Note: Other input to output voltages may be available. Please contact factory. Product: www.cdpoweronline.com

10	81	5	74	
10	81	5	77	
8	72	5	69	
8	72	5	69	
8	72	5	69	
8	72	5	69	
8	63	5	76	
8	63	5	79	
8	48	15	65	
8	48	15	65	
8	45	15	76	
8	45	15	69	
8	45	15	67	
8	45	15	69	

to offer greater than 10 W/inch³ of output power density. Operation down to no

using the HPR1XX Series with high frequency isolation amplifiers.

Reduced parts count and high efficiency add to the reliability of the

MODEL

HPR100

HPR101

HPR102

HPR103

HPR104

HPR105

HPR106

HPR107

HPR108

HPR109

HPR110

HPR111

HPR112

HPR113

HPR114

HPR115

HPR116

HPR117

HPR118

HPR119

HPR120

HPR121

HPR122

HPR123

NOMINAL

INPUT

VOLTAGE

(VDC)

5

5

5

5

5

5

12

12

12

12

12

12

15

15

15

15

15

15

24

24

24

24

24

24

RATED

OUTPUT

VOLTAGE

(VDC)

5

12

15

±5

±12

±15

5

12

15

±5

±12

±15

5

12

15

±5

±12

±15

5

12

15

±5

±12

±15

HPR1XX Series. The high efficiency of the HPR1XX Series means less internal power dissipation, as low as 190mW. With reduced heat dissipation the HPR1XX Series can operate at higher temperatures with no degradation. In addition, the high efficiency of the HPR1XX Series means the series is able

PRODUCT SELECTION CHART

INPUT CURRENT

RATED LOAD

(mA)

216

212

212

218

212

200

90

81

81

88

NO LOAD

(mA)

20

20

20

20

20

20

10

10

10

10

0.75 Watt Single Output DC/DC Converter

TECHNOLOGIES Prower Solutions HPR 102 NOB9490 0141
The HPR1XX Series uses advanced circuit design and packaging technology to deliver superior reliability and perfor- mance. A 170kHz push-pull oscillator is used in the input stage. Beat-frequency oscillation problems are reduced when

• Low Cost

- Multiple Package Styles
- Internal Input and Output
- Filtering
- Non-Conductive Case

- High Output Power Density: 10 Watts/Inch³
- Extended Temperature Range: -25°C to +85°C
- Efficiency to 79%

1509001 CERTIFIED

EFFICIENCY

(%)

69

70

71

68

68

75

69

77

77

71

load will not impact the reliability of the series, although a >1mA minimum load is needed to realize published specifications.

The HPR1XX Series provides the user a low cost converter without sacrificing reliability. The use of surface mounted devices and advanced manufacturing technologies make it possible to offer premium performance and low cost.

REFLECTED

RIPPLE

CURRENT

(mAp-p)

10

5

5

5

5

5

5

5

5

5

SPECIFICATIONS All specifications are typical at $T_{A} = +25^{\circ}C$ nominal input voltage unless otherwise specified.

RATED

OUTPUT

CURRENT

(mA)

150

62

50

±75

±30

+25

150

62

50

±75

±30

±25 150

62

50

±75

±30

±25

150

62

50

±75

±30

±25



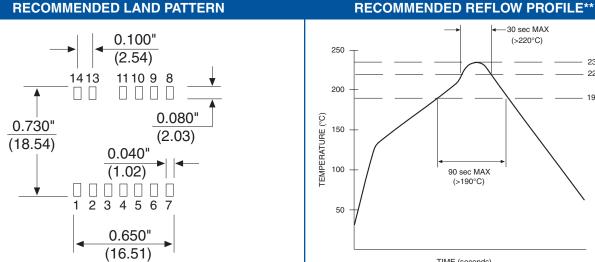
HPR1XX

Corporate: www.cdtechno.com Product: www.cdpoweronline.com

SPECIFICATIONS, ALL MODELS Specifications are at T₁ = +25°C nominal input voltage unless otherwise specified.

	PARAMETER	CONDITIONS	MIN	ТҮР	MAX	UNITS	
оитрит	INPUT						
	Voltage Range		4.5	5	5.5	VDC	
			10.8	12	13.2	VDC	
			13.5	15	16.5	VDC	
			21.6	24	26.4	VDC	
	Voltage Rise Time See Typical Performance Curves & Application Notes: "Capacitive Loading Effects on Start-Up of DC/DC Convert						
	OUTPUT						
	Rated Power			750		mW	
0	Voltage Setpoint Accuracy	Rated Load, Nominal V _{IN}			±5	%	
	Ripple & Noise	BW = DC to 10MHz		150		mVp-p	
		BW =10Hz to 2MHz		30		mVrms	
	Voltage (Over Input Voltage Range)	1mA Load, V _{out} = 5V			7	VDC	
		1mA Load, V _{out} = 12V			15	VDC	
		1mA Load, V _{out} = 15V			18	VDC	
	Temperature Coefficent			.01		%/°C	
	REGULATION						
	Line Regulation	High Line to Low Line		1		%/%Vin	
	GENERAL						
	ISOLATION						
	Rated Voltage		750			VDC	
	Test Voltage	60 Hz, 10 Seconds	750			Vrms (1060pk)	
	Resistance			10		GΩ	
Ļ	Capacitance			25	100	pF	
RA	Leakage Current	V _{ISO} = 240VAC, 60Hz		2	8.5	μArms	
뿌	Switching Frequency			170		kHz	
GENERAL	Frequency Change	Over Line and Load		24		%	
U	Package Weight			2		g	
	MTTF per MIL-HDBK-217, Rev. F*	Circuit Stress Method					
	Ground Benign	T _A = +25°C		7.9		MHr	
	Fixed Ground	T _A = +35°C		1.9		MHr	
	Naval Sheltered	T _A = +35°C		1.2		MHr	
	Airborne Uninhabited Fighter	T _A = +35°C		300		kHr	
	TEMPERATURE						
	Specification		-25	+25	+85	°C	
	Operation		-40		+100	°C	
	Storage		-40		+110	°C	





