



Model 8684B

General Information

Table 1-1. Specifications (2 of 5)

Electrical Characteristics	Performance Limits	Conditions
AMPLITUDE MODULATION² AM Depth AM Distortion (Total Harmonic Distortion) AM Rates ³ Incidental FM Internal AM	0 to 70% <10% at 40% depth and 1 kHz rate. dc to 10 kHz 50 Hz to 10 kHz <15 kHz peak-to-peak Fixed 1 kHz (nominal) square wave with a duty cycle of 50 ±5%. On-Off ratio >80 dB at maximum power.	At 1 kHz rate dc coupled 40% AM depth (3 dB bw) ac coupled 40% AM depth (3 dB bw) 30% AM depth
FREQUENCY MODULATION Peak Deviation FM Rates Incidental AM Internal FM Distortion	5 MHz dc to 10 MHz 100 Hz to 10 MHz <6% Fixed 1 kHz (nominal) sawtooth with variable deviation up to the maximum specified deviation. A 1 kHz sawtooth signal with a nominal amplitude of 1V peak is available at the FM INPUT/OUTPUT connector. <5%	dc coupled (3 dB bw) ac coupled (3 dB bw) With <100 kHz rate and <1 MHz peak deviation With 100 kHz rate and <1 MHz peak deviation.
EXTERNAL PULSE INPUT REQUIREMENTS Rate	0 to 1 MHz	See Table 1-2, Supplemental Characteristics

² Amplitude modulation specifications are valid for the LEVEL vernier range of 5 to 15 dB below the maximum vernier setting with output levels at least 5 dB below the specified maximum output power.

³ AM rate is limited to a maximum of 500 Hz when AM is combined with pulse modulation.

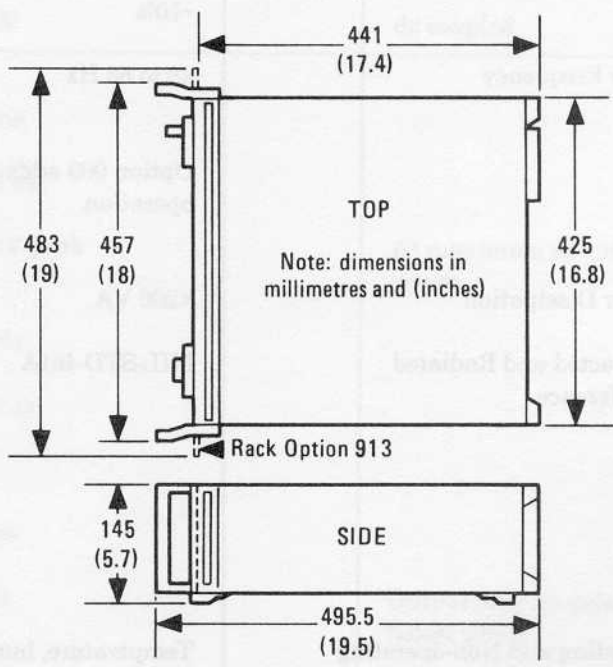
Table 1-1. Specifications (3 of 5)

Electrical Characteristics	Performance Limits	Conditions
EXTERNAL PULSE INPUT REQUIREMENTS (cont'd)		
Width	>100 ns	
On Level	>1.0V	dc coupled
Off Level	<0.4V	dc coupled
RF PULSE OUTPUT		
Rise and Fall Time	<10 ns	
Minimum Pulse Width	<100 ns	
Video Feedthrough	25 mV peak	At maximum specified power
Maximum Pulse Rate	1 MHz	
Maximum Delay Time (Time between VIDEO OUT and RF OUTPUT pulses)	<100 ns	
Pulse Width Compression	<50 ns	
Minimum Duty Cycle	0.01%	Output may be unlevelled below 0.01%
Peak Pulse Power	Within ± 0.5 dB of level set in CW mode	For top 10 dB of LEVEL vernier range
On-Off Ratio	>80 dB	At maximum leveled power
INTERNAL PULSE GENERATOR		
Pulse Rate	10 Hz to 1 MHz in five ranges with continuous adjustment within ranges.	
Pulse Delay (Time between SYNC OUT and VIDEO OUT pulses)	<50 ns to 100 ms in seven ranges with continuous adjustment within ranges.	The range below 100 ns is not calibrated. The pulse delay must be $\leq 90\%$ of pulse period.
Pulse Width	<100 ns to 100 ms in seven ranges with continuous adjustment within ranges.	
Calibration Accuracy (Pulse Rate, Pulse Delay, and Pulse Width)	20% of full scale	

Table 1-1. Specifications (4 of 5)

Electrical Characteristics	Performance Limits	Conditions
<p>GENERAL</p> <p>Operating Temperature Range</p> <p>Power Requirements Line Voltage</p> <p>Line Frequency</p> <p>Power Dissipation</p> <p>Conducted and Radiated Interference</p> <p>Operating and Non-operating Environment</p> <p>Safety</p> <p>Net Weight</p>	<p>0°C to 55°C</p> <p>100, 120, 220 or 240 Vac, +5%, -10%</p> <p>48 to 66 Hz</p> <p>Option 003 adds 48 to 440 Hz operation</p> <p><200 VA</p> <p>MIL-STD-461A</p> <p>Temperature, humidity, shock, and vibration Type Tested to MIL-T-28800B Class IV Requirements.</p> <p>Meets requirements of IEC 348</p> <p>16.0 kg (35 lb)</p>	<p>All specified line voltages may be used</p> <p>Limited to line voltages of 100 or 120 Vac when line frequency is >66 Hz</p> <p>Conducted and radiated interference is within the requirements of CE03, CS01, CS02, CS06, RE02, RS01, and RS03 of MIL-STD-461A. Also within the requirements of VDE 0871 and CISPR Publication 11.</p>

Table 1-1. Specifications (5 of 5)

Electrical Characteristics	Performance Limits	Conditions
<p>GENERAL (cont'd) Dimensions: Full envelope Height x Width x Depth</p>	<p>145 H x 457 W x 495.5 mmD (5.75 H x 18 W x 19.5 inches D)</p>  <p>Note: dimensions in millimetres and (inches)</p>	<p>Note: For ordering cabinet accessories, the module sizes are 5 1/4 H, 1 MW, and 17 D.</p>