SPECIFICATIONS, ALL MODELS

Specifications are at T_A = +25°C nominal input voltage unless otherwise specified.

	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
INPUT	**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 Converters”					
OUTPUT	**OUTPUT**					
	Rated Power				750	mW
	Voltage Setpoint Accuracy	Rated Load, Nominal V_{IN}			±5	%
	Ripple & Noise	BW = DC to 10MHz		150	200	mVp-p
		BW =10Hz to 2MHz		30	40	mVrms
	Voltage (Over Input Voltage Range)	1mA to Rated Current, V_{OUT} = 5V	4.75		7	VDC
		1mA to Rated Current, V_{OUT} = 12V	11.40		15	VDC
		1mA to Rated Current, V_{OUT} = 15V	14.25		18	VDC
	Temperature Coefficent			.01	.05	%/ °C
	REGULATION					
	Load Regulation (All other modes)	Rated Load to 1mA Load		3		%
GENERAL	**GENERAL**					
	ISOLATION					
	Rated Voltage		750			VDC
	Test Voltage	60 Hz, 10 Seconds	750			Vrms
	Resistance		10			GΩ
	Capacitance			25	100	pF
	Leakage Current	V_{ISO}= 240VAC, 60Hz		2	8.5	µArms
	Switching Frequency			170		kHz
	Frequency Change	Over Line and Load		24		%
	Package Weight				3	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

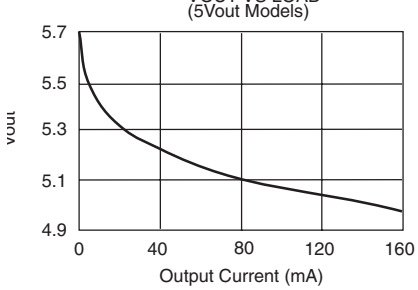
SOLDERING INFORMATION

The surface mount versions of the HPR1XXWC series are designed for SMT reflow soldering. During this standard process devices should be heated at a rate not to exceed 3 degrees C per second. The peak reflow temperature is 260 degrees C. The device should not be exposed to the peak temperature ±10 degrees C for more than 12 seconds. The cool down rate for this device should not exceed 3 degrees C per second.

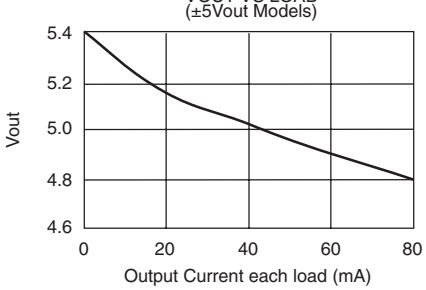
TYPICAL PERFORMANCE CURVES

Specifications are at T_A = +25°C nominal input voltage and nominal load.

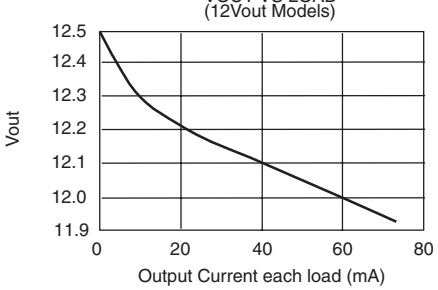
VOUT VS LOAD (5Vout Models)



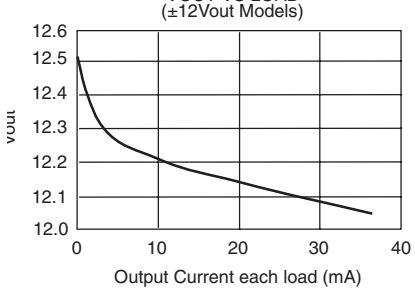
VOUT VS LOAD (±5Vout Models)



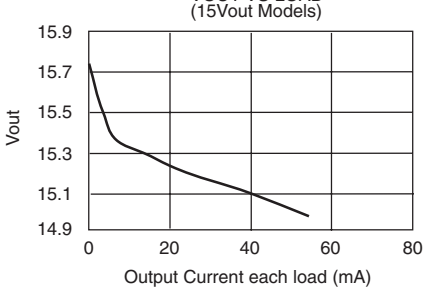
VOUT VS LOAD (12Vout Models)



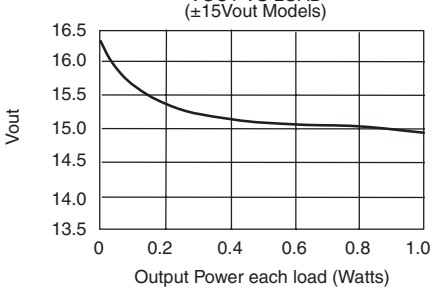
VOUT VS LOAD (±12Vout Models)



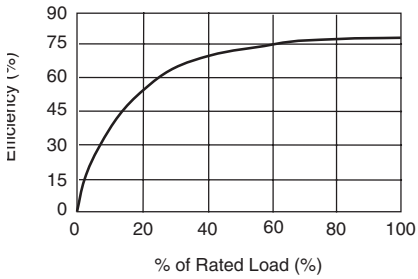
VOUT VS LOAD (15Vout Models)



