH SINGLE OR DUAL REGULATED OUTPUTS. ALL MODELS FEATURE 24-PIN DIP COMPATIBLE CONFIGURATION AND THREE TERMINAL OUTPUT REGULATORS FOR TIGHT LINE AND LOAD REGULATION. AN INTERNAL INPUT Π (Pi) FILTER IS STANDARD FOR THIS SERIES TO MINIMIZE REFLECTED RIPPLE CURRENT. ALL MODELS FEATURE A PHENOLIC UL94V0-RATED CASE.



DIMENSIONS:
1.25" x 0.80" x 0.40"
(31.75) x (20.32) x (10.16)mm

BLOCK DIAGRAM



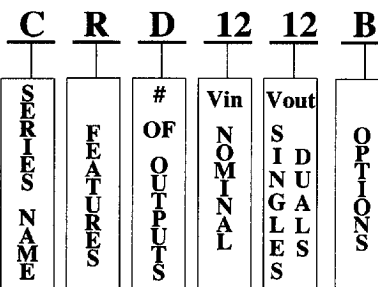
FEATURES

- Industry Standard Pin Out
- 500 VDC I/O Isolation
- Continuous Short Circuit Protection
- Input Π (Pi) Filter

APPLICATIONS

- A/D-D/A Converters
- RS-232 Drivers
- Industrial Control Circuit
- Operational Amplifiers
- Bias Power For RAMs, ROMs, PROMs

PART NUMBER SELECTION GUIDE



Features
• Series Pass Transistor
• Regulated

of Outputs
S = SINGLE
D = DUAL

Input Voltage Range (VDC)
5 = 4.65 to 5.50
12 = 10.9 to 13.2

Output Voltage (VDC)

Single Output:
05 = 5V @100mA
12 = 12V @80mA
15 = 15V @65mA

Dual Output:
12 = $\pm 12V$ @ $\pm 40mA$
15 = $\pm 15V$ @ $\pm 33mA$

For Other Output Voltages Please Consult Factory

Options

B = Alternate Pinout or Height
S (#) = Modification Number
I = Industrial Temperature Range (-40°C to +85°C)

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INTERNATIONAL POWER DEVICES, INC.

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PARAMETER	MIN	TYP	MAX	UNITS	CONDITIONS	NOTES:
GENERAL:						
Switching Frequency	36	40	44	KHz		1. No derating required up to a maximum case temperature of 85°C. Internal Power Dissipation = $P_{out} * (1 - \text{Eff}) / \text{Eff}$.
Isolation Voltage						
Input to Output	500			VDC		
Input to Case	500			VDC		
Output to Case	500			VDC		
Isolation Resistance						2. Provided for input fuse selection.
Input to Output	10 ⁹			Ohms		
Isolation Capacitance						
Input to Output	80			pF		
Short Circuit Protection					Note 3	
ENVIRONMENTAL:						
Operating Temperature						3. Continuous Short Circuit Protection is provided. For dual output units the short circuit current on each individual output is equivalent to the short circuit current for a single output unit.
Commercial Grade	-25		85	°C	Note 1	
Storage Temperature	-40		125	°C	Ambient	
Operating Humidity			95	%	Non-Condensing	
Storage Humidity			95	%	Non-Condensing	
INPUT:						
Input Voltage						4. Long term continuous operation in this mode is not recommended. Converter will auto-restart once short has been removed.
5 Vin	4.65	5.00	5.50	VDC		
12 Vin	10.90	12.00	13.20	VDC		
Input Current						
5 Vin			0.63	Amps	Note 2	
12 Vin			0.25	Amps	Note 2	
Input Ripple Current			20%	I _{in} max		
Reverse Input Current			100%	I _{in} max		
No Load Input Power			0.50	W		
OUTPUT:						
Singles:						
Voltage Accuracy			±4.00%	V _{out}	Full Load	
Load Regulation			±0.50%	V _{out}	0% to 100%	
Line Regulation			±0.50%	V _{out}	LL to HL	
Duals:						
Voltage Accuracy						
+V _{out}			±4.00%	V _{out}	Full Load	
-V _{out}			±4.00%	V _{out}	Full Load	
Load Regulation						
+V _{out}			±0.50%	V _{out}	0% to 100%	
-V _{out}			±0.50%	V _{out}	0% to 100%	
Line Regulation			±0.50%	V _{out}	LL to HL	
Temp. Coefficient			0.02%	/°C		
Voltage Stability			0.05%	V _{out}		
Ripple and Noise			40	mV	p-p, 20 MHz BW	

- All specifications typical at +25°C Nominal Line and Full Load unless otherwise noted.
- Specifications subject to change without notice.
- When measuring the output ripple it is recommended to place a 10 µF tantalum capacitor across each output.



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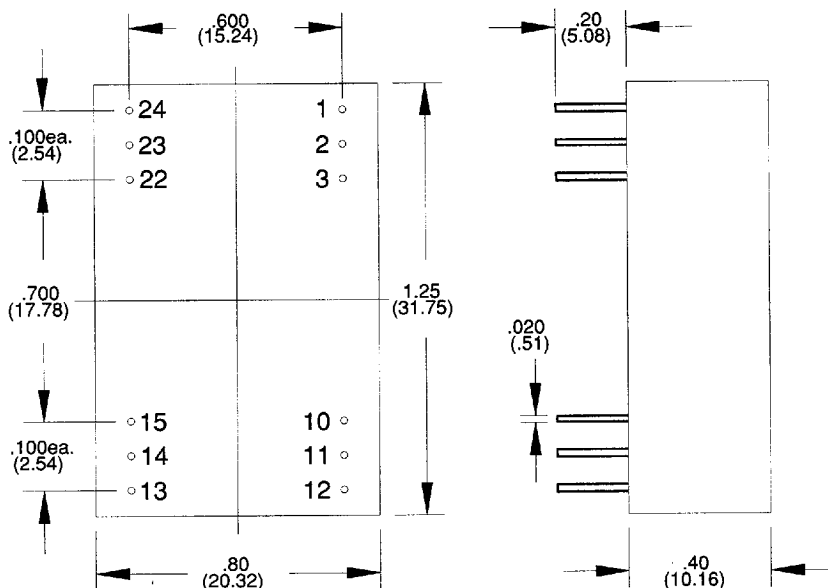
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PIN #	SINGLE	DUAL	DUAL "B"
1 & 24	+Vin	+Vin / -Vin	+Vin
2 & 23	No Connect	+Vin / -Vin	-Vout
3 & 22	No Connect	+Vin / -Vin	Com
4 & 21	No Pin	No Pin	No Pin
5 & 20	No Pin	No Pin	No Pin
6 & 19	No Pin	No Pin	No Pin
7 & 18	No Pin	No Pin	No Pin
8 & 17	No Pin	No Pin	No Pin
9 & 16	No Pin	No Pin	No Pin
10 & 15	-Vout	Com / +Vout	Com
11 & 14	+Vout	Com / NC	+Vout
12 & 13	-Vin	NC / -Vout	-Vin

BOTTOM VIEW

Mechanical tolerances are $\pm 0.04"$



Specifications are subject to change without notice.

All dimensions are in inches (MM)

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