

■ Features

- Single output: 110-150W(Convection cooling)
- Single output: 200-250W(Conduction cooling)
- Single output: 500-550W(Forced air cooling)
- Input voltage range: 90-264V
- Output current(2590mA-41670mA)
- 3"x5" form factor
- Efficiency to 92%
- Protections: SCP, OCP, and OVP
- Class 1 & Class 2 options
- Cover kit accessory available
- 12V fan output(optional)



*Product images are for illustrative purposes only and may vary from actual design.

■ Applications

- Network system, telecommunication system, storage system, industrial equipment, and consumer electronics

■ Model List*(See part number scheme for model number details)

Model Number	Input Voltage	Output Power (Convection)	Output Power (Conduction)	Output Power (Forced Air Cooling)	Output Voltage	Ripple (1)	Efficiency	Certificates
SPJ550-120-XY	90-264Vac	110W	200W	500W	12V	2%	90%	UL/cUL
SPJ550-150-XY	90-264Vac	110W	200W	500W	15V	2%	90%	UL/cUL
SPJ550-240-XY	90-264Vac	150W	250W	550W	24V	1%	91%	UL/cUL
SPJ550-300-XY	90-264Vac	150W	250W	550W	30V	1%	90%	UL/cUL
SPJ550-480-XY	90-264Vac	150W	250W	550W	48V	1%	92%	UL/cUL
SPJ550-580-XY	90-264Vac	150W	250W	550W	58V	1%	82%	UL/cUL

Output Current Min.	Output Current (Convection)	Output Current(7) (Conduction)	Output Current (Forced Air Cooling)
0	9.17A	16.67A	41.67A
0	7.33A	13.33A	33.33A
0	6.25A	10.42A	22.92A
0	5A	8.33A	18.33A
0	3.13A	5.21A	11.46A
0	2.59A	4.31A	9.48A

■ Technical Data

AC Input	90-264Vac/390Vdc
Input Frequency	47-63Hz
Input Current	115Vac: 6A max 230Vac: 3A max
No load Power	<0.5W@115Vac, < 0.7W@230Vac
Inrush Current	115Vac: 25A max., 230Vac: 45A max., 264Vac: 75A
Leakage Current	<200uA@115Vac, <400uA@230Vac
Hold-up Time	Full Load> 16ms typical, Convection Load> 55ms typical, Conduction load> 30ms typical
Power Factor	Exceeds 0.95 with full load
Output Power	Up to 550W(Forced Air Cooled), up to 250W(Conduction Cooled), up to 150W(Convection Cooled)
Output Voltage Adjustability	±3%
Line Regulation	±0.5%
Load Regulation	±1%
Transient Response	50-100% step load change, at 0.1A/uS slew rate, 50% duty cycle, 50Hz=5%, recovery time < 5ms
Rise Time	55 ms typical
Set Point Tolerance	±1%
Over Current Protection	>110%, Hiccup mode/Auto Recovery
Over Voltage Protection	110 to 140%, Hiccup mode/Auto Recovery
Short Circuit Protection	Hiccup mode/Auto Recovery
Switching Frequency	PFC -70 to 130KHz, Resonant -68 to 80 KHz
Operating Temperature	-40-+70°C, -40-0°C, startup is guaranteed
Storage Temperature	-40-+85°C
Relative Humidity	5-95% Rh, noncondensing
Altitude	Operating: 16,000ft.; Nonoperating: 40,000 ft.
MTBF	1.28m Hours, Telcordia-SR332-issue 3
Isolation Voltage	Input to Output-3000Vac for ITE application Input to GND -1500Vac

Notes:

1. Ripple is peak to peak with 20MHz bandwidth and 10µF (Tantalum capacitor) in parallel with a 0.1µF capacitor at rated line voltage and load ranges.
2. Combined output power of main output, fan supply shall not exceed max. Power rating.
3. Fan supply output voltage tolerance including set point accuracy, line and load regulation is and Ripple and noise is less than 10%, 25
4. Specifications are for nominal input voltage, 25°C unless otherwise stated.
5. Thermal shutdown feature: The power supply goes in hiccup mode when the temperature of Substrate PCB exceeds 110°C(±10°C)
6. Output ripple can be more than 10% of the output voltage.
7. Refer Recommended Conduction Plate & Clearance on Page No. 6.

