

2.7-3.0GHz 10KW SOLID STATE POWER AMPLIFIER MtronPTI P/N: PA4003P

FEATURES

Small form factor rack mounted system
High power advanced GaN pulse devices
Instantaneous bandwidth
Suitable for linear pulse applications
Built-in protection circuits
High efficiency, reliability and ruggedness



ELECTRICAL SPECIFICATIONS

Parameter	Specification	Notes
Operating Frequency Range	2.7 - 3.0 GHz	
Peak Output Power	10 KWatt Mom	Double RF pulse "couple"
Short Pulse Width	10 μ Sec	
Long Pulse Width	100 μ Sec	
Time Between Pulses	100 μ Sec	
Couple Repetition Frequency (PRF)	800 to 1000 Hz	
Rise / Fall Time	<110 nS / <100 nS, >30 nS	10% to 90%
Input Peak Power	17 dBm $\pm$ 1.0dB Nom	
Output power flatness with frequency	$\leq$ 0.5 dB	BW respect to mean power lvl
Harmonics	30 dBc Min	
Spurious	70 dBc Min	
Power flatness	$\leq$ 1.0 dB	Over operating frequency
Pulse Width Variation(Jitter)	<-70 nS	
Pulse Width	10 - 100 μ Sec	
Amplitude Pulse Droop	$\leq$ 0.5 dB for 100 μ Sec Pulse $\leq$ 0.2 dB for 10 μ Sec Pulse	
Amplitude Ripple	$\leq$ 0.3 dB	
Phase change along the pulse	$\leq$ 35°, 0 $\leq$ t $\leq$ 5 μ Sec $\leq$ 50°, 5 $\leq$ t $\leq$ 100 μ Sec	
Phase ripple along the pulse	$\leq$ 1°	
Pulse to pulse phase stability	<0.018°	
Pulse Amplitude Stability	<0.0027 dB	
RF ON-OFF transition time	$\leq$ 1 μ Sec	Including delay and rise time
Acoustic Noise	<70 dBa	
Eave Shape Transmitter	NLFM	
Cooling	Forced air	
Stability	65 dB	
Input / Output VSWR	1.5 : 1 Min	
Duplexer	Solid-State Circulator	
Pulse Phase Noise	$\leq$ 100 dBc/Hz @ 1 KHz from carrier	



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POWER SUPPLY

Parameter	Specification	Notes
Main Power	380/220 VAC, 48-64Hz, 3 Phase & Natural	
Static Variation of Nominal Voltage	±15%	
Unbalanced Voltage Between Phases	<3%	
Total Harmonic Distortions	<5%	
Spikes between lines & ground & line to line	<2500 Vp for 4 Sec	
Transients	<700 Vp for 2 mSec	
Power factor	0.8 Min	

ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Notes
Operating Ambient Temperature	-20 to +55°C	
Storage Temperature	-40 to +70°C	
Relative Humidity	95% @ 40°C	Non-Condensing
Shock & Vibrations	MIL STD 810E	
EMI/EMC	MIL STD 461E	
Cabinet Emitted Radiation	Residual RF radiation < 5mW/cm ³	Continuous 8 hours exposure

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions W x H x D	R3U + R5U + R3U	Without cabinet
Weight		
RF Connectors In/Out	Type N F / Waveguide WR284	
RF Output Monitoring FWD / REV	Type N F	
AC Power	380/220 VAC 48 to 64 Hz	3 Phase & neutral
Interface Connector	55 Pin circular female	
Monitor & Control - OPTIONAL Interface	1 Ethernet RJ-45 circular connector TCP/IP 1 RS422/485 D-sub 9S port for redundancy	Remote Bluetooth application
Cooling	Built in forced air	



