

PAC1600T5453-CB Power Module



Introduction

PAC1600T5453-CB cassette AC-DC power module has 90 to 290Vac wide input voltage, 53V/52.5/3.3V triple isolated outputs, total rating output power 1600W. The module is configured with fan for cooling through a left-to-right airflow, support Hot-swap. Surge protection meet IEC61000-4-5 and ITU-TK.21 standard. Be suitable for the application of switches, routers and so on.

Specification



Features

- Over current protection
- Short circuit protection
- Output overvoltage protection
- Over temperature protection
- I2C communication protocol
- Hot swap
- Suitable for the TT, TN, IT power supply system
- 1+1 redundant backup

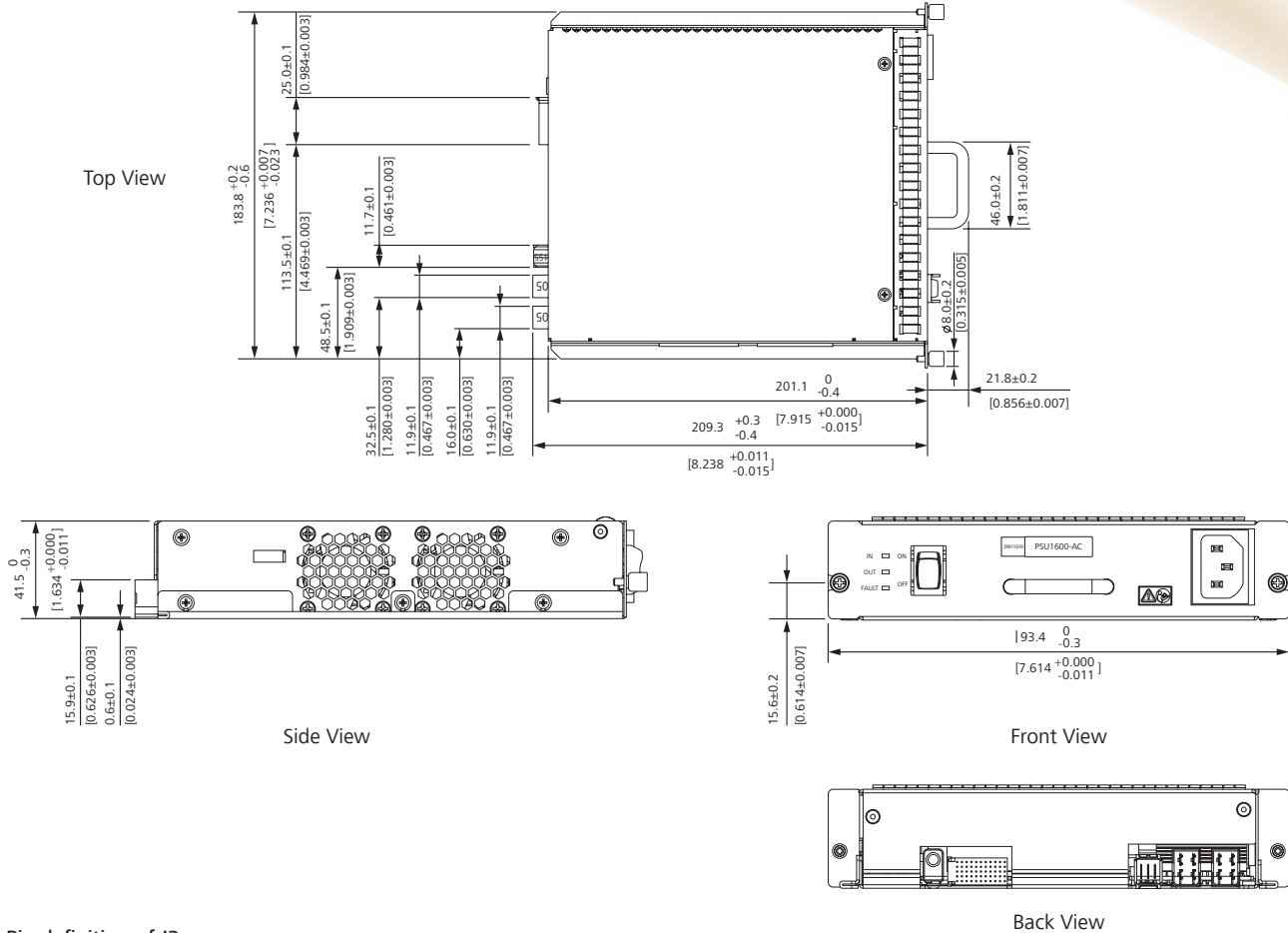
	Model	Parameter	Notes & Conditions
Output characteristics			
Output voltage range	PAC1600T5453-CB	Vo1@50.8 ~ 56.2V Vo2@49.8 ~ 55.2V Vo3@3.23 - 3.57 V	-
Output power	PAC1600T5453-CB	Vo1@22A Vo2@7.6A Vo3@7.6A	22A@Vin=176 - 290V, <22A@Vin=90-175V 7.6A@Vin=176 - 290V, <7.6A@Vin=90-175V 7.6A@Vin=90 - 290V
Output line regulation	PAC1600T5453-CB	2%Vo	Vin=90 - 290 VAC; Po=1600W
Output load regulation	PAC1600T5453-CB	5%Vo	Vin=220 VAC; Po=0 - 1600W
Output ripple and noise (PK-PK)	PAC1600T5453-CB	Vo1@300mV Vo2@300mV Vo3@100mV	Oscilloscope bandwidth: 20 MHz
Input characteristics			
Operating input voltage	PAC1600T5453-CB	90 - 290 VAC@50/60Hz	-
Maximum input current	PAC1600T5453-CB	10A	Vin=220 VAC; Po=1600W
Power factor	PAC1600T5453-CB	≥0.95	Vin=110 VAC; Po=986W Vin=220 VAC; Po=1600W
Protection characteristics			
Input OVP	PAC1600T5453-CB	Turn on: 290V AC Turn off: 295V AC	Hysteresis: ≥5.0V
Input UVP	PAC1600T5453-CB	Turn on: 90V AC Turn off: 85V AC	Hysteresis: ≥5.0V
Output OVP	PAC1600T5453-CB	Vo1/Vo2@58.5 - 61.5V Vo3@3.8 - 4.9V	Latch-off Hiccup
Over current Protection	PAC1600T5453-CB	Vo1+Vo2@30 - 33 A Vo3@16.5 - 22.5A	Hiccup
Over temperature Protection	PAC1600T5453-CB	-	Self-recovery
Absolute maximum ratings			
Operating ambient temperature	PAC1600T5453-CB	-5 - 55°C	-
Storage temperature	PAC1600T5453-CB	-40 - 70°C	-
Other characteristics			
I2C communication	PAC1600T5453-CB	Input power; Output voltage; Air inlet temperature; Remote reset (10s); Fault alarm: Fan failure alarm; OTP alarm;	-
Impulse current	PAC1600T5453-CB	DM: 3kA, CM: 5kA	-
Surge	PAC1600T5453-CB	Line to earth: ±6 kV Line to line: ±6 kV	IEC61000-4-5/ITU-TK.21
Mean time between failures (MTBF)	PAC1600T5453-CB	0.25 million hours	Telcordia SR332, Vin=220VAC, 100% load, TA=25°C

