

HL01R

1 WATT REGULATED DC/DC CONVERTER

FEATURES

- LOW COST
- NON-CONDUCTIVE CASE
- INTERNAL INPUT AND OUTPUT
FILTERING
- SHORT CIRCUIT PROTECTED

- BUILT IN STANDOFFS
- INDUSTRY STANDARD PINOUT

DESCRIPTION

The HL01R Series uses advanced circuit design and packaging technology to realize superior reliability and performance. A 125kHz push-pull oscillator is used in the input stage. Beat-frequency oscillator problems are reduced when using the HL01R Series with high frequency isolation amplifiers.

mount devices and magnetics eliminate hand soldering operations. This "hands-free" construction increases quality and reliability while keeping cost low.

Reduced parts count and all surface mount construction add to the reliability of the HL01R Series. The use of surface

ABSOLUTE MAXIMUM RATINGS

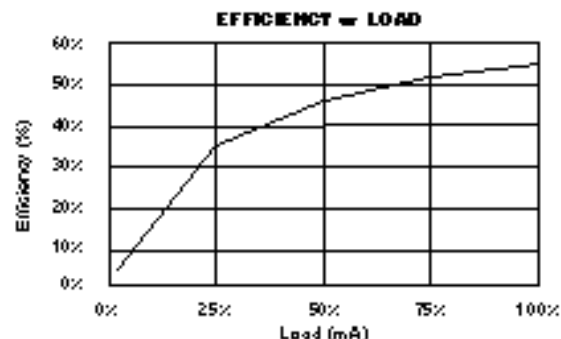
Internal Power Dissipation.....	1.2W
Short Circuit Duration.....	Continuous*
Lead Temperature (soldering, 10 seconds max).....	+300°C*

* Note: Refer to Reflow Profile for SMD Models.

ORDERING INFORMATION

	HL01R	xx	yy	zz	Y/Z	/H
Device Family						
HL Indicates DC/DC Converter						
Model Number						
Where:						
xx = Input Voltage						
y = Number or Outputs (Single "S", Dual "D")						
zz = Output Voltage						
Package Option						
Screening Option						
DIP Package only						

TYPICAL PERFORMANCE CURVES



Specifications typical at $T_A = +25^\circ\text{C}$, nominal input voltage, rated output current unless otherwise specified.

ELECTRICAL SPECIFICATIONS

Specifications typical at T_A = +25°C, nominal input voltage, rated output current unless otherwise specified.

OUTPUT VOLTAGE MODEL	OUTPUT VOLTAGE (VDC)	CURRENT (VDC)	MIN LOAD (mA)	RATED LOAD EFFICIENCY		(%)
				(mA)	(mA)	
HL01R05S05	5	5	200	50	400	58
HL01R05S12	5	12	83	50	400	52
HL01R05S15	5	15	67	50	400	52
HL01R12S05	12	5	200	40	160	58
HL01R12S12	12	12	83	40	160	52
HL01R12S15	12	15	67	40	160	52
HL01R15S05	15	5	200	30	130	58
HL01R15S12	15	12	83	30	130	52
HL01R15S15	15	15	67	30	130	52
HL01R24S05	24	5	200	20	80	58
HL01R24S12	24	12	83	20	80	52
HL01R24S15	24	15	67	20	80	52
HL01R05D05	5	±5	±100	50	425	45
HL01R05D12	5	±12	±41	50	400	53
HL01R05D15	5	±15	±33	50	400	53
HL01R12D05	12	±5	±100	40	185	45
HL01R12D12	12	±12	±41	40	160	53
HL01R12D15	12	±15	±33	40	160	53
HL01R15D05	15	±5	±100	30	145	45
HL01R15D12	15	±12	±41	30	130	53
HL01R15D15	15	±15	±33	30	130	53
HL01R24D05	24	±5	±100	20	90	45
HL01R24D12	24	±12	±41	20	80	53
HL01R24D15	24	±15	±33	20	80	53
PARAMETER		CONDITIONS		MIN	TYP	MAX
INPUT						

UNITS

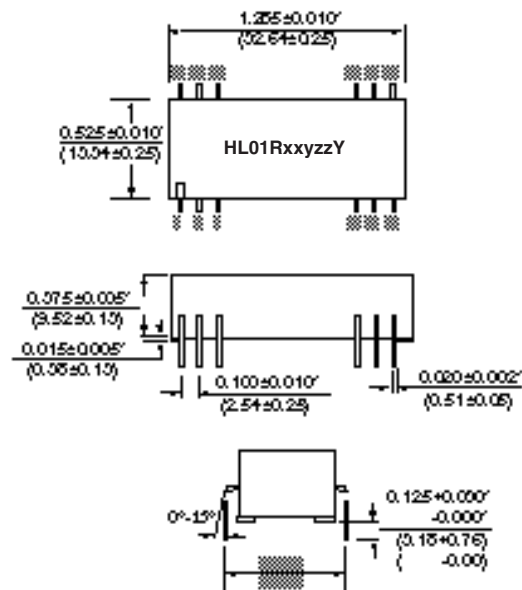
Note: Other input to output voltages may be available. Please contact factory.

