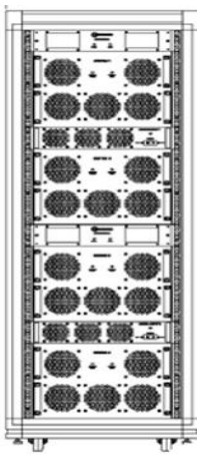
HD32865
SOLID STATE HIGH POWER AMPLIFIER

Communications Corp.



FEATURES

Small form factor rack mounted system
Class A/AB linear design
High power advanced GaN devices
Instantaneous ultra-wide bandwidth
Designed for EMI/RFI, lab, and general communication applications
Suitable for linear CW and composite signal modulation standards & applications
Built-in protection circuits, forward & reflected RF Sample ports
High reliability and ruggedness with extensive monitoring & protection circuits
All remote-control platforms included
High efficiency, with unprecedented reliability and ruggedness
Warranty – 3 years for all parts & labor

ELECTRICAL SPECIFICATION: 50Ω, 25°C

Parameter	Specification	Notes
Operating Frequency Range	1.0 - 2.5 GHz	
Rated Output Power	2.2 KW Min	2.5KW CW Typical
Output Power @ P1dB GCP	1.6 KW Typ	1.4 KW Min
Power Gain	63 dB Min	0dbm in or less for rated pwr
Gain flatness	4.0 dB p-p Max	±1.5dB Typ
Gain adjustment range	25dB Min	>30 dB Typ
Input & Output impedance/Return Loss	-10 dB Max	
2-Tone Intermodulation (IMD)	<-30 dBc Typ	54dBm/Tone, Δ = 1MHz
Modulation	AM, FM, or Pulse modulation	Faithfully reproduced
Harmonics	-20 dBc Max	
Spurious	-73 dBc Max	Non-harmonics
Operating Voltage	208 VAC, 50-60 Hz ±10 %	3-Phase WYE
Power Consumption	12 KW Max	
Input Power Protection	+8 dBm Max	Without damage
Noise Figure	10 dB Max	8dB Typ
Load VSWR Protection *	∞ : 1	Fold-back protection >6:1

* 100% of rated power without foldback up to 6.0:1 mismatch above which would limit to 1000 watts reflected power. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.

ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Notes
Operating Ambient Temperature	0 to +50 °C	
Storage Temperature	-40 to +70 °C	
Altitude	10,000 ft	Operational
Relative Humidity	95 % @ 40 °C	Non-condensing
Shock & Vibrations	MIL STD 810E	

