

MINT1045

45 W Single Output Series

Medical & ITE – Universal Input Power Supply



3 Year Warranty

- 45 W Convection Cooled
- Universal Input 80--270 Vac
- Very Small Size: 2" W x 3" L x 1.0" H
- 88% Efficiency Typical
- Class I or Class II AC Input Applications
- CSA/EN/IEC/UL60601-1 3rd Edition for Medical, BF Rated (2 MOPP), Ultra-low Leakage Current
- CSA/EN/IEC/UL60950-1 2nd Edition for ITE



International Safety Standard Approvals



Specifications

All Specifications are typical at nominal input, full load at 25°C unless otherwise stated.

AC Input	100-240Vac +/- 10%, 47-63 Hz 1Ø rated 80-270 Vac, 47-440 Hz operational	Turn On Time	500 ms max at 120 Vac
Input Current	0.75A @ 120 Vac, 0.45 A @ 240 Vac	Hold-up Time	25 ms minimum at 45 W, nominal input (120Vac)
Inrush Current	Average over half cycle 37A max., 264 Vac	Overvoltage Protection	110-160%, auto-reset
Input Fuses	F1, F2: 1.6A, 250Vac fuses provided internally	Overload Protection	Hiccup Mode, 58W typical
Power Factor	Complies with EN61000-3-2, Class A	Short Circuit Protection	Hiccup Mode, 58W typical
Efficiency	88% typical	Overtemperature Protection	Self-Recovering
Output Power	45 W continuous. See chart for operation above 50°C	Medical Safety Standards	CSA/EN/IEC/UL 60601-1, 3 rd Edition Methods Of Protection: 2 MOPP for Type BF Applications
Peak Output Power	50 W for 1 minute, 10% duty cycle	ITE Safety Standards	CSA/EN/IEC/UL 60950-1, IEC 2 nd Edition See page 2 for detailed safety agency standards
Ripple and Noise	1% pk-pk max., 20 MHz BW, differential mode Measured with noise probe directly across output terminals	Isolation	Input-Output: 4500Vac, Input-Ground: 1900Vac Output-Ground: 1900Vac
Output Voltage	See chart	Leakage Current	12V-28V models: 120Vac: 30µA NC/70µA SFC 264Vac: 75µA NC/130µA SFC 48V model: 120Vac: 90µA NC/120µA SFC 264Vac: 200µA NC/300µA SFC
Voltage Adjustability	Not adjustable Factory set with fixed resistors for higher reliability	Operating Temperature	-20° to 70°C See derating chart
Minimum Load	Not required	Output Power Derating	Derate output power by 2.5% per °C above 50°C, up to 70°C max
Total Regulation	See chart	Storage Temperature	-40 to +85°C
Transient Response	500µs max. to 1%, 50% load step 0.2A/µs, 3.5% deviation. typical	Relative Humidity	5% to 95%, non-condensing
Switching Frequency	Fixed 65 kHz, typical	MTBF	300K hours per Telcordia

Model Number Key

MINT 1 045 A 12 75 K 01

01 = Standard Model, 02 and higher indicates a modified model.

"K" = Input Connector - 3 pin header

"75" = Output Connector - 4 pin header

Output Voltage: "12" = 12V output, "24" = 24V output, etc.

Model Configuration: "A" = Class I Input; "B" = Class II Input (no ground)

Output Power (Watts) - "045" = 45W

of Outputs

Product Family: "M" = Medical, "I" = Internal, "NT" = New Technology

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Model Number	Volts	Output Current	Output Parameters		Initial Set-point Tolerance
			Ripple & Noise	Total Regulation	
MINT1045A1275K01	12 V	3.75	120mV	±0.5%	±2%
MINT1045A1575K01	15 V	3.00	150mV	±0.5%	±2%
MINT1045A2475K01	24 V	1.90	240mV	±0.5%	±2%
MINT1045A2875K01	28 V	1.60	280mV	±0.5%	±2%

Only class I input

Notes:

- Derate output power by 2% per volt AC for input voltage <90Vac.

