

Product Specification

AC - DC Medical Power Module

Key Product Features

- Switching Power Module for PCB Mountable
- Fully Encapsulated Plastic Case
- Universal Input Range 90-264VAC
- Regulated Output and Low Ripple and Noise
- <0.15W No load Input Power
- Isolation Class II
- CE, CB, UL, cUL Approvals

DPMTC30 Series 30 Watt



All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Product Specification				
Model	DPMTC30-5S	DPMTC30-12S	DPMTC30-15S	DPMTC30-24S
Input				
Max Output Wattage	25W	30W	30W	30W
Input Voltage	90-264Vac or 120-370 VDC			
Frequency	47-440 Hz			
Current	650mA max. (115VAC) / 400mA max. (230 VAC)			
Inrush current	30A max. (115 VAC) / 60A max. (230VAC)			
Leakage current	<0.1mA max. / 264VAC (Touch Current)			
No Load Input Power (<240 VAC)	<0.15W			
External Fuse (recommended)	3.15A slow blow type			

- NOTES:
- 1- This product is not designed for use in critical life support systems, equipment used in hazardous environment, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other than the ones listed in this datasheet.
 - 2- Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
 - 3- Safety approvals cover frequency 47-63 Hz.
 - 4- The "natural convection" is about 20LFM but is not equal to still air (0 LFM).
 - 5- It's recommended to add Varistor 14S471K at L / N input side in parallel.

Output	DPMTC30-5S	DPMTC30-12S	DPMTC30-15S	DPMTC30-24S
Voltage (V.D.C)	5V	12V	15V	24V
Voltage Accuracy	±2%			
Current max	5000 mA	2500 mA	2000 mA	1250 mA
Maximum Capacitive Load (at 230VAC)	6800uF	1600uF	1200uF	470uF
Line Regulation (LL-HL) (typ.)	±0.5%			
Load Regulation (10-100%) (typ.)	±1%			
Ripple & Noise (max.)	100mVp-p	150mVp-p	150mVp-p	240mVp-p
Efficiency (at 230VAC)	84%	89%	86%	86%
Hold-up Time	10ms min.			

Protection	
Over Power Protection	Hiccup technique, auto-recovery
Over Voltage Protection	Zener diode clamp
Short Circuit Protection	Hiccup mode, indefinite (automatic recovery)

Isolation	
Input-Output (V.A.C)	4000V

Environment	
Operating Temperature	-40°C...+80°C (with derating)
Storage Temperature	-40°C...+90°C
Max. Case Operating Temperature	Under 115VAC 78°C, others 85°C
Temperature Coefficient	±0.05%/°C
Altitude During Operation	5000m
Humidity	Up to 95% RH
MTBF	>250,000h @ 25°C (MIL-HDBK-217F)
Atmospheric Pressure	70kPa to 106kPa

Safety Approval	
cUL/ UL Standard	UL 60950-1, CAN/CSA C22.2 No. 60950-1-07 ANSI/AAMI ES60601-1 (2005 + C1:09 + A2:10), CAN/CSA-C22.2 No. 60601-1(2008), 2 x MOPP
CB Standard	IEC 60950-1:2005 (2nd Edition) + Am 1:2009 + Am 2:2013 IEC 60601-1:2005 (3rd Edition) + CORR. 1 (2006) + CORR.2(2007) + AM1(2012) or IEC 60601-1 (2012 reprint), 2 x MOPP

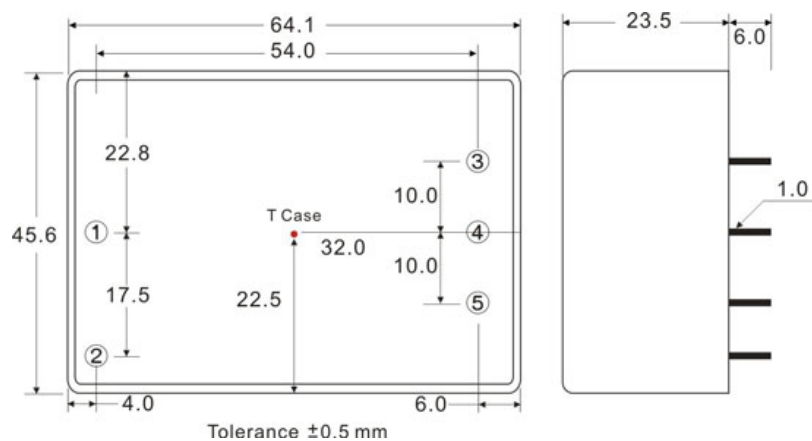
EMC

EMI (Conducted & Radiated Emission)	EN 55011 class B (Radiation Class A for DPMTC30 A2 Series)
ESD	EN61000-4-2 air $\pm 8\text{kV}$, Contact $\pm 4\text{kV}$
Radiated Immunity	EN61000-4-3 10V/m
Fast Transient	EN61000-4-4 $\pm 2\text{kV}$
Surge	EN61000-4-5 $\pm 1\text{kV}$
Conducted Immunity	EN61000-4-6 10 Vrms
PFMF	EN61000-4-8 30A/m
Dips	EN61000-4-11 30% 10ms
Interruption	EN61000-4-11 >95% 5000ms

