SECTION VII
SPECIFICATIONS

Gated Amplifier

Nominal Frequency Range for Gated Amplifier ..... 250 kHz to 22 MHz
Nominal Output Impedance of Gated Amplifier ..... 50 Ohms
On/Off Ratio of Gated Amplifiers ..... >140 dB
Output Level Control ..... >20 dB
Gated Amplifier RMS Output Power (into 50 Ohms) ..... 5KW over 1 decade of frequency, falls off at lower and higher frequencies
Typical Gated Amplifier RMS Output Power (into 50 Ohms) ..... 5 KW between 0.25 and 5 MHz, falls to approximately 250W at 20 MHz
Gated Amplifier Output Monitor ..... 60 dB below High Power Output into 50 Ohms
RF Level Control ..... 0 to 5 V in 0.01V steps
Bias Control ..... 0 to 5 V in 0.01 V steps
Output Level Control ..... 0 to 100 in single steps
Pulse Width ..... controlled in single cycle steps to 10 MHz
Maximum Pulse Width ..... 200 microseconds (hardware limitation)
Maximum Duty Cycle ..... 0.3 %
Second RF Burst Gate Width ..... 0 to 4095 microseconds in 1 microsecond steps
Second RF Burst Gate Delay ..... 0 to 32000 microseconds in 1 microsecond steps
Overload Provisions ..... Output shuts down if duty cycle limit is exceeded.
RF Input to Gated Amplifier Module ..... 1V peak to peak

Timing

Synthesizer Clock Frequency ..... 80 MHz
Time Base Frequency ..... 1 MHz
Trigger Source ..... Internal, External, or Computer
Maximum Internal Trigger Rate ..... 10 kHz
Internal Trigger Rate ..... 0.17 Hz to 10 kHz in 20 steps (1, 1.7, 2.5, 5 sequence)
External Trigger Input ..... Positive 5V (CMOS compatible)
Trigger Output ..... Positive 5 Volt trigger
Integrator Gate Width ..... 0 to 4095 microseconds in 1 microsecond steps
Integrator Gate Delay ..... 0 to 32000 microseconds in 1 microsecond steps
Integrator Gate Monitor ..... Positive 5V during off time, 0V during on time

Quadrature Phase Sensitive Receiver

Nominal Frequency Range for Receiver ..... 250 kHz to 20 MHz
Receiver Gain Control ..... 78 dB in 2 dB steps
Receiver High Pass Filter ..... 0.25, 1, and 4 MHz
Receiver Low Pass Filter ..... 5, 10, and 20 MHz
Receiver Input Impedance ..... 50 Ohms
Receiver Output Impedance ..... 50 Ohms
High Level Receiver Output Monitor Level (Rear Panel) ..... 1V peak-to-peak (Linear Range)
Receiver Gain to High Level Receiver RF Output Monitor (Rear Panel)
..... 10dB to 88dB in 2 dB steps
Receiver RF Monitor (Front Panel) ..... -20 dB below RF Receiver Output
Receiver Monitor Output Impedance ..... 50 Ohms
Maximum Receiver RF Monitor Output Level ..... 100 mV peak-to-peak
Receiver Gain to Receiver RF Monitor ..... -10dB to 68dB in 2 dB steps
Intermediate Frequency (IF) of Superheterodyne Receiver ..... 25 MHz
IF Bandwidth Filter ..... 0.1, 1, and 4 MHz
Reference Phase (Software Control) ..... 0 degrees or 180 degrees
Phase Detector Outputs ..... (0 degrees and 90 degrees) or (180 degrees and 270 degrees)
Phase Detector Resolution ..... 0.5°
Maximum Phase Detector Output Level (Internal to RAM-5000) ..... ±2V
Receiver Gain to output of Phase Detectors ..... 22 dB to100 dB in 2 dB steps
Phase Detector Monitors ..... -20 dB from Phase Detector Outputs
Maximum Phase Detector Monitors Output Level ..... ±200 mV
Phase Detector Video Low Pass Filters ..... 50 kHz, 100 kHz, 150 kHz, 250 kHz,
..... 400 kHz, 800 kHz, 1.5 MHz, 2 MHz
Integration Ranges for the Gated Integrators ..... 454, 769, Hz,
..... 1.36, 2.37, 4,12, 7.3, 12,2, 21,3, 37.0, 66.7, 110, 200, 350, 620, 1100, or 2000 kHz
Maximum Gated Integrators Output Level (Internal to RAM-5000) ..... ±5V
Gated Integrators Output Monitor ..... -20 dB
Maximum Gated Integrator Output Monitor Level ..... ±500 mV

Measurement Circuits

Internal Digital-to-Analog Converters	6
Resolution	12 bits
Output Range (5 converters)	0 V to 4.99V
Output Range (1 converter)	-2.5V to +2.5 V
Diagnostic Analog-to-Digital Converter	1
Multiplexed Inputs	8
Resolution	8 bits
External Sensor Analog Inputs	2
Maximum External Sensor Input Levels	±5 V

Computer Interface

Digital Interface	32 bit TTL (16 bit Input, 16 bit Output)
Data Acquisition Card	ADAC 5632 TTL
Connector to Digital Interface	D-37 Connector
Optional Computer Interface	GPIB (IEEE-488)

Cabinet

Cabinet Style	19-inch rack mount
Dimensions	17.5" (44.5 cm) wide, 10.5" (26.7 cm) high, 17.2" (43.7 cm) deep
Shipping Weight	Approximately 50 pounds (23kg)

Power Supply

AC Power Requirements	85 to 240 Volts RMS, 50-60 Hz, ~200 W
AC Power Factor	>99%
Auxiliary Power Outputs (-18V,-8V,+8V,+18V,+48V)	2
AC Power Requirements	100, 120, 220, or 240 Volts RMS, 50-60 Hz, ~300 VA
AC Mains Line Fuse (120V countries)	slow blow 3.15A fuse typically Bussman T3.15 250V
AC Mains Line Fuse (240V countries)	slow blow 1.65A fuse typically Bussman T1.65 250V
High Voltage Fuse	Fast Blow Rectifier Fuse
	Bussman GBB-8 8 Ampere 250V

Specifications are subject to change without notice.