■ **Safety and EMC Approval**

Conducted Emissions	EN55022-B, CISPR22-B, FCC Par15 Class B
Radiated Emissions	EN 55032A Level B with external core (King core K5B RC 25x12x15-M in input cable)
Input Current Harmonics	EN 61000-3-2 Class D
Voltage Fluctuation and Flicker	EN 6100-3-3
ESD Immunity	EN 61000-4-2 Level 3, Criterion A
Radiated Field Immunity	EN61000-4-3 Level 3, Criterion A
Electrical Fast Transient Immunity	EN61000-4-4 Level 3, Criterion A
Surge Immunity	EN61000-4-5 Level 3, Criterion A
Conducted Immunity	EN61000-4-6 Level 3, Criterion A
Magnetic Field Immunity	EN61000-4-8 Level 3, Criterion A
Voltage dips, interruptions	EN61000-4-11 Criterion A & B
CE Mark	Complies with LVD Directive
Approval Agency	Nemko, UL, cUL
Safety Standards	UL 60950-1, 2 nd edition, CAN/CSA C22.2 No. 60950-1-07, 2 nd edition IEC 60950-1:2005(2 nd edition)+AM 1:2009 + AM2:2013 EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013
Safety File Numbers	UL Certificate No: 20160627-E150565 CB Test Certificate No: N093260 Nemko Certificate No: P16221279

■ **Derating Curve**

De-rate linearly from 100% at 115Vac to 78% at 90Vac.

