

# 1.5 WATT UNREGULATED DC/DC CONVERTER

## PWR1726AC



### FEATURES

- 8000V ISOLATION TEST VOLTAGE
- NO EXTERNAL PARTS REQUIRED
- REMOTE ON/OFF
- LOW-BARRIER CAPACITANCE
- RoHS COMPLIANT

ISO9001  
CERTIFIED



### APPLICATIONS

- BIOMEDICAL DATA ACQUISITION
- INDUSTRIAL PROCESS EQUIPMENT
- DATA ACQUISITION
- TEST EQUIPMENT
- PORTABLE EQUIPMENT



For full details go to  
[www.murata-ps.com/rohs](http://www.murata-ps.com/rohs)

### DESCRIPTION

The PWR1726AC is a single-channel, bipolar output DC/DC/ converter designed for those applications where high-isolation voltage and low-barrier capacitance are critical for system reliability and integrity.

Calculated mean-time-to-failure (MTTF) is in excess of 100 years at an ambient temperature of +25°C and at rated output power. The performance of the PWR1726AC is not derated over its entire specified temperature range of -25°C to +85°C.

The PWR1726AC provides a plus and minus output voltage that is approximately equal to the magnitude of the input voltage. The unit operates over an input voltage range of 7VDC to 16VDC.

Each PWR1726AC isolation barrier is tested per the method set forth by UL544, VDE750, and CSA C22.2.

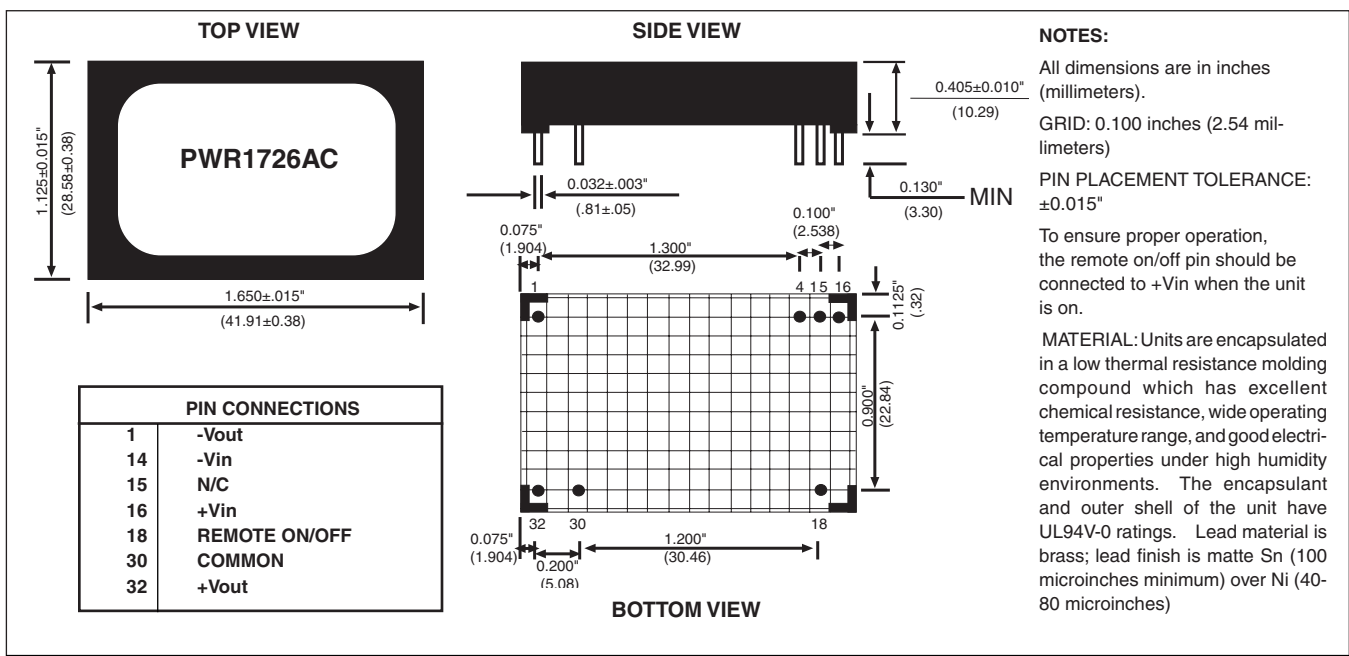
# COMMON SPECIFICATIONS

Specifications typical at  $T_A = +25^\circ\text{C}$ ,  $V_{IN} = 15\text{VDC}$ ,  $I_{LOAD} = \pm 50\text{mA}$  and in free-running mode unless otherwise noted.

