

# FSP550-2F37 series

## FEATURES

- Class-I design
- Low inrush current
- Meet EN 55032 and FCC Class B
- Isolated between +12V & +54V outputs
- Isolated between PE and RETURN
- Surge protection  $\pm 2$  KV diff,  $\pm 4$  KV com
- High altitude 5000 meters operation



## SAFETY STANDARD APPROVAL



## DESCRIPTION

This AC-DC switching power supplies in a package of 190 x 90 x 33.5 mm (above PCB) is an isolated dual outputs 54V & 12V PSU that suitable for PoE Switch & Network application. This PSU is capable of delivering 550 watts continuous power with 19 CFM forced air cooling conditions.

## INPUT SPECIFICATIONS

Input voltage:	90-264 VAC
Input frequency:	47-63 Hz
Input current:	7.2 A (rms) for 115 VAC 3.5 A (rms) for 230 VAC
Earth leakage current:	1.5 mA max. @ 264 VAC, 63 Hz
Touch current:	250 uA max. @ 264 VAC, 63 Hz

## OUTPUT SPECIFICATIONS

Output voltage/current:	See rating chart.
Total output power:	550W
Protection:	
Over voltage:	Set at 110~125% of nominal output voltage and latch
Short circuit & Over current:	Output protected to short circuit condition and auto recovery
Over temperature:	Detected by thermistor and auto recovery

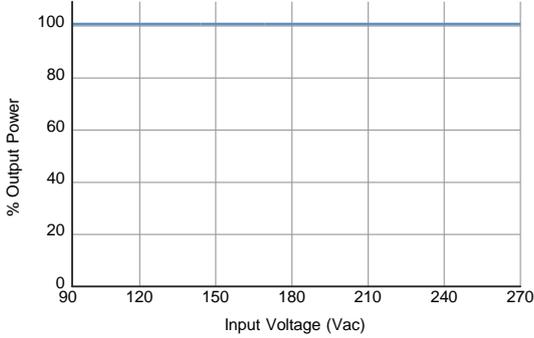
## ENVIRONMENTAL SPECIFICATIONS

Operating temperature:	-20°C~+70°C
Storage temperature:	-40°C~+85°C
Relative humidity:	10% to 95% non-condensing
Derating:	Derate from 100% at +50°C linearly to 80% at +70°C, applicable to forced-air cooling conditions

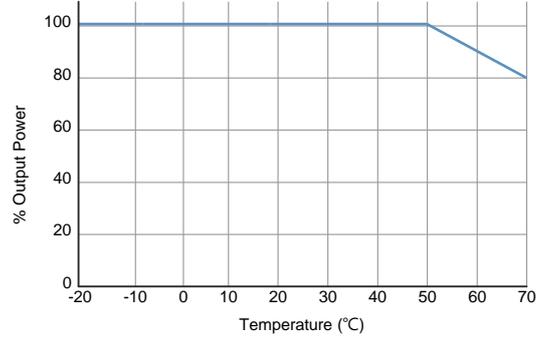
## GENERAL SPECIFICATIONS

Power factor:	0.98 min at 100% load and 115VAC 0.95 min. at 100% load and 230VAC
Efficiency:	89% minimum at 115 VAC
Hold-up time:	16 ms minimum at 115 VAC
Power on time:	3 Sec maximum
Line regulation:	$\pm 1\%$ maximum at full load
Inrush current:	60A @ 230 VAC, at 25°C cold start
Withstand voltage:	3000 VAC from input to output, 1500 VAC from input to earth ground, 1500 VAC from output to earth ground
MTBF:	500,000 hours minimum at full load at 25°C ambient, calculated per TELCORDIA SR-332
EMC Performance	
EN55032	Class B conducted, class B radiated
EN61000-3-2:	Harmonic distortion, class A
EN61000-3-3:	Line flicker
EN61000-4-2:	ESD, $\pm 15$ KV air and $\pm 8$ KV contact
EN61000-4-3:	Radiated immunity, 3 V/m
EN61000-4-4:	Fast transient/burst, $\pm 2$ KV
EN61000-4-5:	Surge, $\pm 2$ KV diff, $\pm 4$ KV com
EN61000-4-6:	Conducted immunity, 3 Vrms
EN61000-4-8:	Magnetic field immunity, 3 A/m
EN61000-4-11:	Voltage dip immunity, 30% reduction for 500 ms >95% reduction for 10 ms >95% reduction for 5000 mS

