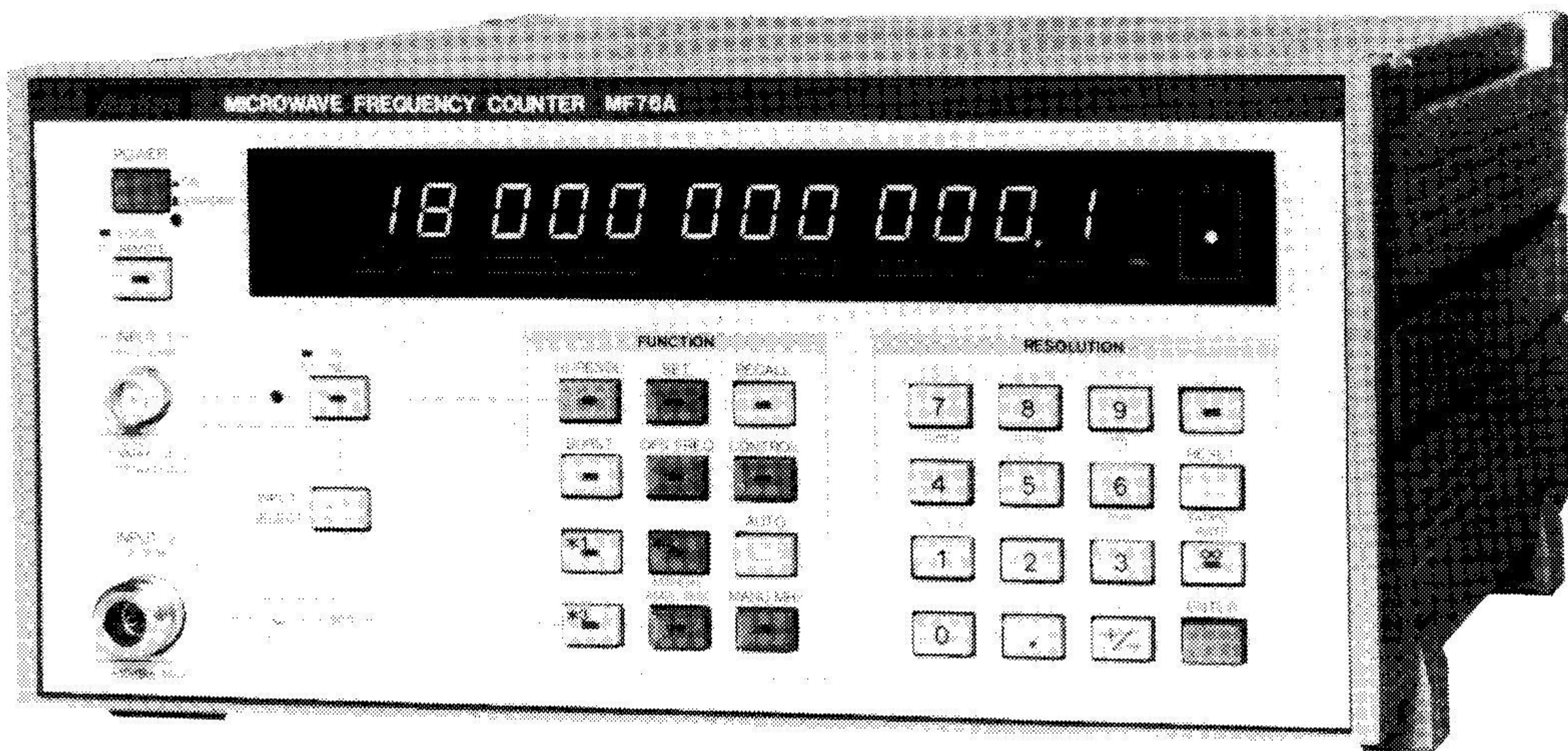


OPERATION MANUAL

MICROWAVE FREQUENCY COUNTER

MF76A



2.2 SPECIFICATIONS

Table 2-3 lists specifications of the MF76A and Table 2-4 lists specifications of the optional reference oscillator.