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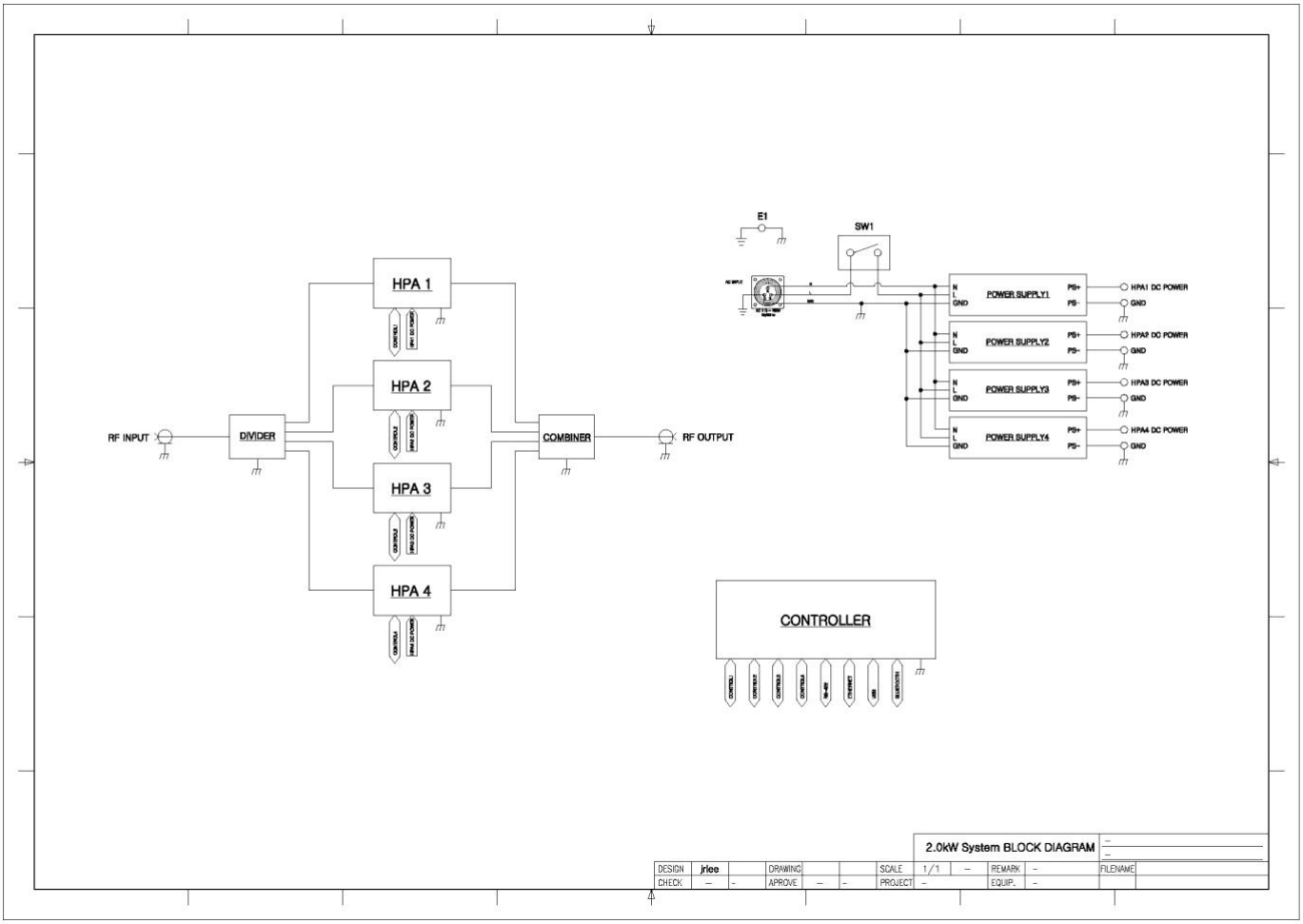
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MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions W x H x D	Rack Cabinet	32U
Weight	600 lbs. Nom.	
RF Safety Interlock	Rear Panel	Contact open Interlock enable
RF Connectors In / Out Forward & Reflected Sample Ports	Type N-F / 1 5/8" F Type N-F	RF Input/Sample Front Panel Std. RF Output Rear Panel Std.
Cooling	Built in forced air	Air entry in/out rear panel
STANDARD: Digital Monitor & Control FWD, REV, VSWR, GAIN, ALC, V & I, TEMP	Ethernet RJ-45 TCP/IP, RS232, USB, Optional: GPIB & Fiber Optic Interface	Remote Bluetooth application Optional