Specifications (continued)

Vibration	Random vibration per MIL-STD-810E, Method 514.4, Cat. 1, Figure 514.4-1, 1 hr in each of three axes	Shock	Half-sine, 40 gpk, 10 msec duration, +/- in each of three axes, total of 6 shocks
Enclosure Dimensions	See outline drawing	Operating Altitude	-500 to 10,000 ft
Weight	113 grams	Non-operating Altitude	-500 to 40,000 ft

EMI/EMC Compliance

Conducted Emissions	EN55011/22 Class B, FCC Part 15, Class B, 3db margin
Radiated Emissions	EN55011/22 Class A, FCC Part 15, Class A,
Static Discharge Immunity	EN61000-4-2, 6kV Contact Discharge, 8kV air discharge
Radiated RF Immunity	EN61000-4-3, 3V/m.
EFT/Burst Immunity	EN61000-4-4, 2kV/5kHz.
Line Surge Immunity	EN61000-4-5, 1kV differential, 2kV common-mode
Conducted RF Immunity	EN61000-4-6, 3Vrms
Power Frequency Magnetic Field Immunity Convection Cooled	EN61000-4-8, 3A/m
Voltage Dip Immunity	EN61000-4-11 100Vac, 95% dip/0.5 cycle (Criteria A), 60%/5cycles (Criteria A at 30% load), 30%/25 cycles (Criteria A).
Line Frequency Harmonics	Complies with EN61000-3-2, EN60601-2-1

Safety Agency Compliance

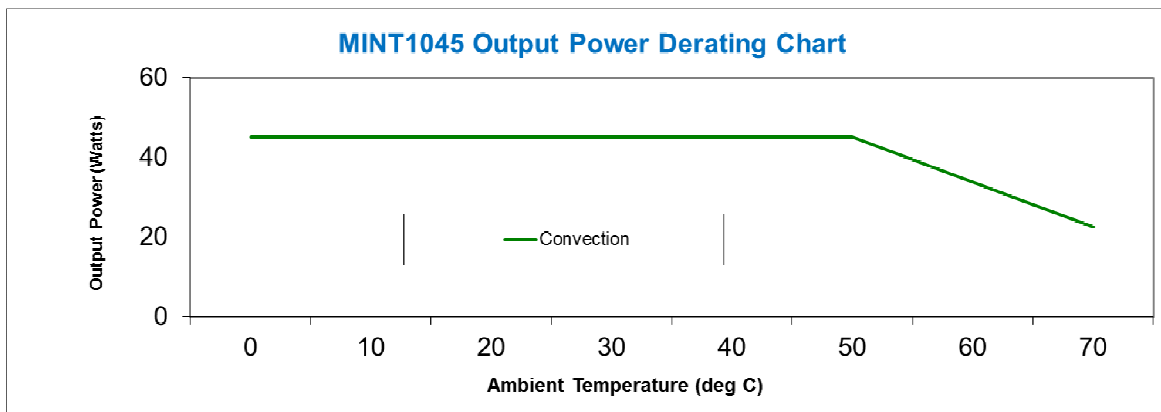
Medical Certification to the New 3rd Edition:

- Demko certified to EN 60601-1:2005, 3rd Ed.
- CB certified to IEC 60601-1:2005, 3rd Edition
- UL Recognized to ANSI AAMI ES60601-1:2005 & CAN/CSA C22.2, No. 60601-1-08

ITE Certification to the New 2nd Edition:

- Demko certified to EN60950-1:2006+ A11:2009, 2nd Ed.
- CB certified to IEC 60950-1:2005, 2nd Edition
- UL Recognized to UL 60950-1:2007, 2nd Edition & CAN/CSA C22.2, No. 60950-1-07, 2nd Edition