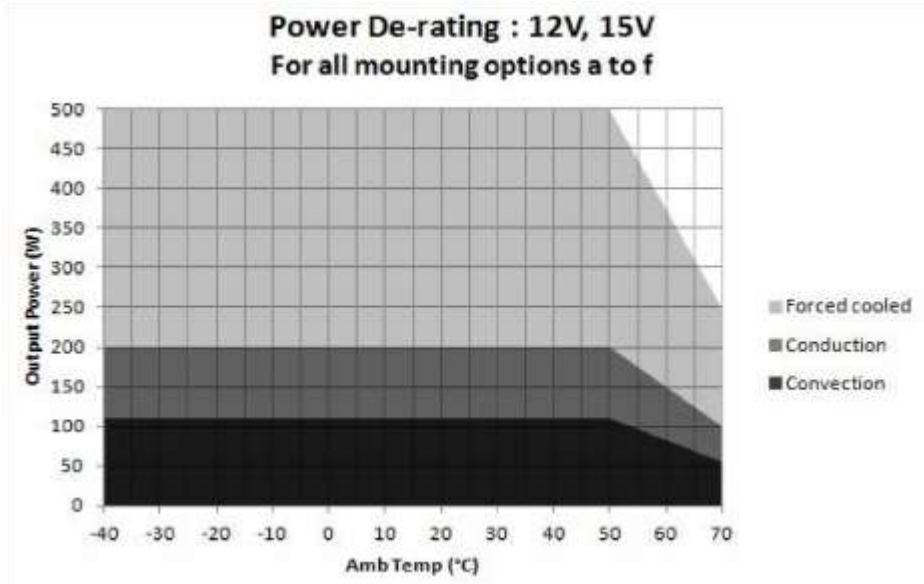


■ **Derating Curve(cont.)**

Convection load: 110W up to 50°C
De-rate above 50°C @ 2.5% per °C

Conduction load: 200W up to 50°C
De-rate above 50°C @ 2.5% per °C

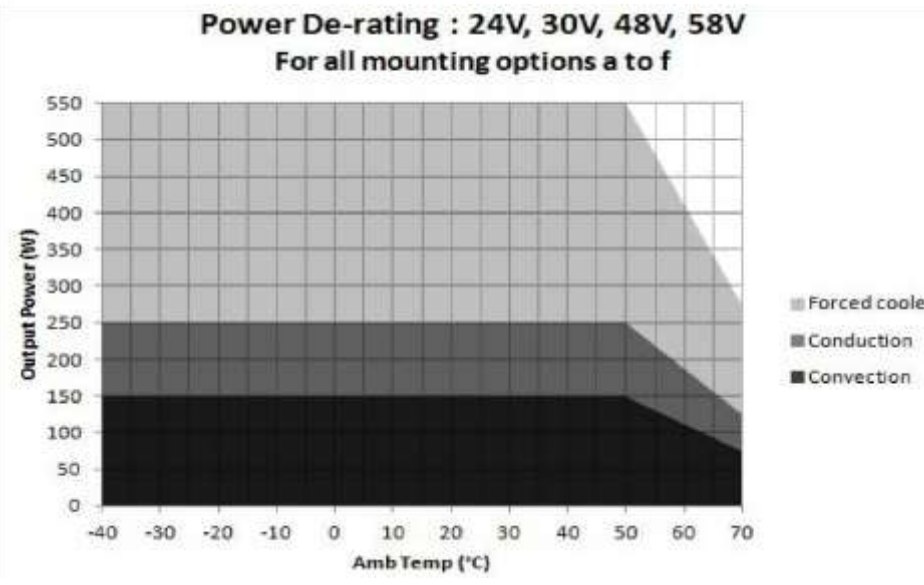
Forced air cooled: 500W up to 50°C
De-rate above 50°C @ 2.5% per °C



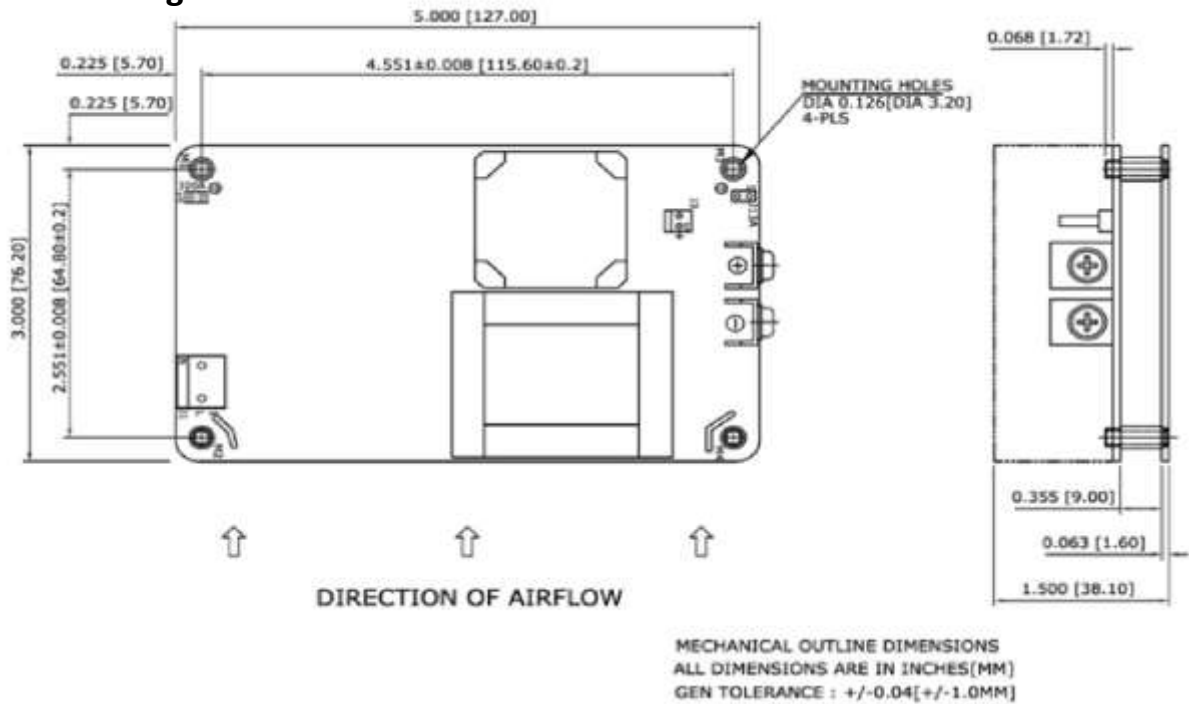
Convection load: 150W up to 50°C
De-rate above 50°C @ 2.5% per °C