**INPUT VOLTAGE DERATING CURVE**



**OUTPUT POWER DERATING CURVE**



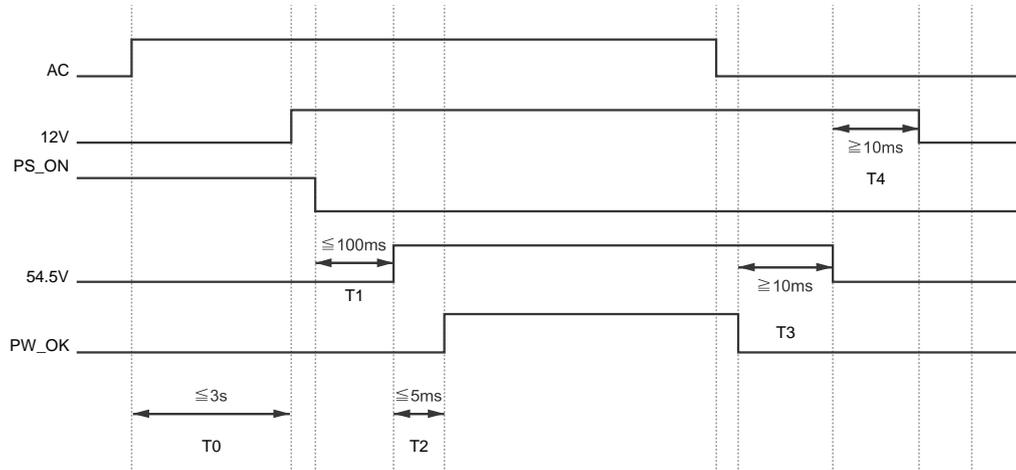
**OUTPUT VOLTAGE/CURRENT RATING CHART**

Model	Output Voltage	Min. Load	Max. Load	Output Power	Ripple & Noise	Load Regulation	Efficiency 115/230Vac
FSP550-2F37-B54H	54.5V 12V	0.02A 0.5A	9A 12.5A	550W	500mV 240mV	±3 % ±3%	89 / 91%
FSP550-2F37-C54H	54.5V 12V	0.02A 0.5A	9A 12.5A	550W	500mV 240mV	±3 % ±3%	87 / 88%

NOTES:

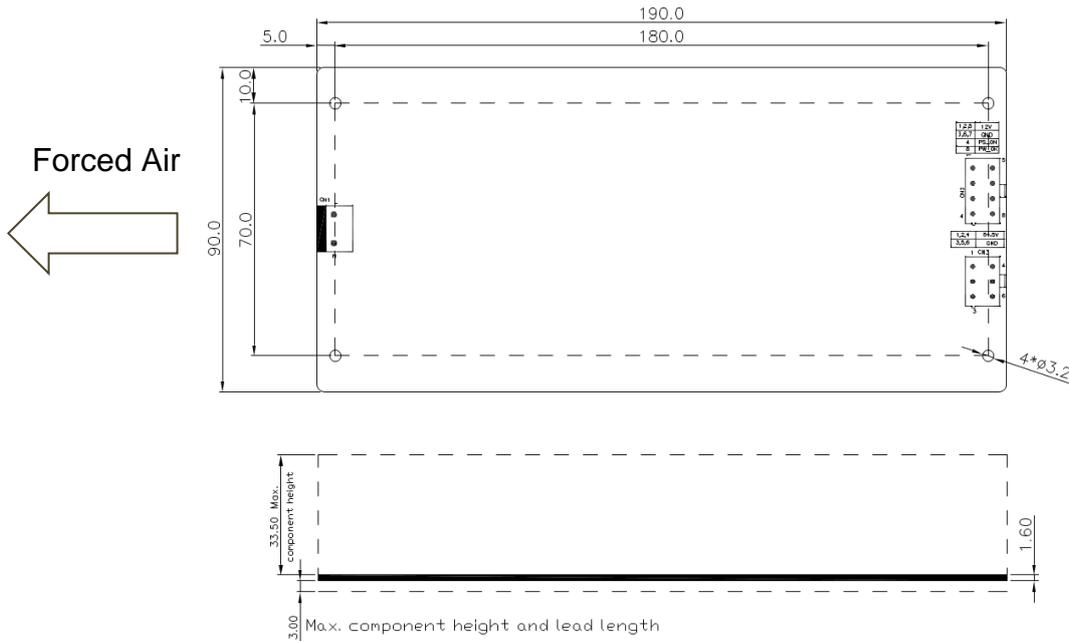
- Output voltage tolerance is measured at connector terminal
- Total output power is limited at 550W maxi.
- Ripple and noise is maximum peak to peak voltage value measured at output within 20 MHz bandwidth, at rated line voltage and output load ranges, and with a 100 µF electrolytic capacitor in parallel with a 0.1 µF ceramic capacitor across the output.