COMMON SPECIFICATIONS

Specifications typical at T_A = +25°C, nominal input voltage, rated output current unless otherwise specified.

Voltage Range		4.75 11.4	5 12	5.25 12.6	VDC VDC
Reflected Ripple Current		14.25 22.8	15 24 30	15.75 25.2 100	VDC VDC mAp-p
ISOLATION Rated Voltage Test Voltage	60 Hz, 10 Seconds	500 500			VDC Vpk
Resistance Capacitance Leakage Current	V _{ISO} = 240VAC, 60Hz		1 25 2	10	GΩ pF μArms
OUTPUT Rated Power			1		W
Voltage Setpoint Accuracy Temperature Coefficient Ripple & Noise	BW = DC to 10MHz BW =10Hz to 2MHz		±3 ±0.01 30 1	±5 ±0.02 100 10	% %/°C mVp-p mVrms
Line Regulation Load Regulation	High Line to Low Line Rated Load to No Load		±0.1 ±0.3	±0.3 ±0.5	% %
GENERAL Switching Frequency			125		kHz
Package Weight MTTF per MIL-HDBK-217, Rev. F Ground Benign	Circuit Stress Method		10 675		g kHr
TEMPERATURE Specification		-25		+70	°C
Operation Storage		-40 -40		+85 +110	°C °C

MECHANICAL Package/Pinout "Y" and "Z"



DIP PACKAGE

NU = Do Not Use.

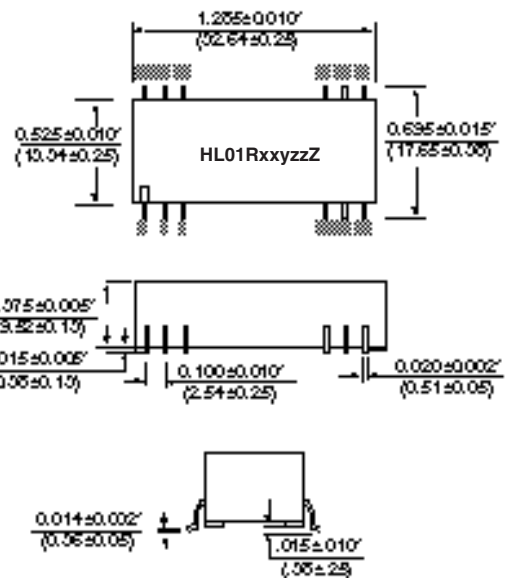
NC = No Internal Connection.

Duplicate pin functions are internally connected.

All dimensions are in inches (millimeters).

GRID: 0.100 inches (2.54 millimeters)

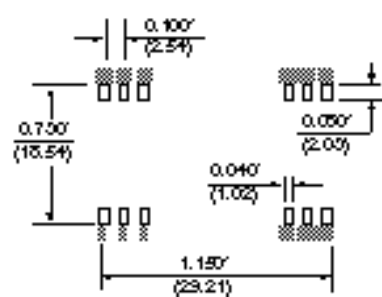
Typically Marked with: specific model ordered, date code, job code and Logo.



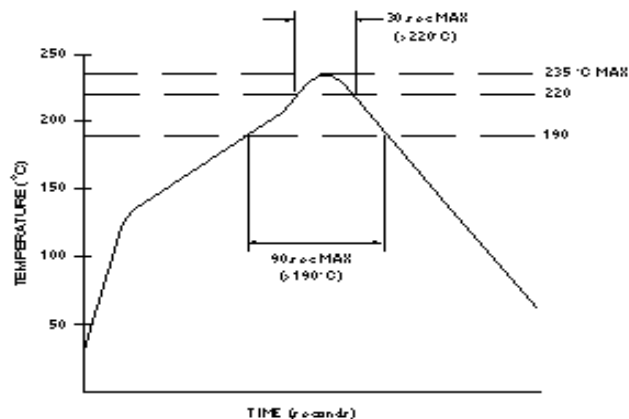
SMD PACKAGE

PIN CONNECTIONS		
PIN#	SINGLES	DUALS
1	+VIN	+VIN
2	NU	-VOUT
3	Common	Common
10	-VOUT	Common
11	+VOUT	+VOUT
12	-VIN	-VIN
13	-VIN	-VIN
14	+VOUT	+VOUT
15 -VOUT	Common	Common
22	NU	Common
23	NU	-VOUT
24	+VIN	+VIN

RECOMMENDED LAND PATTERN



RECOMMENDED REFLOW PROFILE





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