

eF175-113, MOTOROLA

Electrical
Specification for:

Wide range AC/DC Single Output 108W Power Supply

Telkooor Part Number:

900-0113-0000

CUSTOMER	MOTOROLA	SIZE		CAGE CODE	S5417	DWG. NO.		REV	C
		SCALE		RELEASE DATE	02/10/06	0113-DOC-10	SHEET 1	OF	4

Input:

Input Voltage: 85-264Vac
 Frequency: 47-63Hz
 Inrush Current: 50A maximum, cold start at 25°C, 250Vac
 25A maximum, cold start at 25°C, 120Vac (both for 2 m Sec. Max)
 Efficiency: 80% typical at 230Vac, full load
 76% typical at 115Vac, full load
 73% Minimum at 85Vac,full load
 Power Factor: 0.98 typical at 230Vac, full load
 0.99 typical at 115Vac, full load
 Input Protection: Internal Line Fuse: Replaceable 3.15A 250Vac Slow- Blow
 Brown – Out: 75 to 300Vac ,(power supply will not damaged at this input voltage range)

Output Voltages & Currents:

Output	Output Voltage	Min. Load	Max. Load	Peak Load
V1	10.5-15.5V adjust	0	9.0A	11A

Output Power: Nominal power: 105W at all operation Temp , with base plate free convection cooling

Line Regulation: ±0.2% Maximum of the output voltage at nominal input for high line and low line.

Load Regulation: ±0.5% Maximum of the output voltage at half load for load changes from Minimum to Maximum rated current load

V1 leakage current from Parallel power supply or battery is 100uA Max

External Batery leakage current 120mV Max. Vp-p 20Mhz BW

Ripple & Noise Linear external control DC voltage 0-5V , changes the output voltage from 10.5V to 15.5V . when no control voltage is applied output is 13 V DC

Output voltage Adjust external control Impedance is 5K ohm

Overshoot & Undershoot: Less than 1% of the nominal output voltage at turn ON and OFF

Transient Load Response: ±5% Max. Deviation for load change of 25% to 75%, at slew rate of 1A/µsec, recovery time less then 500 usec

Turn On Delay: 2 sec. Maximum(time from AC line turn ON, to output voltage presence)

Hold-up Time: 16mSec minimum at full load

Turn-On Rise Time: 40mSec Max (time from output voltage 10% to 90% of nominal value)

Overload & Short circuit Protection: 110 to 130% of I Max, constant current limit, automatic recovery.

Over-voltage Protection: Outputs shut down when output rise to 16.5V+/-0.5V (Latched Shut-Down) AC input must recycle to re-start.

Temperature Protection: Shutdown due to excessive internal temperature 115+/-5°C automatic recovery.

Input Connector: Molex 5 Pin P/N :26-48-1055 (2 pins empty)

Output Connector: Molex 10 Pin P/N : 26-48-1105

CUSTOMER	MOTOROLA	SIZE	CAGE CODE	S5417	DWG. NO.	REV	C
		SCALE	RELEASE DATE	02/10/06	0113-DOC-10	SHEET	2 OF 4

Signals & Commands

Power supply type (AC or DC)	2 pins (logic TBD)
Output control	2 pins ,external DC voltage 0-5V linear control
Power OK:	Open collector active HIGH , when output drop below 9.5V value, LOW when output is O.K
Inhibit	Active low, output shut down

Environmental Specifications:

Temperature:	Operating: -40°C to +70°C (de-rating linearly to 70 °C with 50% de-rating). Storage: -50°C to +85°C.
Temperature Coefficient:	N.A
Cooling:	105W NOMINAL POWER free convection cooling (base plate cooling). 200W with 15 CFM forced air cooling .
Humidity:	5% to 95% RH non-condensing at 55Deg C .
Altitude:	Operating 10,000 ft. Non- operating 40,000 ft.
Vibration:	Three orthogonal axes at 1 octave/min, 5 min dwell at four major resonances at 0.75G peak, 5Hz to 500Hz.

Safety Regulatory & EMC Specifications:

Meets FCC PART 15 CLASS B, CISPR 22 CLASS B, EN55022 CLASS B with external line filter

EN61000-3-2	Harmonics
EN61000-3-3	Voltage fluctuations
EN6000-4-2	ESD +8KV AIR +4KV contact discharge, performance criteria B
EN61000-4-3	Radiated Immunity: 80-1000Mhz 3V/m, AM 80% (1KHz), criteria A
EN61000-4-4	Fast transient: 4KV on AC power port performance criteria B
EN61000-4-5	Surge: 2KV line to line and 4KV line to Ground
EN61000-4-6	3VRMS, 80% A.M. BY 1kHz
EN61000-4-8	3A /m at 50Hz, performance criteria A.
EN61000-4-11	Voltage dips and interruption: 30% reduction for 10mSec –Criteria B, 60% For 100mSec. Criteria C, 95% reduction for 5000mSec Criteria C.

Dielectric Withstand:

Input to Case:	1500VAC
Input to Output:	3000VAC
Output to Case:	500 VDC.
Safety Agency Compliance:	IEC60950,UL 60950,CSA C22.2 -234, LEVEL 3.EN-60950, CLASS 1, SELV CE - MARK
Leakage Current:	1mA @50/60 Hz, 264Vac input
MTBF:	300,000 hours minimum per BELCOR 332,issue 6 specification @30 degrees C.

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		SCALE	RELEASE DATE	02/10/06	0113-DOC-10	SHEET	3 OF 4