MINT1045 Output Power Derating Chart



MINT1045

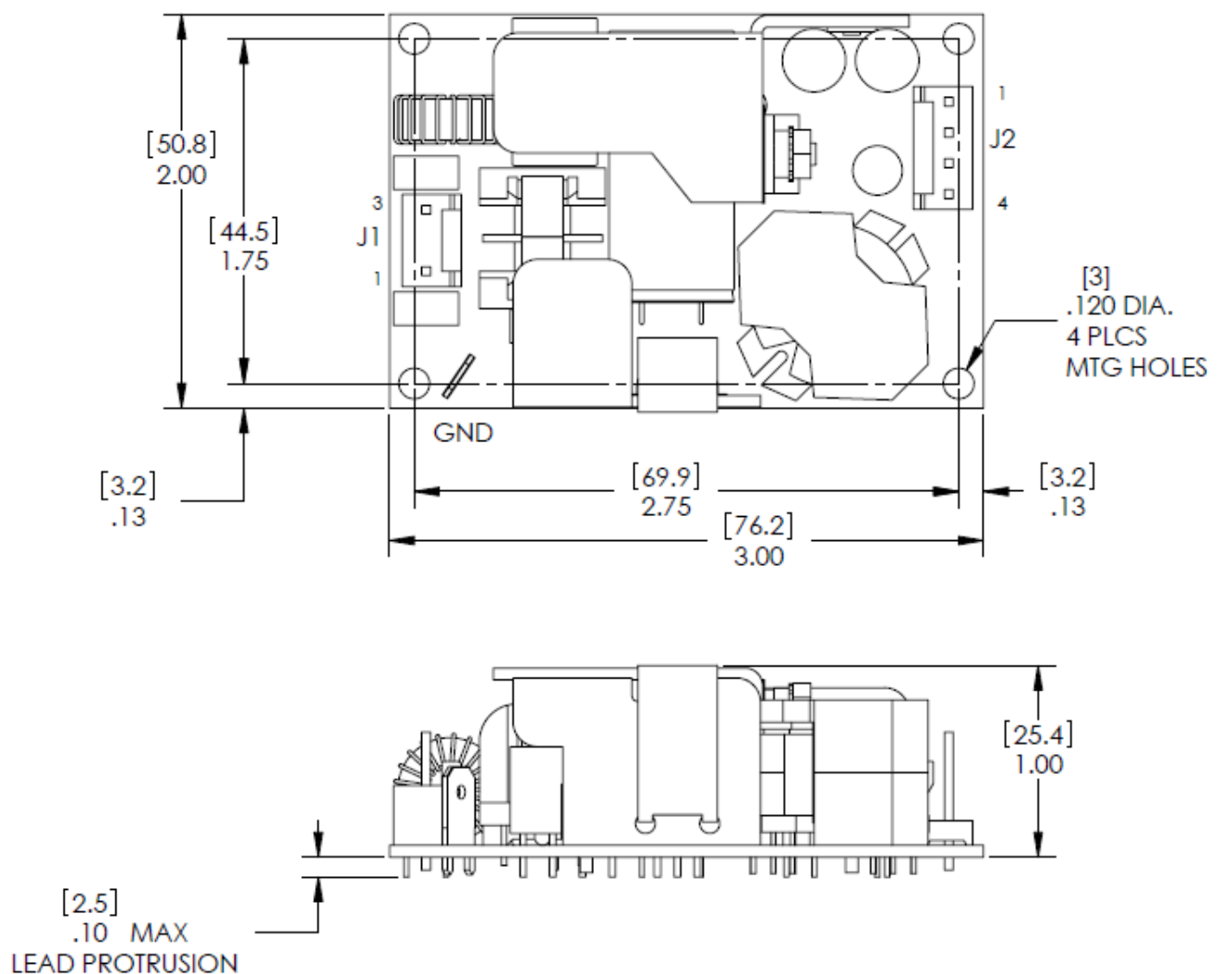
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Outline Drawing



Mating Connectors: J1 = AMP 640250-3, J2 = 640250-4,
Contacts = AMP 770461-1

Note: For Class II (No earth ground) applications, all mounting hardware must be non-conductive.

J1 - AC INPUT AMP 640445-3

PIN 1) LINE
PIN 2) REMOVED
PIN 3) NEUTRAL

J2 - DC OUTPUT AMP640445-4

PIN 1) +V1
PIN 2) +V1
PIN 3) RTN
PIN 4) RTN

GND - .25" X .032" FASTON TAB