Conduction load: 250W up to 50°C
De-rate above 50°C @ 2.5% per °C

Forced air cooled: 550W up to 50°C
De-rate above 50°C @ 2.5% per °C



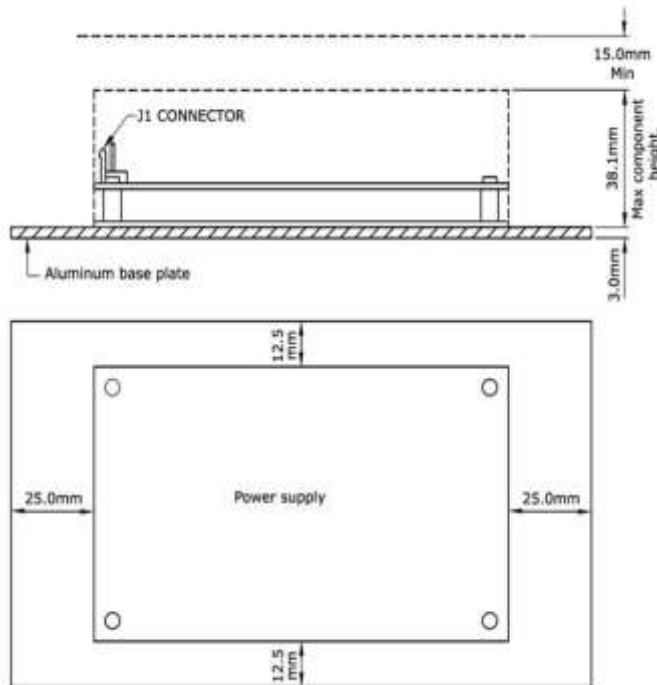
■ Mechanical Diagram



Mechanical Specifications	
AC Input Connector (J1)	JST: B3P-VH-B(LF)(SN) or equivalent Mating: VHR-3M or equivalent Pins: SVH-41T-P1.1 or equivalent
Earth (J4)	Molex: 19705-4301 Mating: 19003-0001
DC Output Connector (J2) Screw Terminal	6-32 inches Screw Pan HD Mating: Designed to accept Ring Tongue Terminal AMP: 8-31886-1 wherein one 16AWG(max) wire can be crimped Note: One Ring Tongue Terminal with 16AWG is recommended for current up to 11A only. Use Multiple tongue terminals with wire for more current.
Aux (fan) Output(J3)	AMP: 640456-2 Mating: 640440-2
Dimensions	5x3x1.5 in. (127x76.2x38.1mm)
Weight	500g

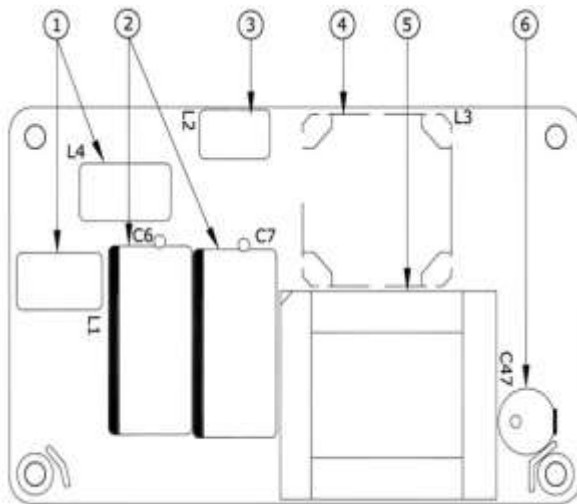
Connectors		
J1	Pin 1	AC Line
	Pin 2	Not fitted
	Pin 3	AC Neutral
J2	Pin 1	V1 +VE
	Pin 2	V1 -VE
J3	Pin 1	Fan +VE
	Pin 2	Fan -VE

