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.

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Murata Power Solutions

CF350-A12C

350 Watt High Density AC/DC Power Supply

FEATURES

- 350W compact high density
- Active load current share
- Universal AC input with Power Factor Correction
- Ruggedized U-channel construction
- RoHS compliant
- Includes ORing diode for N+1 parallel operation
- International regulatory approvals

DESCRIPTION

The CF350-A12C switching power supply utilizes advanced component and circuit technologies to deliver one of the industry's smallest 350 Watt switchers. Built to meet 1U height considerations, the U-Frame package measures only 6.80 x 3.86 x 1.40". The CF350-A12C offers universal AC input (85-265VAC) with active power factor correction (PFC) and compliance to worldwide safety and EMC standards.

SELECTION GUIDE

Model Number	Power Output	Main Output	Standby Output
CF350-A12C	350W	12V	5V

INPUT CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Input Voltage Operating Range		85		264	Vac
Input Frequency		47		63	Hz
Turn-on Input Voltage	Ramp up		83		Vac
Turn-off Input Voltage	Ramp down		67		
Maximum Rated Input Current	100Vac			2.8	Arms
Inrush Current	Cold start at 25°C, 220Vac			60	Apk
Power Factor	230Vac, full load		96		%
	115Vac, full load		99		

OUTPUT VOLTAGE CHARACTERISTICS

Output Voltage	Parameter	Conditions	Min.	Typ.	Max.	Units
12V	Voltage Set Point Accuracy	±0.1% tolerance		12		Vdc
	Line Regulation	For Vin (min) to Vin (max)		±0.4		%
	Load Regulation	For load changes from zero to full load			±1	%
	Ripple Voltage & Noise[1]	20MHz Bandwidth			130	mV p-p
	Output Current		0		29	A
	Peak Current			31		
5Vsb	Voltage Set Point Accuracy			5		Vdc
	Line Regulation	For Vin (min) to Vin (max)		±0.4		%
	Load Regulation			±2		%
	Output Current		0		5	mA
	Peak Current			5		mA
	Ripple Voltage & Noise[1]	20MHz Bandwidth			110	mV p-p

OUTPUT CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Remote Sense	12V output: Compensates for voltage drops of up to 0.5V between the power supply to the load. Outputs are internally sensed at output connector if remote sense lines are opened.				
Efficiency	230Vac, full load		87		%
	115Vac, full load		83		
Start-up Delay	Output voltage at 90%			2.0	s
Rise Time			30		ms
Transient Load Response	For load change of 25% to 75%, at slew rate of 1A/µs, recovery time less than 2ms			±5	%
Current Sharing Accuracy	Single wire current share in a N+1 parallel redundant configuration with OR-ng diodes included in the PSU			±10	%
Hot Swap	Available				
Hold-up Time	110Vac, full load		16		ms
Overshoot and Undershoot	Voltage change at turn-on and turn-off			1	%

1 Ripple and noise are measured with 10 µF, in parallel with 0.1 µF ceramic capacitors.

RoHS COMPLIANT 2002/95/EC

GENERAL CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Storage Temperature Range	Non-condensing	-25		85	°C
Operating Temperature Range	Derating linearly to 70°C with 50% derating	-5		50	
Temperature Coefficient	±0.02%/°C	0		70	
Cooling	150W free convection cooling (base plate cooling). 350W forced air cooling (250 LFM min.)				
Operating Humidity	Non-condensing	5		95	%
Storage Humidity	Non-condensing	5		90	
Altitude	Operating 10,000 ft. Non- operating 40,000 ft.				
Vibration	Three orthoganol axes at 1octave/min, 5 min dwell at four major resonances at 0.75G peak, 5Hz to 500Hz				
MTBF	Calculated per Bellcore 332, issue 6 specif-cation at Ta=30°C	300			Khrs
Safety Approvals	UL 60950, CSA C22.2-234, Level 3, EN-60950, Class 1, SELV CE-Mark				
Input Fuse	Power Supply has internal line fuse: IEC type 6.3A 250Vac SLO BLOW				
Switching Frequency		85		90	kHz
Weight	720g max (27oz)				

PROTECTION CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Over Temperature	Shutdown due to excessive internal temperature 95 ± 5°C automatic recovery.				
Over Voltage	Outputs shut down at 125% of nominal (Latched Shut-Down) AC input must recycle to re-start.				
Over Current	12V output: 110 to 130% of Imax, constant current limit; automatic recovery. Long-term fail condistion shall not cause damage to PSU.				

ISOLATION CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Insulation Safety Rating / Test Voltage	Input to Output - Reinforced	3000			Vrms
	Input to Chassis - Basic	1500			Vrms
Isolation	Output to Chassis	100			Vdc
Material Flammability	UL 94V-0				
Grounding	Output RTN's not connected to chassis gnd. 12V RTN and 5V RTN shorted.				

CONTROL SIGNALS

Status	Description
Inhibit	Active low, all output shut down.
Power OK (DC Fail)	Open collector active low when any of the outputs drop below 10% of its nominal value.