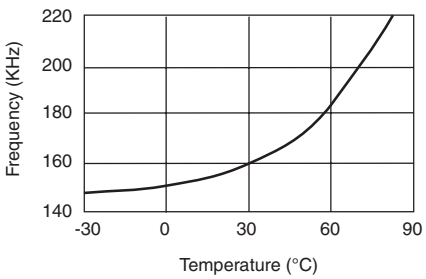
VOUT VS LOAD (±15Vout Models)



EFFICIENCY VS LOAD

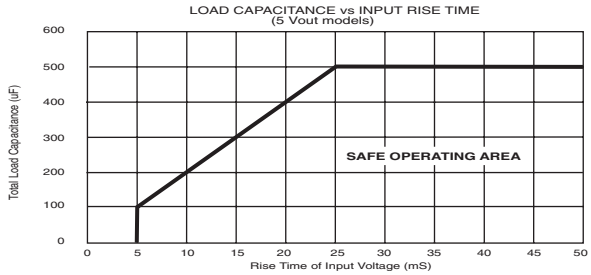


OSCILLATION FREQUENCY VS TEMPERATURE

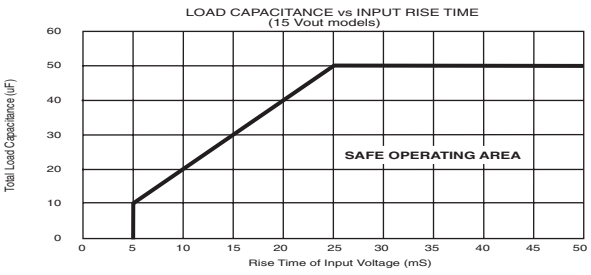


SAFE OPERATING AREA

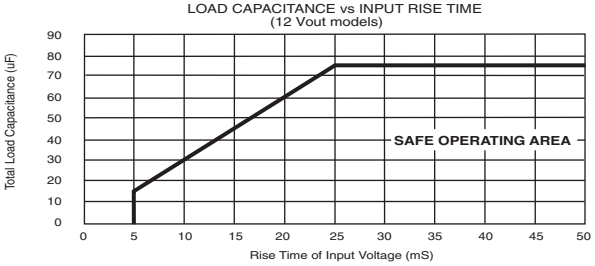
LOAD CAPACITANCE vs INPUT RISE TIME (5 Vout models)



LOAD CAPACITANCE vs INPUT RISE TIME (15 Vout models)



LOAD CAPACITANCE vs INPUT RISE TIME (12 Vout models)



NOTES:

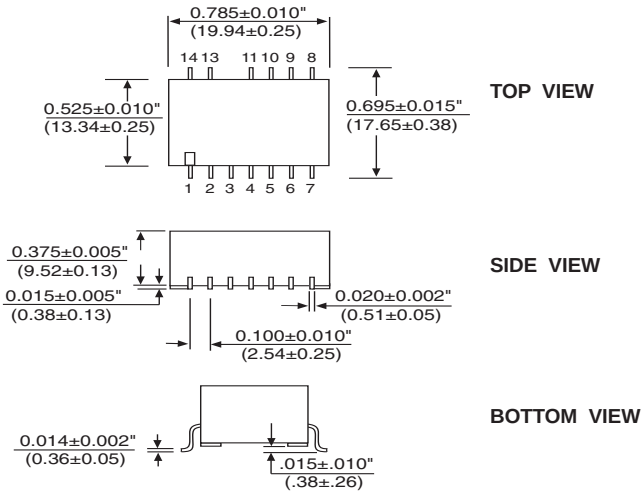
1.) When operated within the SAFE OPERATING AREA as defined by the above curves, the output voltage of HPR1XXC devices is guaranteed to be within 95% of its steady-state value within 100 milliseconds after the input voltage has reached 95% of its steady-state value.

2.) For dual output models, total load capacitance is the sum of the capacitances on the plus and minus outputs.

MECHANICAL

PACKAGE/PINOUT "W"

SMD PACKAGE



PIN CONNECTIONS					
PIN#	SINGLES	DUALS	PIN#	SINGLES	DUALS
1	+VIN	+VIN	7	+VOUT	+VOUT
2	-VIN	-VIN	8	NC	NC
3	NC	NC	9	NC	NC
4	NC	NC	10	NC	NC
5	-VOUT	-VOUT	11	NC	NC
6	NC	Common	13	NC	NC
			14	NC	NC

NOTES:

NC = Do Not Connect.

Duplicate pin functions are internally connected.

All dimensions are in inches (millimeters).

GRID: 0.100 inches (2.54 millimeters)

MATERIAL: Lead material is phosphor bronze; lead finish is 100-300 microinches of matte tin over a nickel barrier layer of 5-40 microinches.

ABSOLUTE MAXIMUM RATINGS

Internal Power Dissipation 450mW
Short Circuit Duration..... Momentary

ORDERING INFORMATION

HPR 1XX W C

Device Family
HPR Indicates DC/DC Converter
Model Number
Selected from Table of Electrical Characteristics
Package Option
W = SMD Package
RoHS Compliant Version