■ Recommended Conduction Plate & Clearance

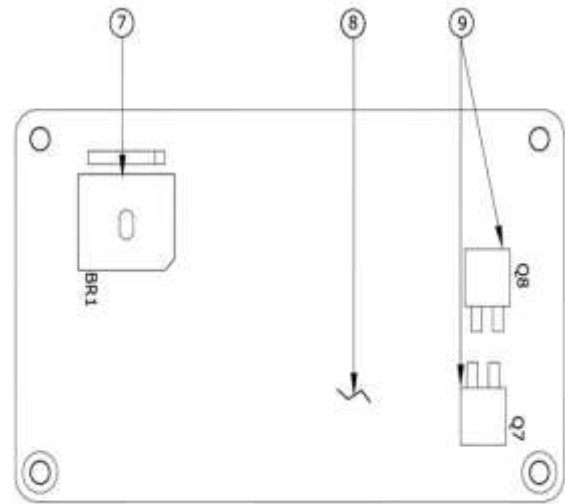


Conduction power rating mentioned in the table is with additional aluminum base plate of 3mm thickness with 177.8mm(7in) length & 101.6mm(4in) width. Clearance of minimum 15mm above the component height is recommended for better thermal management.

■ Maximum Operating Temperature



Top PCB



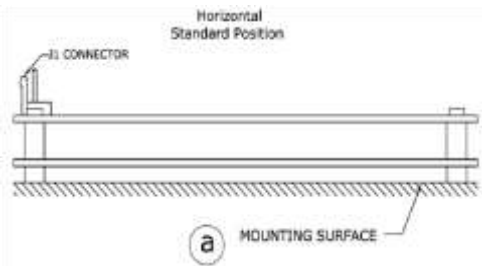
Bottom PCB

For reliable and safe operation, please make sure the maximum component temperatures given in table below is not exceeded.

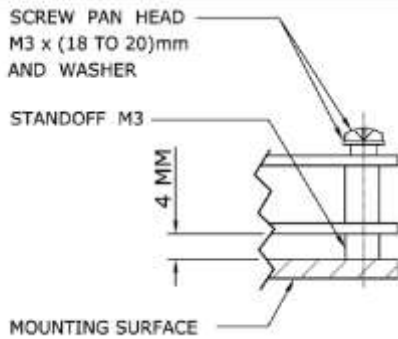
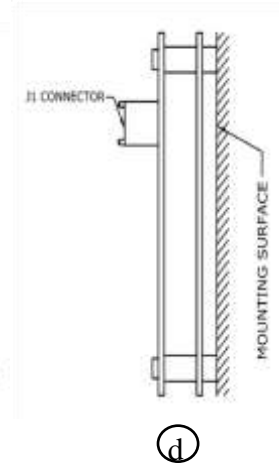
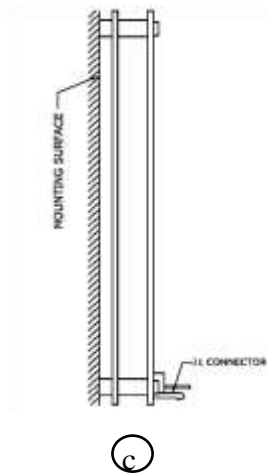
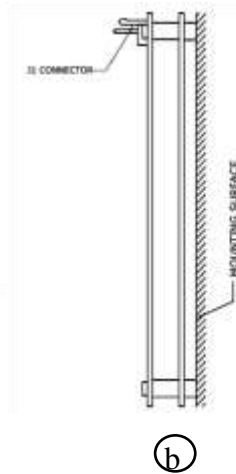
■ Maximum Operating Temperature(cont.)