EMISSIONS AND IMMUNITY

Characteristic	Description	Criteria
Harmonics	IEC/EN 61000-3-2	
Voltage Fluctuation and Flicker	IEC/EN 61000-3-3	
Emission Conducted	FCC / EN55022 (CISPR 22)	CLASS B, 6 dB Margin – with an external line filter Type 03SS-P-Q By High Lan or equivalent
ESD	IEC/EN 61000-4-2	4kV contact discharge, Performance Criteria B
		8kV operational air discharge, Performance Criteria B.
Electromagnetic Field	IEC/EN 61000-4-3	
Electrical Fast Transients/Burst	IEC/EN 61000-4-4	1kV for AC power port, 0.5kV for DC power I/O and signals port, Performance Criteria B
Surge	IEC/EN 61000-4-5	1kV differential mode and 2kV common mode
RF Conducted Immunity	IEC/EN 61000-4-6	3 Vac, 80% AM, 0.08-1kHz, Performance Criteria A
Magnetic Immunity	IEC/EN 61000-4-8	3 A/m at 50Hz, Performance Criteria A
Voltage dips, interruptions	IEC/EN 61000-4-11	20% reduction for 10ms - Criteria B, 60% for 100ms - Criteria C, 90% reduction for 5000ms - Criteria C.

OUTPUT CONNECTOR AND SIGNAL SPECIFICATION

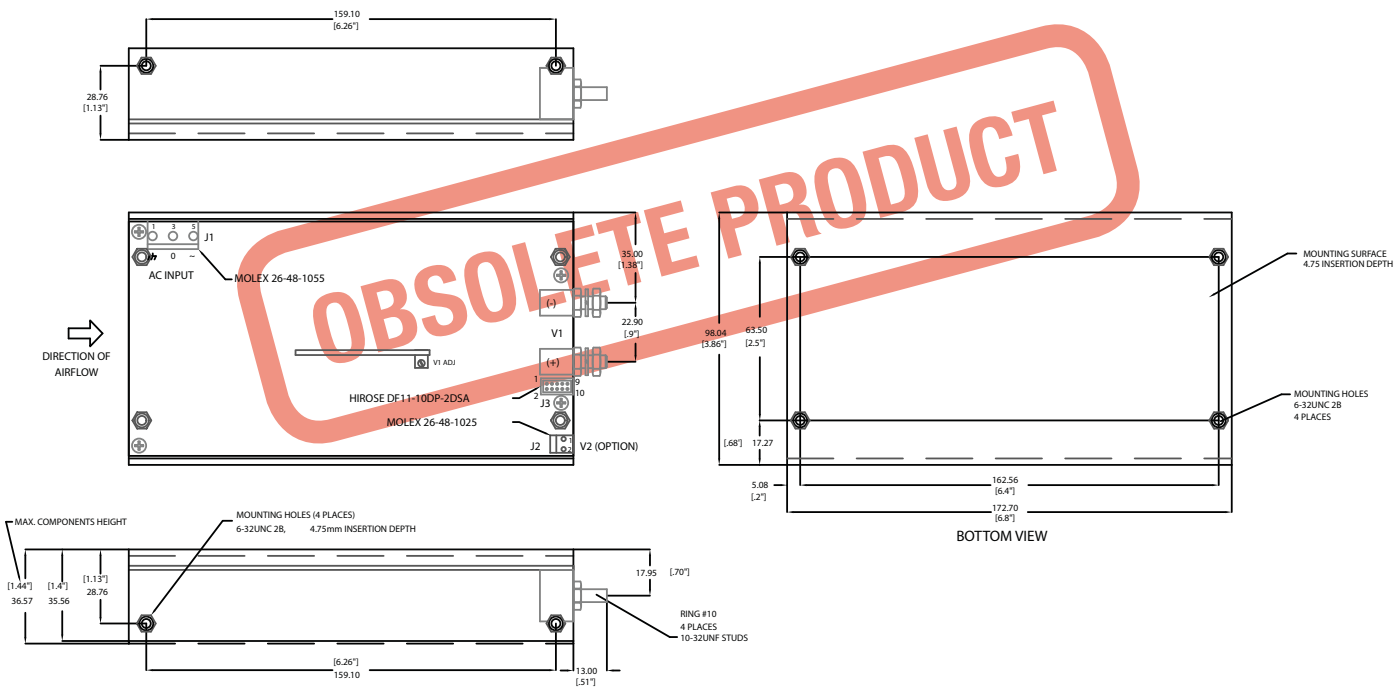
PIN	J1 : Molex 26-48-1055
1	Chassis
3	Neutral
5	Phase

PIN	J2 : Molex 26-48-1025
1	Vsb RTN
2	Vsb

PIN	V1
V1+	+DC output
V1-	-DC output

PIN	J3 : HIROSE DF11-10DP-2DSA
1	12V Ishare
2	12V +RS
3	12V -RS
4	DC Fail active low
5	Return
6	+5V standby
7	None
8	Inhibit
9	DC Fail active high
10	None

MECHANICAL DIMENSIONS



Dimensions: 173mm x 98mm x 36.6mm (6.8” x 3.85” x 1.44”)

MATING CONNECTORS

Connector	Housing	Crimp terminal
J1	Molex 09-50-3051 (1x)	Molex 08-52-0113 (3x)
J2	Molex 09-50-3021 (1x)	Molex 08-52-0113 (3x)
J3	Hirose DF11-10DS-2C (1x)	Hirose DF11-2428SC (10x)
V1	#10 power ring lug (2x)	

Murata Power Solutions

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