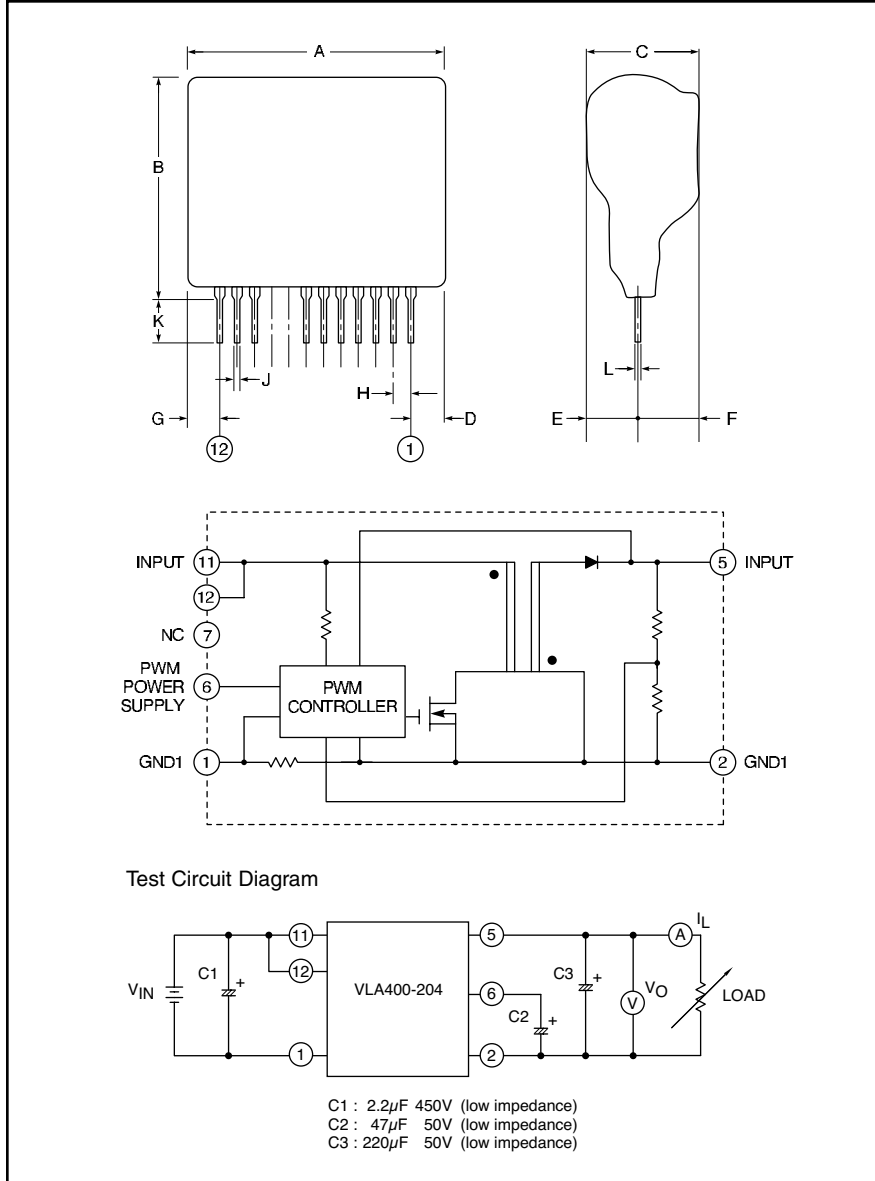


### High Voltage Input DC/DC Converter



#### Description:

VLA400-204 is a non-isolated type DC-DC converter. Wide range of input voltage (DC 113V - 380V) enables direct connection to rectified 120V and 240V AC. This device is best suited for use as a pre-regulator for standard DC-DC converters.

#### Features:

- Input Voltage Range: 113V - 380V DC
- Thin Profile, Lightweight Design
- Built in Surface Mount Transformer
- SIP Structure Enables Efficient use of PCB Area

#### Application:

- Power Source for Standard DC-DC Converters
- Pre-regulator

#### Outline Drawing and Circuit Diagram

Dimensions	Inches	Millimeters
A	1.46	37.0
B	1.34	34.0
C	0.71	18.0
D	0.18	4.5
E	0.25	6.5
F	0.47	12.0
G	0.22	5.5
H	0.10	2.54
J	0.02+0.02/-0.004	0.5+0.5/-0.1
K	0.18±0.06	4.5±1.5
L	0.01+0.01/-0.004	0.25+0.2/-0.1

Note: All dimensions listed are maximums except H, K, L, AND J.