Identifying No.	Description	Max. Temp. Allowed(°C)
1	Common mode chokes	95
2	Input Bulk capacitors	90
3	Differential Choke	110
4	Boost Choke	110
5	Output Transformer	125(for 12V&15V) 110(for 24V, 30V, 48V,58V)
6	Output Capacitor	90
7	Bridge Rectifier	120
8	Aluminum Clad PCB	105
9	Output Rectifiers	110

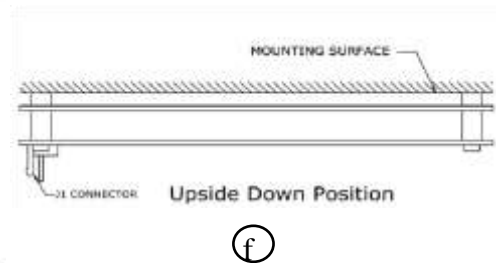
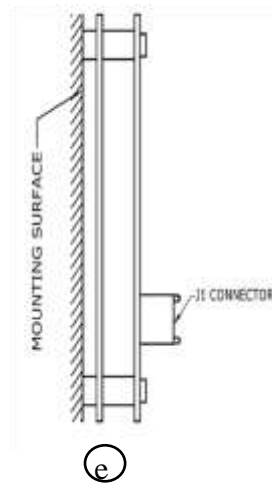
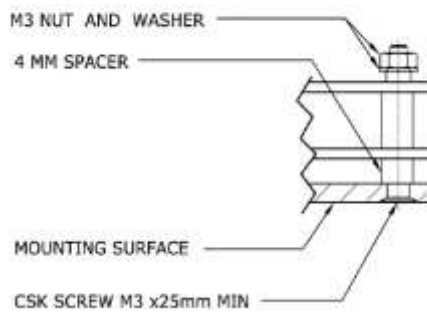
■ Mounting option

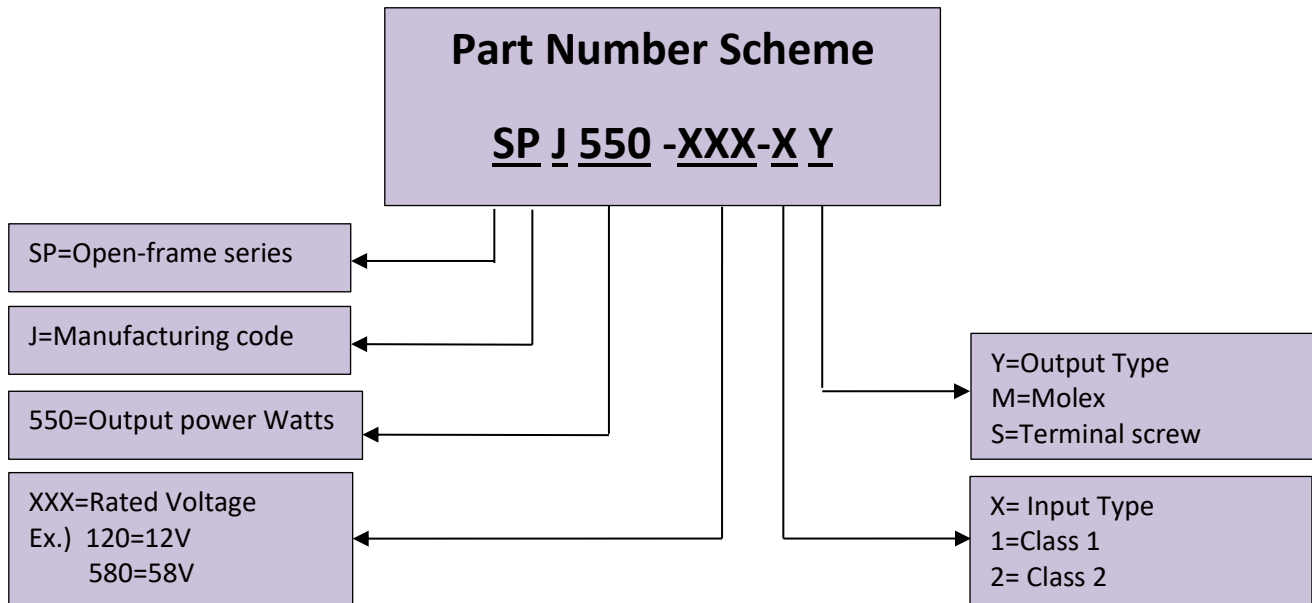


FIXING OPTION - 1



FIXING OPTION - 2





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*Specifications are subject to change without notice. Autec is not responsible for issues arising from errors or omissions.