**INTERFACE TIMING CHART: (CN2)**



**MECHANICAL SPECIFICATIONS**

**FSP550-2F37-B54H**



Pin assignment:  
 Input connector (CN1):

Pin No.	Function	Wafer
1	Neutral	JWT
2	NC	A3963WV2-3P or EQU
3	Line	

Pin assignment of CN2:

Pin No.	Function	Wafer
1, 2, 5	+12V	JWT C4201WV0-2*4P or EQU
3, 6, 7	RETURN	
4	PS_ON	
8	PW_OK	

Output connector (CN3):

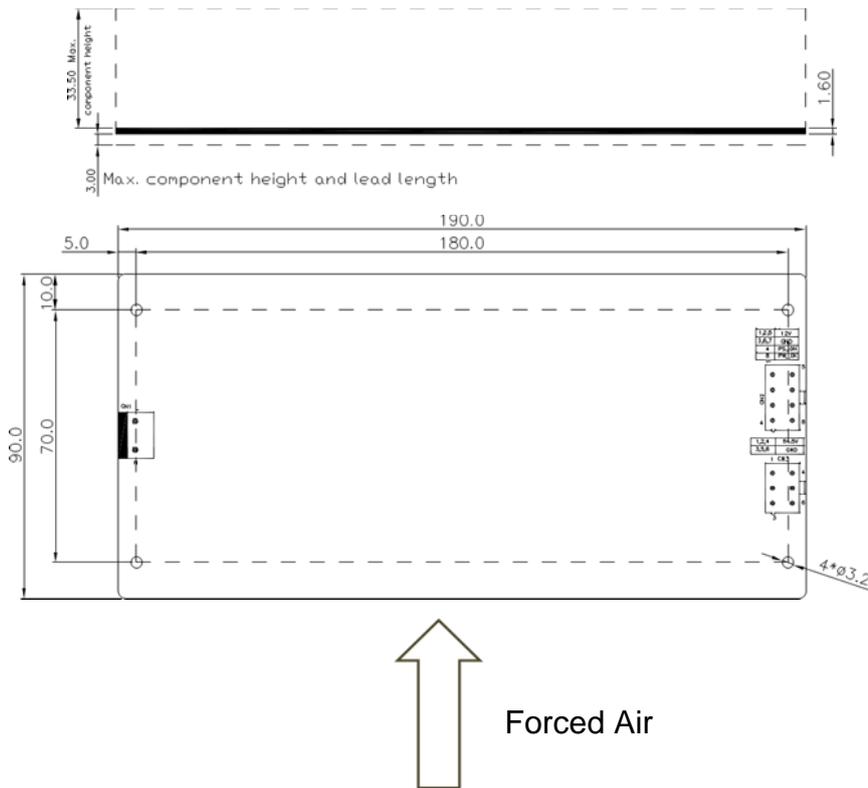
Pin No.	Function	Wafer
1, 2, 4	54.5V	JWT
3, 5, 6	RETURN	C4201WV0-2*3P or EQU

**NOTES:**

1. Dimension (LxWxH): 190.5 x 101.6 x 33.5 mm / 7.5" x 4" x 1.38"
2. To ensure compliance with level B emissions, connect the three PCB mounting holes with metallic standoffs to the chassis.
3. Weight: 410 grams / 0.90 lbs. approx.

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**FSP550-2F37-C54H**



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