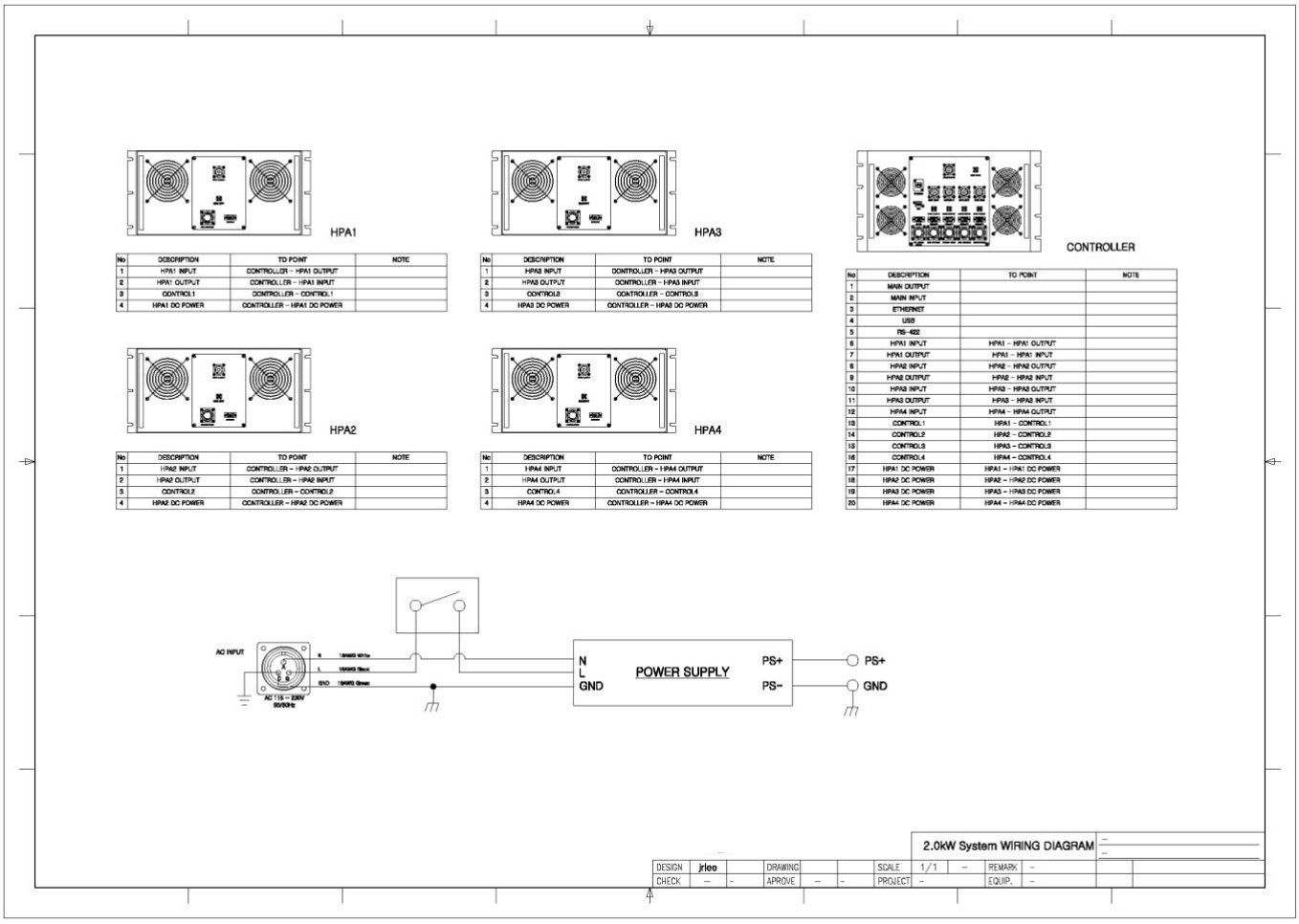
OUTLINE DRAWING & BLOCK DETAILS

- 2.2KW System Block Diagram