Mechanical Specifications

Dimensions	2.52 x 1.8 x 0.93 in (64.1 x 45.6 x 23.5 mm) Tolerance $\pm 0.5\text{mm}$
Case Material	Plastic resin (flammability to UL 94V-0)
Weight	135g
Cooling Method	Free air convection

Mechanical Outline

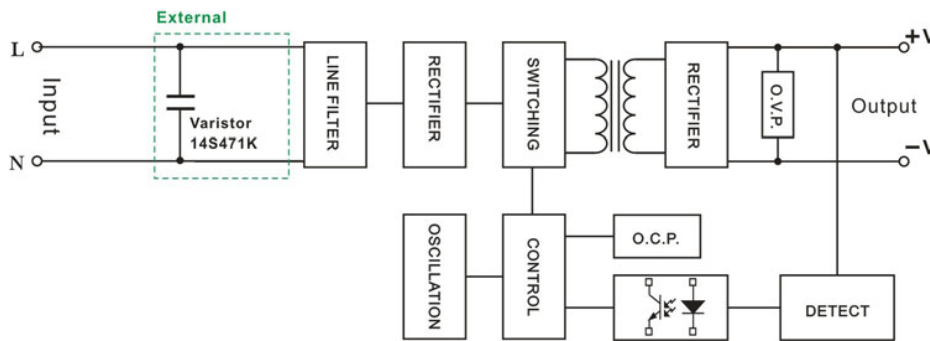


Outline Pin Assignnet

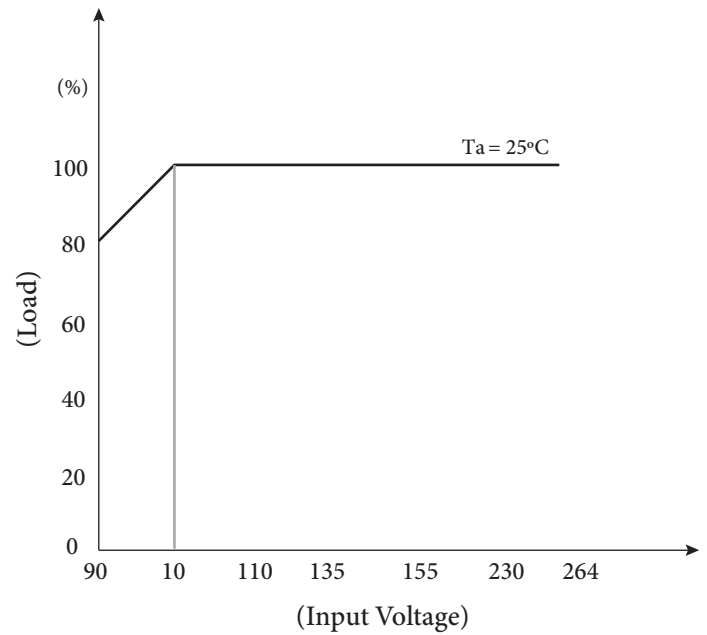
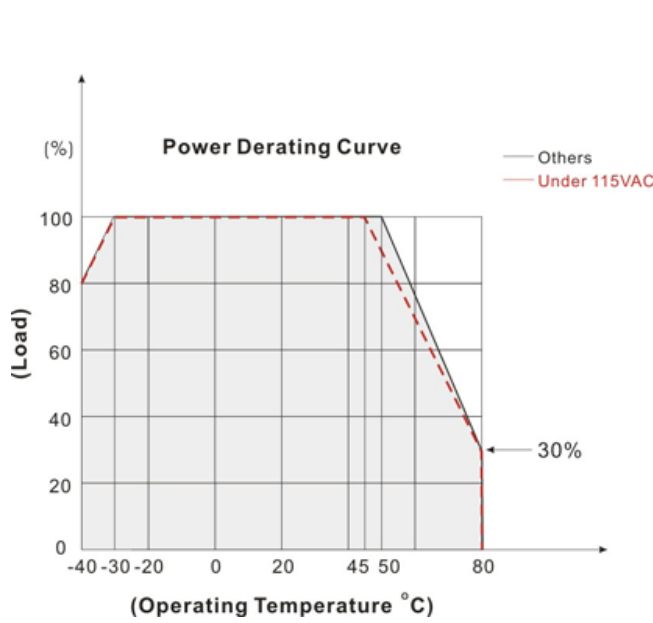
PIN#	Signal Name
1	AC IN (L)
2	AC IN (N)
3	-DC OUT
4	NO PIN
5	+DC OUT

Block Diagram

Single Output



Derating Curve



Screw terminal

DPMTC30-A2



Outline Pin Assignet

PIN#	Signal Name
1	AC IN (N)
2	NO CONNECT
3	AC IN (L)
4	NO CONNECT
5	-DC OUT
6	NO CONNECT
7	+DC OUT
8	NO CONNECT

