

OBSOLETE PRODUCT

Contact Factory for Replacement Model



FEATURES

- HIGH RELIABILITY
- SHORT-CIRCUIT PROTECTED
- HIGH EFFICIENCY
- LINEAR OUTPUT REGULATED
- TRACKING OUTPUTS
- SIX-SIDED SHIELDING
- INTERNAL INPUT AND OUTPUT FILTERING
- NON-CONDUCTIVE CASE
- INDUSTRY STANDARD PINOUT
- 500Vdc ISOLATION

DESCRIPTION

The PWR70XXAC Series uses advanced circuit design and packaging technology to realize superior reliability and performance. A 170kHz driven push-pull oscillator is used to ensure stable frequency and non-saturating operation of the input stage. This means there are no high peak voltages or currents like other design topologies, which can severely reduce unit reliability. Reliability is further enhanced by the use of MOSPOWER transistors. These rugged devices permit higher frequency operation with less complicated drive circuitry than is possible with bipolar power transistors. Reduced parts count adds to the reliability of the PWR70XXAC Series.

Continuous short-circuit protection and foldback current limiting make the PWR70XXAC Series rugged devices for use in

demanding system applications. These features add to the overall reliability of the PWR70XXAC Series by reducing the possibility of inadvertently damaging the unit due to an output overload.

The high efficiency of the PWR70XXAC Series means low internal power dissipation. With less heat dissipated, the PWR70XXAC Series can operate at higher ambient temperature with no degradation of reliability.

The PWR70XXAC Series offers the user low cost without sacrificing reliability. The use of surface mounted devices and manufacturing technologies makes it possible to offer premium performance and low cost.



ELECTRICAL SPECIFICATIONS

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

MODEL	NOMINAL INPUT VOLTAGE (VDC)	RATED OUTPUT VOLTAGE (VDC)	RATED OUTPUT CURRENT (mA)	INPUT CURRENT		REFLECTED RIPPLE CURRENT (mAp-p)	EFFICIENCY (%)
				NO LOAD (mA)	RATED LOAD (mA)		
PWR7000AC	5	5	1000	50	1580	30	63
PWR7004AC	5	± 12	± 210	50	1490	30	67
PWR7005AC	5	± 15	± 167	50	1450	30	69
PWR7006AC	12	5	1000	30	620	30	67
PWR7010AC	12	± 12	± 210	30	580	30	72
PWR7011AC	12	± 15	± 167	30	570	30	73
PWR7012AC	15	5	1000	30	500	30	67
PWR7016AC	15	± 12	± 210	30	480	30	70
PWR7017AC	15	± 15	± 167	30	460	30	73
PWR7018AC	24	5	1000	30	320	30	65
PWR7022AC	24	± 12	± 210	30	310	30	67
PWR7023AC	24	± 15	± 190	30	355	30	68
PWR7030AC	48	5	1000	20	165	30	63
PWR7033AC	48	± 5	± 500	20	168	30	62

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

COMMON SPECIFICATIONS

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

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
INPUT					
Voltage Range		4.75 10.8 13.5 21.6 43.2	5 12 15 24 48	5.25 13.2 16.5 26.5 52.8	V_{DC} V_{DC} V_{DC} V_{DC} V_{DC}
ISOLATION					
Rated Voltage		500			V_{DC}
Test Voltage	60 Hz, 10 Seconds	500			V_{pk}
Resistance			10		$G\Omega$
Capacitance			80		pF
Leakage Current	$V_{ISO} = 240V_{AC}$, 60Hz		10	10	μArms
OUTPUT					
Rated Power			5		W
Voltage Setpoint Accuracy	Rated Load, Nominal V_{IN}			± 1	%
Temperature Coefficient			± 0.02		$\%/^{\circ}\text{C}$
Ripple & Noise	BW = DC to 10MHz BW = 10Hz to 2MHz		30 2		mVp-p mVrms
Tracking	$-V_{OUT}$ Tracks $+V_{OUT}$		± 1		%
TRANSIENT RESPONSE					
5V Output Models (Within $\pm 1\%$)	Rated Load to No Load		50		μs
	No Load to Rated Load		100		μs
All Other Models (Within $\pm 0.1\%$)	Rated Load to No Load		30		μs
	No Load to Rated Load		100		μs
REGULATION					
Line Regulation	High Line to Low Line		± 0.02		%
Load Regulation	Rated Load to No Load				%
5V Output Models			± 0.04		%
All Other Models			± 0.02		%
GENERAL					
Switching Frequency			170		kHz
Package Weight			50		g
MTTF per MIL-HDBK-217, Rev. F	Circuit Stress Method				
Ground Benign	$T_A = +25^{\circ}\text{C}$		762,000		Hr
	$T_A = +70^{\circ}\text{C}$		46,000		Hr
Fixed Ground	$T_A = +35^{\circ}\text{C}$		230,000		Hr
Naval Sheltered	$T_A = +35^{\circ}\text{C}$		127,000		Hr
Airborne Uninhabited Fighter	$T_A = +35^{\circ}\text{C}$		29,000		Hr
Moisture Sensitivity Level (MSL)	IPC/JEDEC J-STD-20		2		
TEMPERATURE					
Specification		0	+25	+70	$^{\circ}\text{C}$
Operation		-25		+85	$^{\circ}\text{C}$
Storage		-40		+110	$^{\circ}\text{C}$