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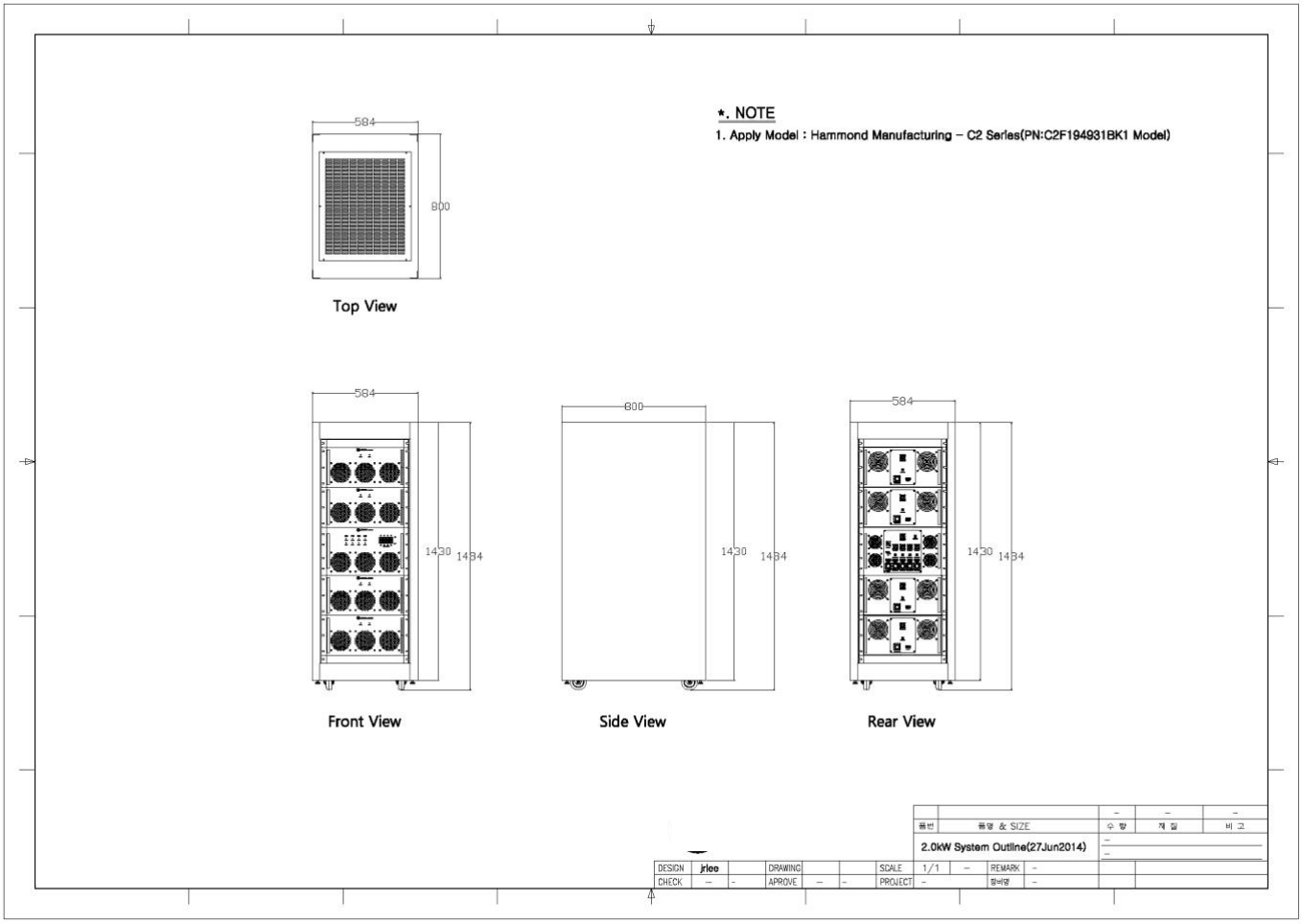
2.2KW System Wring Diagram