Model Selector

Model	Input Voltage	Output Voltage	Output Current	Output Power	Efficiency
PAC1600T5453-CB	100 - 240 Vac	Vo1: 53.5V Vo2: 52.5V Vo3: 3.4V	22A/ 7.6A/ 7.6A	1600W	91.0%

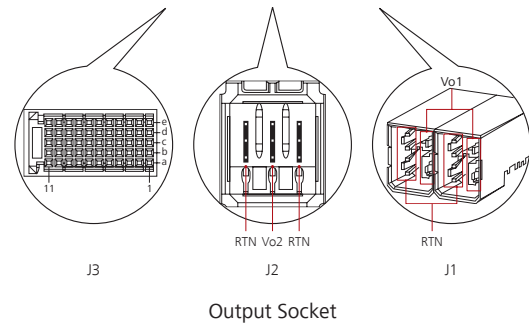
Mechanical Diagram

Unit: mm [in.]



Pin definition of J3:

Pin	Definition	Type	Description
a1	CARDIN_PWR	Output	Detect whether the power module securely connects to the system backplane. If yes, pin a1 and pin c1 are short-circuited; if not, pin a1 and pin c1 are disconnected.
a2, a5, a9	NC	N/A	NC
a3	ISHARE+	Output	Current share bus +
a4	ISHARE-	Output	Current share bus -
a6 - a8	Vout3	Output	Output: 3.3 V
a10	I2C_SCK_PWR	Output/Input	I2C clock signal
a11	I2C_SDA_PWR	Output/Input	I2C data signal
b1 - b11	NC	N/A	-
c1 - c11	GND	N/A	GND
d1 - d11	NC	N/A	-
e1 - e8	Vout3	Output	Output: 3.3 V
e9 - e10	NC	N/A	-
e11	CARDIN_PWR	Output	Same function as pin a1



Input connector: IEC 60320 C14
Output socket: J1----FCI (10073379-001LF)
J2----STARCONN (095U03-00410A-M9)
J3----FCI (HM2R30PA5100N9LF)

Tolerances
±0.5[0.02in.] (≤63[2.48])
±1.0[0.04in.] (>63[2.48])