

OBSOLETE PRODUCT Contact factory for replacement model

HPR7XX

FEATURES

- EFFICIENCY >80%
- SIP PACKAGE
- HIGH POWER DENSITY: > 16 WATTS/INCH³
- LOW COST

DESCRIPTION

The HPR7XX Series provides high power densities where space is critical. The small SIP package measures only 2.2" x .3" x .4" (56 x 9 x 10 mm). Designed for high density boards, the package is non-conductive, which presents advantages over painted metal enclosures.

The series includes many different voltage models (other input and output voltages are available upon request), all set in a low thermal resistance molding compound, called Iso-ThermoFlexTM, which provides excellent heat dissipation of internal components. The use of surface mount devices and manufacturing processes, combined with the encapsulation process, assure the user that the product is more environmentally rugged than any other DC/ DC converter of its type.

• SINGLE AND DUAL OUTPUTS

- INTERNAL INPUT AND OUTPUT FILTERING
- SIX-SIDED SHIELDING

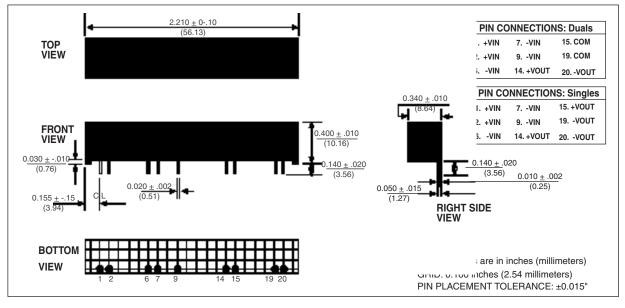
Operation down to no load will not impact the reliability of the series, although this product has a 10mA minimum load for specification purposes. It is recommended that all pins be used for current carrying capacity even though duplicate pin-outs are internally connected.

5 WATT UNREGULATED

SIP DC/DC CONVERTER

The HPR7XX has 500VDC isolation barrier between input and output, offering the designer maximum flexibility in grounding options and polarity configurations. The outstanding MTTF, superior reliability, and low cost make it an excellent choice for any high power- density applications.





ELECTRICAL CHARACTERISTICS

	NOMINAL	RATED	RATED	INPUT CURRENT		REFLECTED		
MODEL	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	NO LOAD (mA)	RATED LOAD (mA)	RIPPLE CURRENT (mAp-p)	EFFICIENCY (%)	
HPR700	5	5	1000	70	1250	15	80	
HPR703	5	± 5	±500	70	1250	15	80	
HPR704	5	±12	±208	70	1190	15	84	
HPR705	5	±15	±167	70	1190	15	84	
HPR706	12	5	1000	25	490	15	80	
HPR710	12	±12	±208	25	490	15	85	
HPR711	12	±15	±167	25	490	15	85	
HPB712	15	5	1000	20	407	15	82	
HPR717	15	±15	±167	20	392	15	85	

Note: Other input to output voltage options may be available. Please consult factory.

COMMON SPECIFICATIONS

PARAMETER	CONDITIONS	MIN	ТҮР	МАХ	UNITS
INPUT					
Voltage Range		4.75	5	5.25	VDC
		11.4	12	12.6	VDC
		14.2	15	15.8	VDC
Voltage Rise Time	See Application N	ote: "Capacitive Load	ling Effects on Start-U	Jp of DC/DC Convert	ers"
ISOLATION					
Rated Voltage		500			VDC
Test Voltage	60 Hz, 10 seconds	500			Vpk
Resistance			1		GW
Capacitance			55		pF
Leakage Current	V _{ISO} = 240VAC, 60Hz		5		μArms
OUTPUT					
Rated Power			5		w
Voltage Setpoint Accuracy	Rated Load, Nominal V _{IN}		±3		%
Temperature Coefficent			±0.05		%/Deg C
Ripple & Noise	BW = DC to 10MHz		50		mVp-p
	BW =10Hz to 2MHz		5		mVrms
Voltage	$I_1 = 10 \text{mA}, V_{\text{out}} = 5 \text{V}$			5.75	VDC
	$I_{L} = 10 \text{mA}, V_{OUT} = \pm 12 \text{V}$			13.10	VDC
	I_{L} =10mA, V_{OUT} = ±15V			16.25	VDC
REGULATION					
Line Regulation	High Line to Low Line		1.2		%/%Vin
Load Regulation (5V out only)	Rated Load to No Load		15		%
Load Regulation (All other Models)	Rated Load to No Load		10		%
GENERAL					
Switching Frequency			170		kHz
Package Weight			7		
MTTF per MIL-HDBK-217, Rev. E	Circuit Stress Method		/		g
Ground Benign	$T_{a} = +25^{\circ}C$		2000		kHr
TEMPERATURE		05	.05	.70	°C
Specification Operation		-25 -40	+25	+70 +85	°C ℃
Storage		-40 -40		+85	 ⊃°
Olorage		-+0		T110	

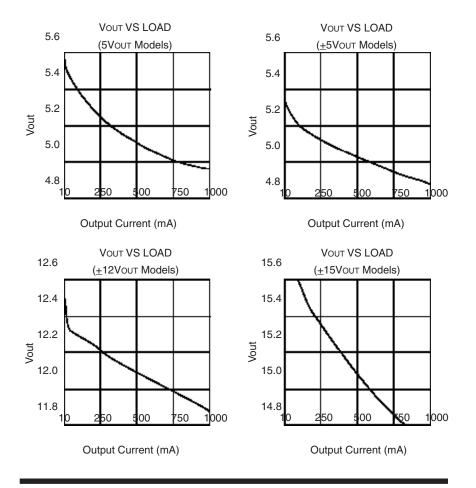
ABSOLUTE MAXIMUM RATINGS

Internal Power Dissipation	1.7W
Short Circuit Protection	Momentary
Lead Temperature (soldering, 10 seconds max)	+300°C

ORDERING INFORMATION

	HPR	7XX	/H
Device Family -	T		\top
HPR indicates DC/DC converter			
Model Number			
Screening Option			

TYPICAL PERFORMANCE CURVES



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