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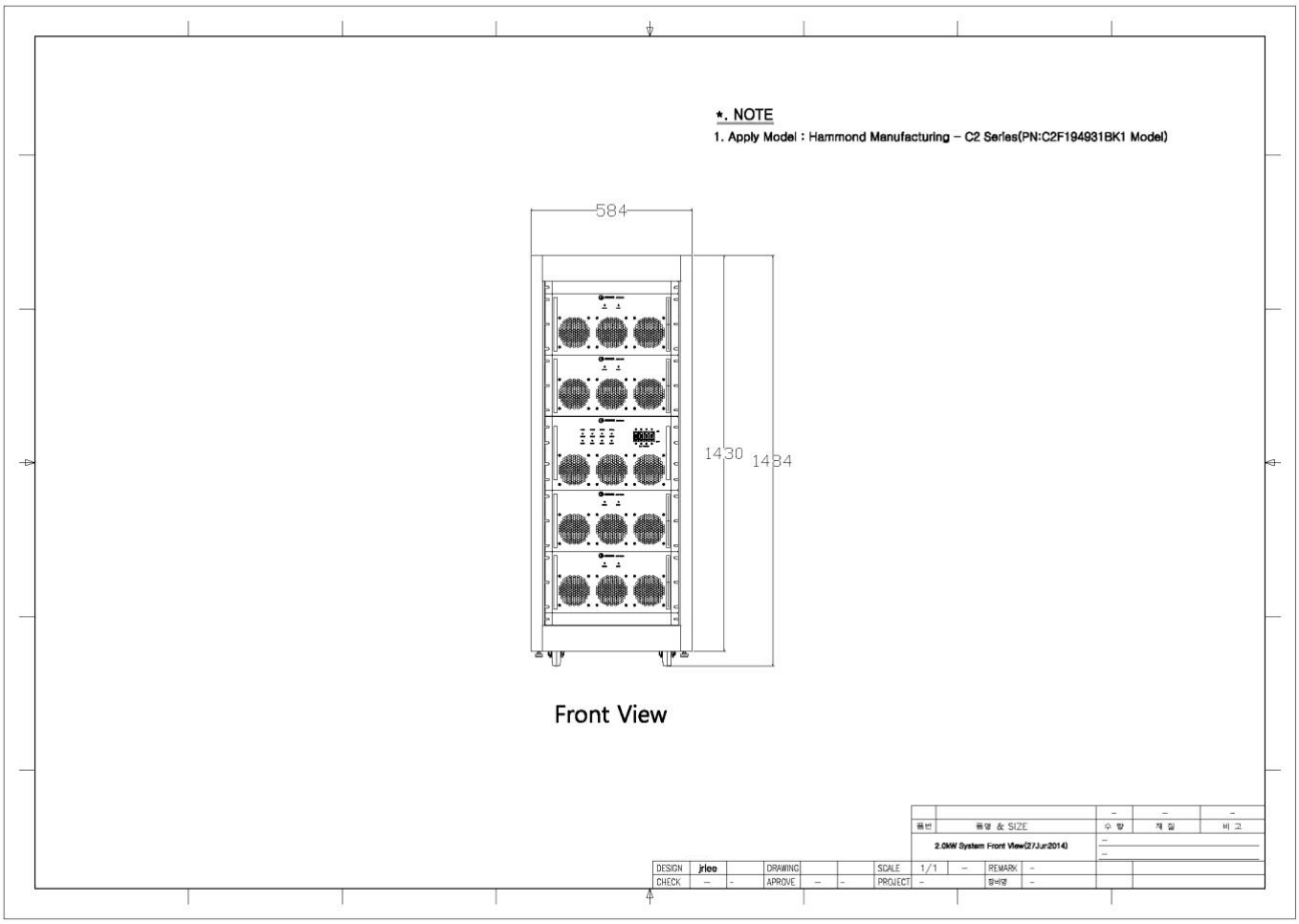
- 2.2KW System Outline