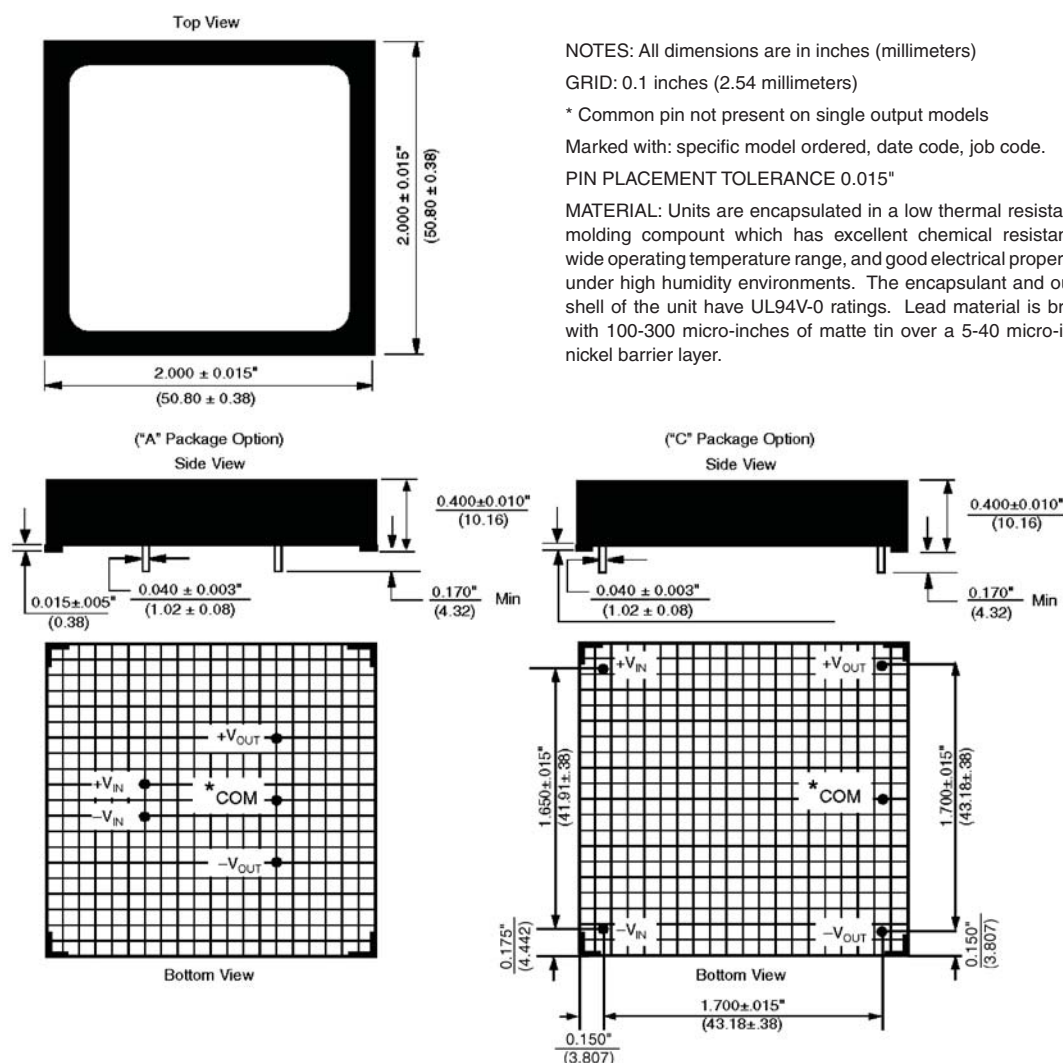
ABSOLUTE MAXIMUM RATINGS

Output Short-Circuit Duration.....Continuous
Internal Power Dissipation..... 3.5W
Lead Temperature (soldering, 10 seconds max).....+300°C

ORDERING INFORMATION

	PWR	70xx	A	C
Device Family	PWR Indicates DC/DC Converter			
Model Number	Selected from Table of Electrical Characteristics			
Package Option	A or C (see mechanical section)			
RoHS Compliant				

MECHANICAL



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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 ISO 9001 and 14001 REGISTERED



This product is subject to the following **operating requirements** and the **Life and Safety Critical Application Sales Policy**:
 Refer to: <http://www.murata-ps.com/requirements/>

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