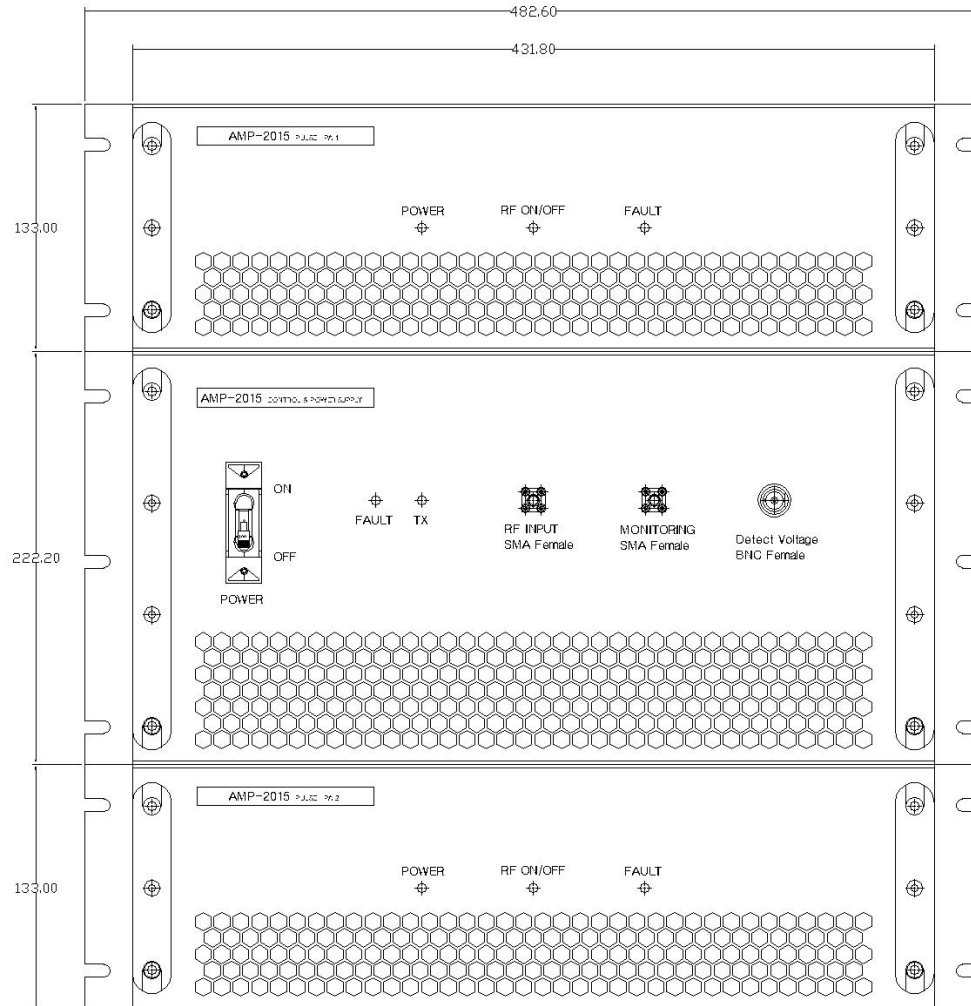
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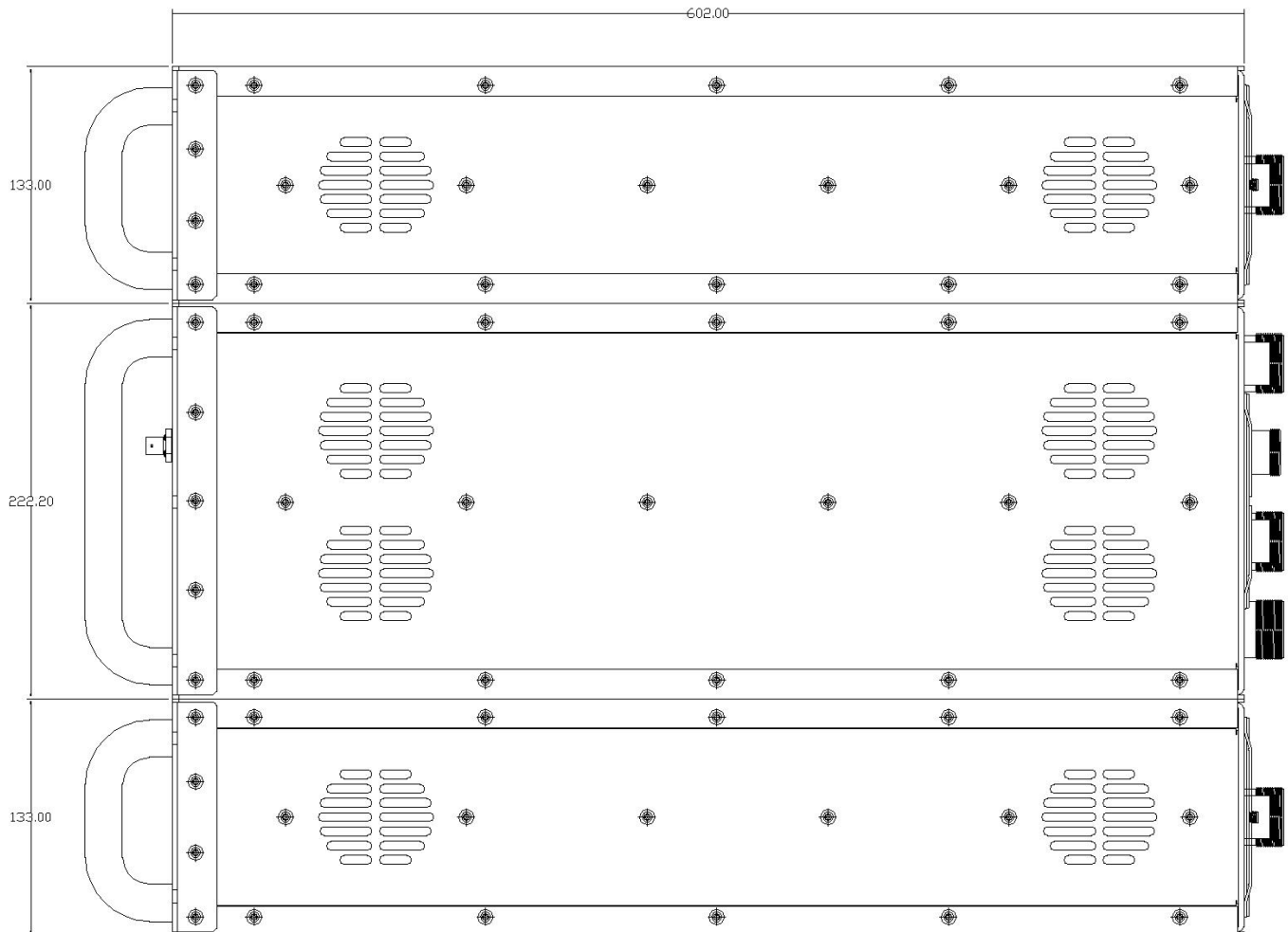
OUTLINE DRAWING





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