**VLA400-204**

**High Voltage Input DC/DC Converter**

**Absolute Maximum Ratings,  $T_a = 25^\circ\text{C}$  unless otherwise specified**

Characteristics	Symbol	VLA400-204	Units
Input Voltage (Between Pins 11, 12-1)	$V_{IN}$	390	Volts
Output Power	$P_{O(max)}$	4.4	Watts
Surface Temperature (Highest Surface Temperature Point)	$T_C$	100	$^\circ\text{C}$
Operating Temperature (No Condensation)*	$T_{opr}$	-10 ~ +75	$^\circ\text{C}$
Storage Temperature (No Condensation)	$T_{stg}$	-20 ~ +85	$^\circ\text{C}$

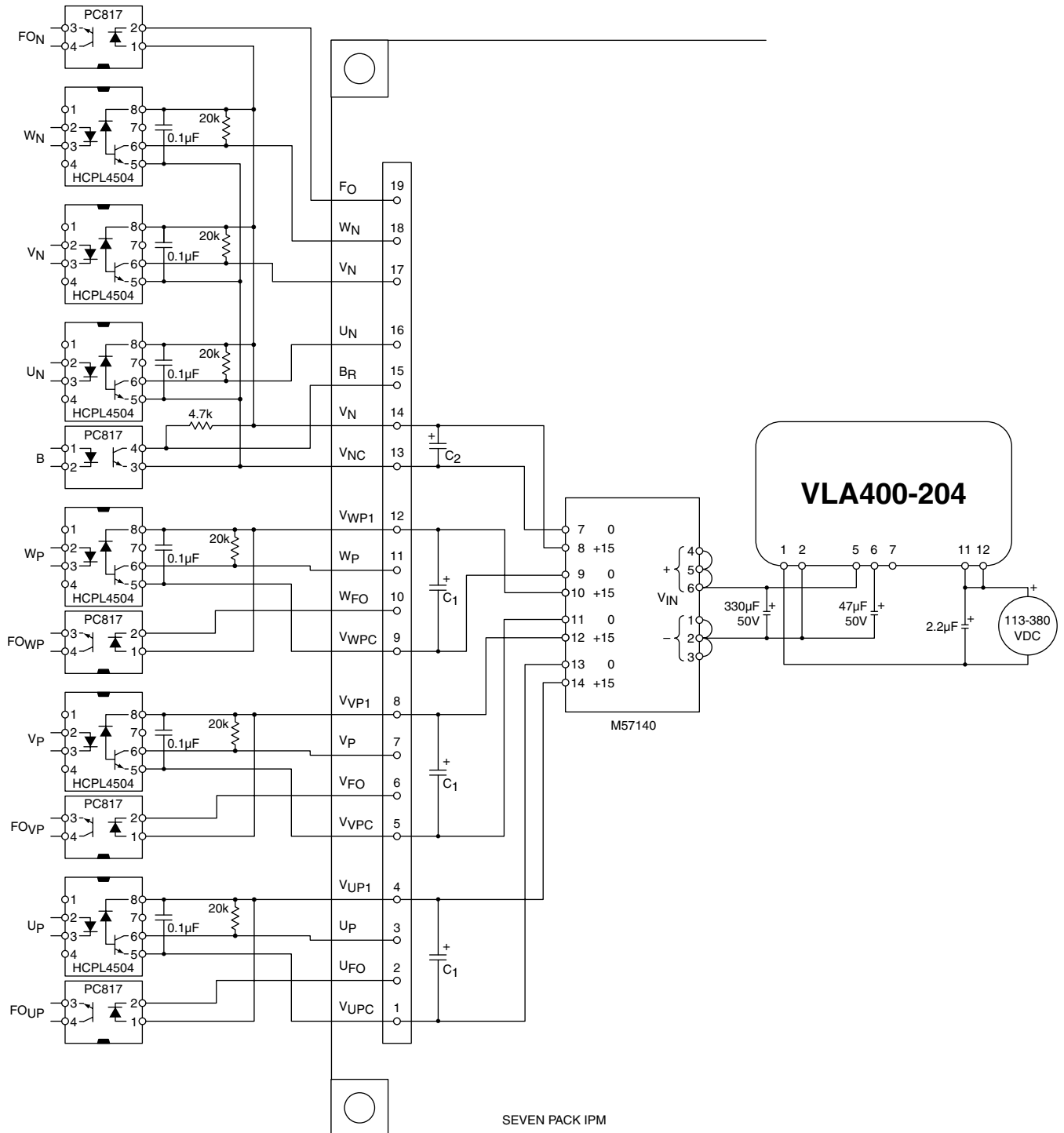
\*Please refer to derating characteristics.

**Electrical and Mechanical Characteristics,  $T_a = 25^\circ\text{C}$ ,  $V_{IN} = 24\text{V}$  unless otherwise specified**

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Input Voltage	$V_{IN}$	DC	113	280	380	Volts
Circuit Current	$I_B$		—	1.5	—	mA
Output Voltage	$V_O$	$I_L = 0 \sim 200\text{mA}$	18	20	22	Volts
Load Current	$I_L$	$V_{IN} = 113 \sim 380\text{V}$	—	200	220	mA
Input Regulation	$R_{reg-I}$	$V_{IN} = 113 \sim 380\text{V}$	—	0.8	1.4	Volts
Load Regulation	$R_{reg-L}$	$I_L = 0 \sim 200\text{mA}$	—	1.0	2.0	Volts
Efficiency	$\eta$	$I_L = 220\text{mA}$	—	75	—	%

**VLA400-204**  
High Voltage Input DC/DC Converter

**Application Circuit**



**VLA400-204**  
High Voltage Input DC/DC Converter

