

# MINT1180 Family





#### **FEATURES AND BENEFITS**

#### 3" x 5" x 1.3" Package

Ideal for 1U Applications

Universal Input 90-264 VAC

Approved to CSA/EN/IEC/UL60950-1 2nd Edition

3 Year Warranty

180W Convection Cooled Power
Class I and Class II versions
Approved to CSA/EN/IEC/UL60601-1, 3rd Edition, 2 x MOPP Isolation
Efficiency 90% typical
RoHS Compliant

#### MODEL SELECTION

Model Number	Volts	Output Current*	Minimum Load	Ripple & Noise**	Total Regulation	OVP Threshold
MINT1180A1275K01	12V	15.0A	0A	120mV pk-pk	±3%	14.0 ± 1.1V
MINT1180A1575K01	15V	12.0A	0A	150mV pk-pk	±3%	18.5 ± 1.2V
MINT1180A1875K01	18V	10.0A	0A	180mV pk-pk	±3%	21.5 ± 2.0V
MINT1180A2475K01	24V	7.50A	0A	240mV pk-pk	±3%	29.0 ± 2.5V
MINT1180A2875K01	28V	6.40A	0A	280mV pk-pk	±3%	33.5 ± 2.5V
MINT1180A3275K01	32V	5.62A	0A	320mV pk-pk	±3%	36.0 ± 3.0V
MINT1180A4875K01	48V	3.75A	0A	480mV pk-pk	±3%	56.0 ± 3.0V

Notes: 1. \* Total convection power is 180 Watts. 2. \*\* Measured with noise probe directly across output terminals, and load terminated with 0.1µF ceramic and 10µF low ESR capacitors.



AC Input	100-240Vac, ±10%, 47-63Hz, 1Æ 120-370Vdc
Input Current	115Vac: 1.8A, 230Vac: 0.9A
Inrush Current	264Vac, cold start: will not exceed 55A
Input Fuses	F1, F2: 4.00A, 250VAC fuses provided on all models
Earth Leakage Current	<275µA@264Vac, 60Hz, NC; <400µA SFC
Efficiency	88% typical



Output Voltage	See models chart	
Output Power	180W convection cooled	
Turn On Time	Less than 3 sec. @115Vac & Full Load	
Hold-up Time	>16mS at 180W, 120Vac	
Ripple and Noise	See models chart	
Total Regulation	+/- 3% combined line, load and initial setting.	
Switching Frequency	PFC: Fixed, 65kHz, Main Converter: Variable 35- 200kHz, 65-70kHz at full load.	
Minimum Load	Not required	
Transient Response	500 $\mu$ S typ. for return to within 0.5% of nominal, 50% load step. Di/Dt <0.2A/ $\mu$ S. Max Volt Deviation = 3%	
Voltage Adjustability	Fixed output	





# PROTECTION

Overvoltage Protection	OVP latch at 110%-130% of rated output voltage.	
Short Circuit Protection	Provided - no damage will occur if the output is shorted, auto recovery	
Overtemperature Protection	Provided, self-recovering Automatic power shutdown at TC 135°C/115°C	
Overload Protection	120% to 140% of current rating, Hiccup Mode	

# ENVIRONMENT

Operating Temperature	-10°C to +70°C, Start Up at -40°C, full load		
Relative Humidity	5% to 95%, non-condensing		
Weight	325g		
Dimensions	W: 3.0" x L: 5.0" x H: 1.3"		
Altitude	Operating: -500 to 10,000 ft. Non-operating: -500 to 40,000 ft.		
Storage Temperature	-40°C to +85°C		
Vibration	Operating: 0.003g²/Hz, 1.5grms overall, 3 axes, 10 min/axis, Non-Operating: 0.026g²/Hz, 5.0grms overall, 3 axes, 1 hr/axis		
Shock	Operating: Half-sine, 20gpk, 10ms, 3 axes, 6 shocks total, Non-Operating: Half-sine, 40 gpk, 10 ms, 3 axes, 6 shocks total		

#### **EMI/EMC COMPLIANCE**

Conducted Emissions	EN55011/22 Class B, FCC Part 15, Subpart B, Class B
Radiated Emissions	EN55011/22; FCC Part 15, Class A with 6dB Margin
Static Discharge Immunity	EN61000-4-2, Criteria A, 6kV Contact Discharge, 8kV air discharge
Radiated RF Immunity	EN61000-4-3, 3V/m. Criteria A
EFT/Burst Immunity	EN61000-4-4, 2kV/5kHz, Criteria A
Line Surge Immunity	EN61000-4-5, 1kV differential, 2kV common- mode, Criteria A
Conducted RF Immunity	EN61000-4-6, 3Vrms, Criteria A
Power Frequency Magnetic Field Immunity	EN61000-4-8, 3A/m, Criteria A
Voltage Dip Immunity	EN61000-4-11, 5% Vnom: 0.5cycle; 40% Vnom: 5 cycles, 70% Vnom: 25 cycles, Criteria A
Line Harmonic Emissions	EN61000-3-2, Class A, B, C, & D
Flicker Test	EN61000-3-3, Complies (dmax<6%)

# RELIABILITY

MTBF

214,194 hours, 25°C, 110Vac



Safety Standards

EN/CSA/UL/IEC 60601-1, 3rd Edition EN/CSA/UL/IEC 60950-1, 2nd Edition

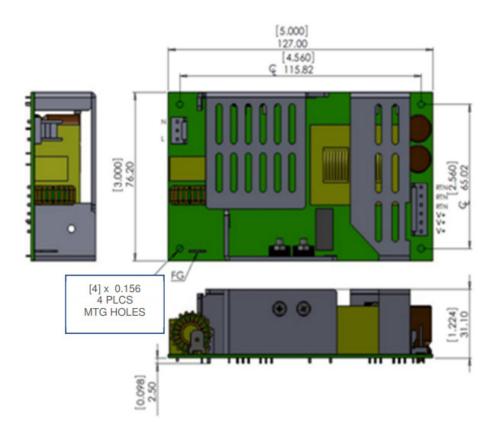


Isolation	Input-Output: 4000Vac, 2 x MOPP Input-Ground: 1800Vac, 1 x MOPP Output-Ground: 1500Vac





#### **MECHANICAL DRAWINGS**



Notes:

- 1. All dimensions in inches (mm), tolerance is +/-0.000".
- 2. Mounting holes should be grounded for EMI purposes.
- 3. FG is safety ground connection.
- 4. The power supply requires mounting on metal standoffs 0.20" (5mm) in height, min.

#### **CONNECTOR INFORMATION**

Input Connector J100	Ground (FG)	DC Output Connector J300
PIN 1) AC LINE PIN 2) EMPTY PIN 3) AC NEUTRAL	0.25" FASTON TAB	Term. 1,2,3: RTN Term. 4,5,6: +Vout
Mating Connector: AMP 640250-3 Pins: 640252-2	Mating Connector: Molex 190020001	Mating Connector: AMP 640250-6 Pins: 640252-2

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