



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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DT060AF Series | ITE & Medical Safety

60W/90W Peak

- Level VI energy compliant
- No load input power < 0.15W
- Average efficiency > 89%
- Eco-friendly design
- UL/CSA/EN 60950-1, 2nd edition
ANSI/AMMI/CSA/EN 60601-1, 3rd edition
- 10 year warranty



GREEN POWER

Description

The **DT060AF Series** is a 60W external power supply (EPS) designed for both medical and ITE applications. The eco-friendly design is compliant with the new DOE Energy Conservation Standards for External Power Supplies. With a 150% (90W) peak power rating, operating efficiencies > 89% and no-load input power < 0.15W, the DT060AF Series is ideal for ITE and medical equipment designs, including MOOP and 2xMOPP, that are compliant with 2016 conservation standards.

Specifications

Input

Input Voltage	• 85 VAC to 264 VAC
Input Frequency	• 47 Hz to 63 Hz
Inrush Current	• < 40/80A at 115/230 VAC, cold start, 25°C
Input Protection	• Internal T3.15A / 250 VAC fuse in line
No Load Input Power	• < 0.15W
Input Current	• 2A _{rms} max/115 VAC, 1 A _{rms} max/230VAC

Output

Output Voltage	• See tables on page 2
Initial Set Accuracy	• See tables on page 2
Minimum Load	• No minimum load required
Start Up Rise Time	• 2 ms typical
Hold Up Time	• 16 ms typical
Line Regulation	• ±0.5% typical
Load Regulation	• ±3.0% typical
Ripple & Noise	• < 1% pk-pk typical, 20MHz Bandwidth
Over-voltage Protection	• latch off
Over-load Protection	• auto recovery
Short Circuit Protection	• auto recovery

Environmental

Operating Temperature	• -20°C to 60°C derating: 2.5% / °C > 40°C
Cooling	• 72W, free air convection
Operating Humidity	• 10-95% RH, non-condensing
Storage Temperature	• -40°C to +80°C
Altitude	• 0 to 5000 m

General

Efficiency	• 89% typical
Energy Saving	• DOE: EPS efficiency Level VI ErP: EC Code of Conduct Ver. 5 (Tier 2/2016)
Isolation	• 4000 VAC Input to Output, 2 x MOPP 1500 VAC Input to Ground, 1 x MOPP 1500 VDC Output to Ground, 1 x MOPP
Isolation Resistance	• 50 MΩ
Switching Frequency	• 120 kHz typical
MTBF	• > 200 kHrs to MIL-HDBK-217F at 50°C

EMC & Safety

Safety Approvals:	• UL/CSA/EN 60950-1, 2nd edition • ANSI/AMMI/CSA/EN 60601-1, 3rd edition • CE Mark
Harmonic Currents	• EN 61000-3-2 class A
EMI	• EN 55022/CISPR 22 Class B, EN 61000-3-3
ESD Immunity	• EN 61000-4-2, 6kV/contact, 8kV/air
Radiated Immunity	• EN 61000-4-3, 10V/m with 80% AM
EFT Burst	• EN 61000-4-4, 2kV
Surge	• EN 61000-4-5, 1kV/L-L, 2kV/L-G
Conducted Immunity	• EN 61000-4-6, 10V with 80% AM
Magnetic Fields	• E61000-4-8, 10A/m
Dips & Interruptions	• EN 61000-4-11, 30% dips 500ms, 60% dips 200ms, 100% dips 10ms, 100% dips 20ms, 100% dips 5000ms

Warranty

Manufacturer's Warranty	• 10 years. Call Tri-Mag or go to www.Tri-Mag.com for details.
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DT060AF Series | ITE & Medical Safety

Output Specifications

Model No.	Output Rail	Load				Initial Accuracy	Step Efficiency			Avg. Eff.
		Min	Rated	Max	Peak		@20% Load	@50% Load	@100% Load	
DT060AF-5	+12V	0A	5A	-	7.5A	+11.4V~+12.6V	90%	91%	88%	89%
DT060AF-8	+15V	0A	4.0A	-	6.0A	+14.25V~+15.75V	90%	91%	88%	89%
DT060AF-6	+24V	0A	2.5A	-	3.75A	+22.8V~+25.2V	90%	91%	88%	89%
DT060AF-14	+48V	0A	1.25A	-	1.87A	+45.6V~+50.4V	90%	91%	88%	89%

Notes

- Output Load:**
Rated 60W for convection cooling.
- Peak Load Duration:**
90W peak rating for durations up to 5 sec. Ideal for motor-starting/in-rush conditions.
- Engineering Specification:**
Contact Tri-Mag for full engineering specification for the specific part number used in your design application.
- Standby Power Consumption with System:**
New external power supply (EPS) efficiency requirements have been established by the U.S. DOE (EPS) and the European ErP regulations. The no-load power consumption requirements are < 0.21W and < 0.15W respectively.
- Audible Noise:**
For the DT060AF-x energy saving series, achieving level VI (<0.15W) standby power consumption is accomplished through burst mode operation of the controller. The burst operation frequency is dependent on load conditions and is approx. 114Hz, within the audible frequency range.
- Step Efficiency and Average Efficiency:**
Test conditions in step efficiency are referred to 3.2.2 IPS (Internal Power Supply) of ENERGY STAR program requirements for computers. ENERGY STAR required for efficiency @ 20%, 50%, 100% load is 90%, 91%, 89%; average efficiency is the average of step efficiency.

7. **Model Ordering Table:**

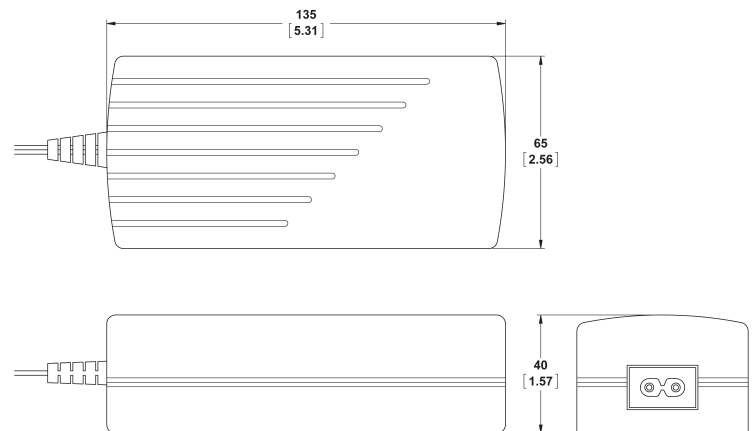
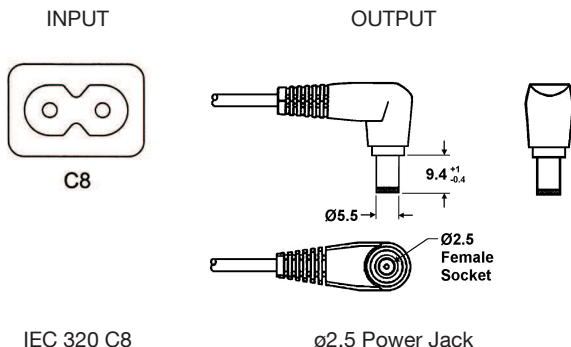
Safety/Application	Energy Saving
ITE & Medical	DT060AF-x

Mechanical Specifications

Notes

- Dimensions shown in mm. Tolerance: ±1 mm (excluding cable).
- Size: 65 X 135 X 40 (mm)
2.56" X 5.31" X 1.57"
Net weight: 350 g approx./unit

3. Connectors:



- Box Color: Black
- RoHS Compliant