Table 2-3 Specifications

		INPUT 1	INPUT 2
Input	Frequency range	10Hz to 200MHz 100kHz to 200MHz (BURST) 10Hz to 1MHz (HI RESOL 1mHz) 10Hz to 10MHz (HI RESOL 10mHz) 10Hz to 20MHz (HI RESOL 0.1, 1Hz)	0.2 to 18GHz
	Sensitivity (Sine wave)	50mVrms	-22dBm: 0.2 to 14GHz -15dBm: 14 to 18GHz
	Maximum input	10Vrms: 1M Ω 2Vrms: 50 Ω	Max operating level: +10dBm Damage level: +20dBm
	Input impedance	$\geq 1\text{M}\Omega$ shunted by $\leq 40\text{pF}$, 50 Ω	50 Ω
	Coupling/Connector	AC, BNC	DC, N
Frequency measurement	Resolution	0.1Hz, 1Hz, 10Hz, 100Hz, 1kHz, 10kHz, 100kHz, 1MHz	
		1mHz, 10mHz, 100mHz, 1Hz: HI RESOL	_____
	Gate time	10s, 1s, 100ms, 10ms, 1ms, 100 μ s, 10 μ s, 1 μ s	
		$\begin{array}{l} < 20\text{s}: 1\text{mHz} \\ \leq 16\text{s}: 10\text{mHz} \\ \leq 5\text{s}: 100\text{mHz} \\ \leq 0.5\text{s}: 1\text{Hz} \end{array} \left. \vphantom{\begin{array}{l} < 20\text{s}: 1\text{mHz} \\ \leq 16\text{s}: 10\text{mHz} \\ \leq 5\text{s}: 100\text{mHz} \\ \leq 0.5\text{s}: 1\text{Hz} \end{array}} \right\} \text{HI RESOL} $	_____
	FM tolerance	_____	50MHz p-p: 0.5 to 18GHz 25MHz p-p: 0.2 to 0.5GHz
	Acquisition time	_____	$\leq 600\text{ms}$
Accuracy	± 1 count $\pm$ time base accuracy		
	$\pm(1 \text{ count} + \text{time base accuracy} + \text{trigger error})$: HI RESOL		_____

Table 2-3 Specifications (Cont'd)

		INPUT 1	INPUT 2
	Unit indication	GHz, MHz; kHz, and Hz	_____
		MHz, kHz, Hz, and mHz : HI RESOL	_____
General specifications	Offset mode		Addition, difference and ppm to and from the selected value are displayed.
	Display system		12-digit and "-" sign display 1 digit, 7 segment green LED, zero blanking, storage display
	Sample rate		Approximately 0.08, 0.8, 2s and ∞ : selected from SAMPLE RATE switch Approximately 20ms to 9999min: selected from ten keys
	Reference Oscillator	Frequency	10MHz
		Starting characteristic	$\leq 5 \times 10^{-8}$ /day (after 30 minutes warm-up)
		Aging rate	$\leq 2 \times 10^{-8}$ /day
		Temperature characteristic	$\pm 5 \times 10^{-8}$ ($25 \pm 25^{\circ}\text{C}$)
	Power		AC $\pm 10\%$ $\pm 15\%$, 50/60 Hz $\pm 5\%$, when started $\leq 100\text{VA}$, under normal operation $\leq 85\text{VA}$
	Dimensions		132.5H, 284W, 351Dmm (excluding such protrusions as handles, rubber feet, etc.)
	Weight		$\leq 12\text{kg}$
	Ambient temperature, rated range of use		0 to 50°C

The aging rates of the standard crystal oscillator are 4×10^{-8} /week or less, 8×10^{-8} /month or less, and 1×10^{-7} /year or less.