**This profile is only applicable to the surface mount package devices.

235 °C MAX

- 220

190

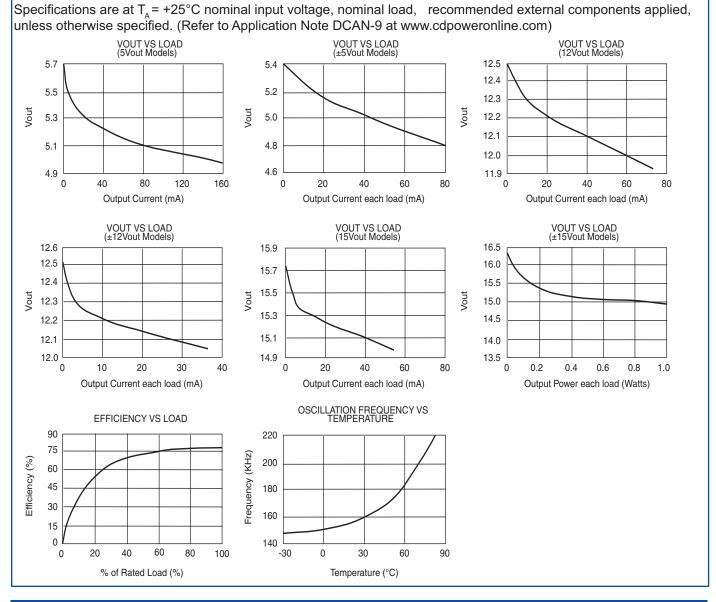
-30 sec MAX

(>220°C)

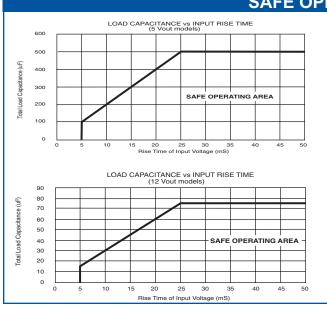
90 sec MAX (>190°C)

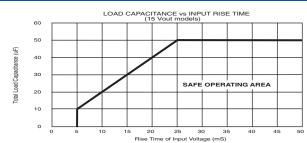
TIME (seconds)

TYPICAL PERFORMANCE CURVES



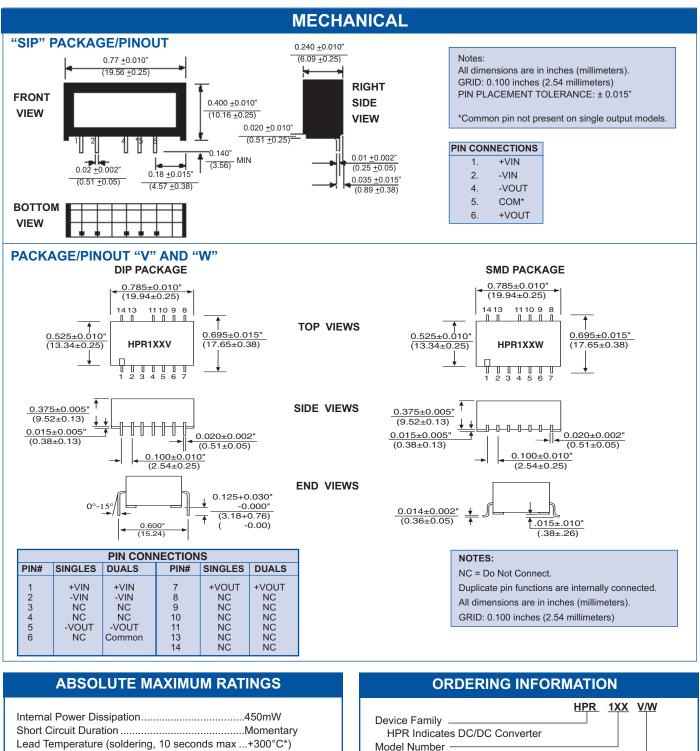
SAFE OPERATING AREA





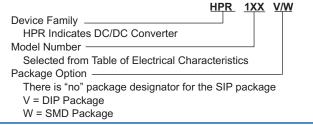
NOTES:

- When operated within the SAFE OPERATING AREA as defined by the above curves, the output voltage of HPR1XX devices is guaranteed to be within 95% of its steady-state value within 100 milliseconds after the input voltage has reached 95% of its steadystate value.
- 2. For dual output models, total load capacitance is the sum of the capacitances on the plus and minus outputs.



*NOTE: Refer to Reflow Profile for SMD Models.

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