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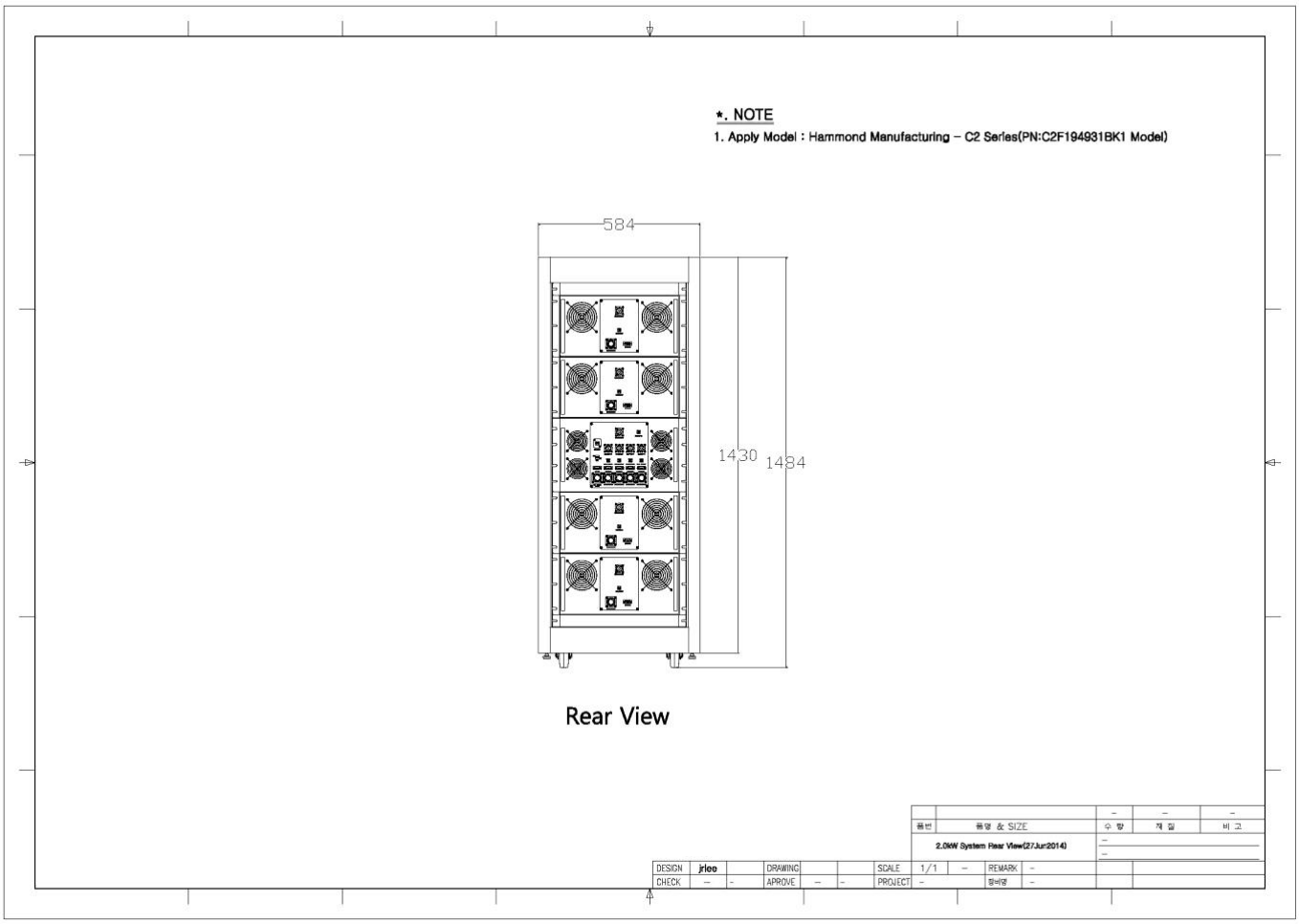
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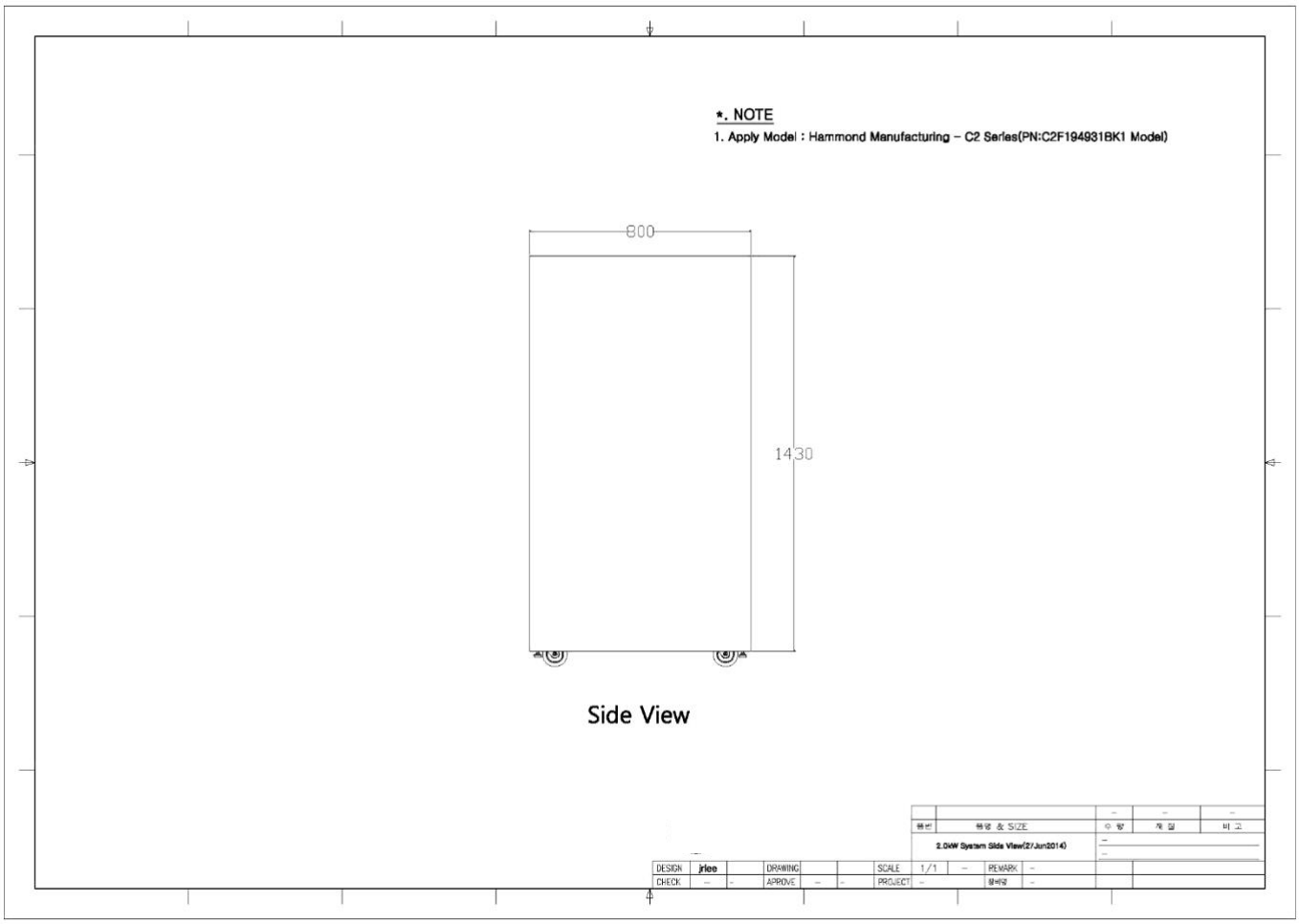
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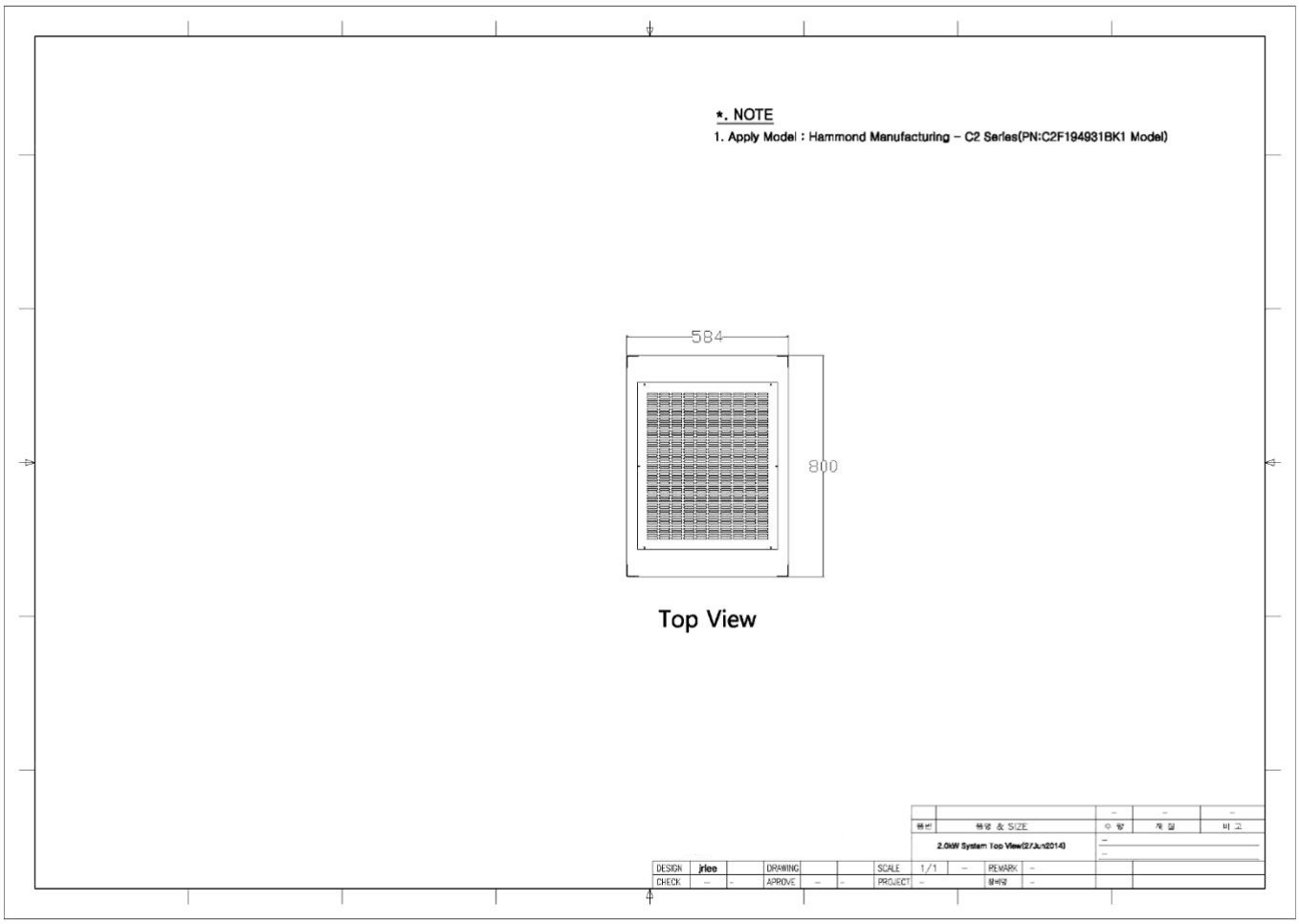
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- **Operators & Service manual-included documents:**
  Block Diagrams
  Wiring Diagrams Schematics
  Bill of Materials
  Assembly drawings
  Interlock Diagrams Test data
  Test Setup Diagram.

- **Proof-of-compliance-Test data/results**
  Saturated power: - Swept Power out plots: Frequency versus power out, with associated tabular data, at 0 dBm input.
  Linear Power: determine the point of where a 10 dB decrease in input power results in a 9dB decrease in output power for 1dB compression, and a 7dB decrease in output for 3dB compression. The corresponding output power is measured and graphed. This is repeated across the frequency range.
  Gain Flatness: Power input level is set to -20dBm. The output power is then read across the frequency range.
  Harmonics: Power input level is set to 0 dBm. Using a Spectrum analyzer record the amplitude of fundamental carrier frequency in dBm. The levels of the second and third harmonics are measured in dBm are subtracted from the level of the fundamental. This is repeated across the frequency range.

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