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
<b>INPUT</b>					
Rated Voltage			12		V <sub>DC</sub>
Voltage Range		7		16	V <sub>DC</sub>
Input Current	$I_{LOAD} = 0$		30		mA
	$I_{LOAD} = \text{Rated Load}$		145	165	mA
	Short Circuit		115		mA
Ripple Current	$I_{LOAD} = \text{Rated Load}$		15		mAp-p
<b>ISOLATION</b>					
Voltage Rated Continuous		3500			V <sub>rms</sub>
AC, 60Hz		5000			V <sub>DC</sub>
DC		8000			V <sub>pk</sub>
Test Voltage	60sec, 60Hz				GΩ
Resistance			10		pF
Capacitance			10		μA
Leakage Current	$V_{ISO} = 240\text{VAC}, 60\text{Hz}$		1	2	
<b>OUTPUT</b>					
Rated Voltage	$I_{LOAD} = \text{Rated Load}$		±15		V <sub>DC</sub>
Voltage Range	$I_{LOAD} = \text{Rated Load}$	±14.25		±15.75	V <sub>DC</sub>
	$I_{LOAD} = 0\text{mA}$	±16.0		±18.0	V <sub>DC</sub>
Rated Current	Balanced Loads		±50		mA
Current Range	Balanced Loads	0		±90	mA
	Single Ended	0		180	mA
Line Regulation	$7\text{VDC} < V_{IN} < 18\text{VDC}$		1.16		mV/mV
Load Regulation	No Load < $I_{OUT} < \pm 50\text{mA}$			0.3	%/mA
Ripple Voltage	BW = DC to 10MHz				mVp-p
	$I_{LOAD} = 0$		15		mVp-p
	$I_{LOAD} = \text{Rated Load}$		50		mVp-p
					(referenced to common)
<b>GENERAL</b>					
MTTF	Calculated per MIL - HDBK - 217 Rev. E Ground, Benign 25° C		1.2		MHr
Switching Frequency			120		kHz
Moisture Sensitivity Level	as per IPC/JEDEC J-STD-20		2		
<b>TEMPERATURE</b>					
Specification		-25	+25	+85	°C
Operation		-40		+100	°C
Storage		-55		+110	°C

NOTE: Other input and output voltages may be available upon request. Please consult the factory.

## MECHANICAL



## ABSOLUTE MAXIMUM RATINGS

Input Voltage .....	16V <sub>DC</sub>
Output Short-Circuit Duration .....	Continuous
Internal Power Dissipation .....	2W
Lead Temperature (soldering, 10 seconds max) .....	+300°C

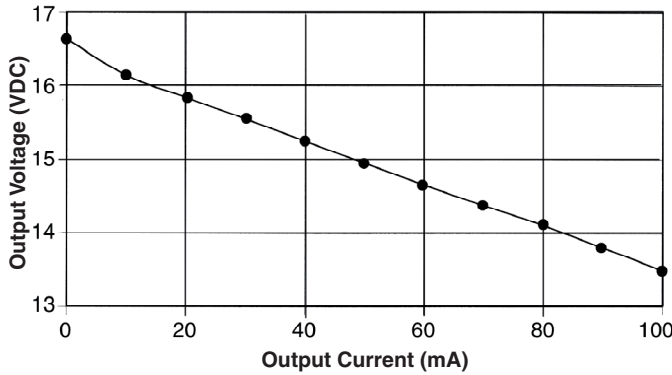
## ORDERING INFORMATION

Device Family _____	<b>PWR</b>	<b>1726A</b>	<b>C</b>
PWR indicates DC/DC converter			
Model Number _____			
RoHS Compliant _____			

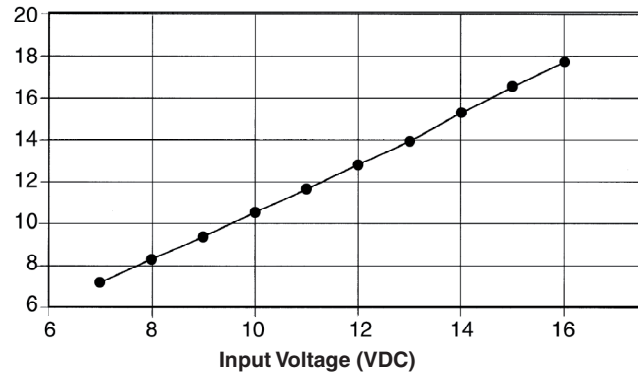
## TYPICAL PERFORMANCE CURVES

TA=+25°C, Rated Input Voltage, Rated Output Current unless otherwise noted

### OUTPUT VOLTAGE VS. OUTPUT CURRENT



### OUTPUT VOLTAGE VS. INPUT VOLTAGE



## THROUGH-HOLE SOLDERING INFORMATION

These devices are intended for wave soldering or manual soldering. **They are not intended to be subject to surface mount processes under any circumstances.**

The normal wave soldering process can be used with these devices where the device is subjected to a maximum wave temperature of 260°C for a period of no more than 10 seconds. Within this time and temperature range, the integrity of the device's plastic body will not be compromised and internal temperatures within the converter will not exceed 175°C. Care should be taken to control manual soldering limits identical to that of wave soldering.

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