DIGITAL STORAGE VERTICAL CONTROL 155-0157-00 M180

DESCRIPTION

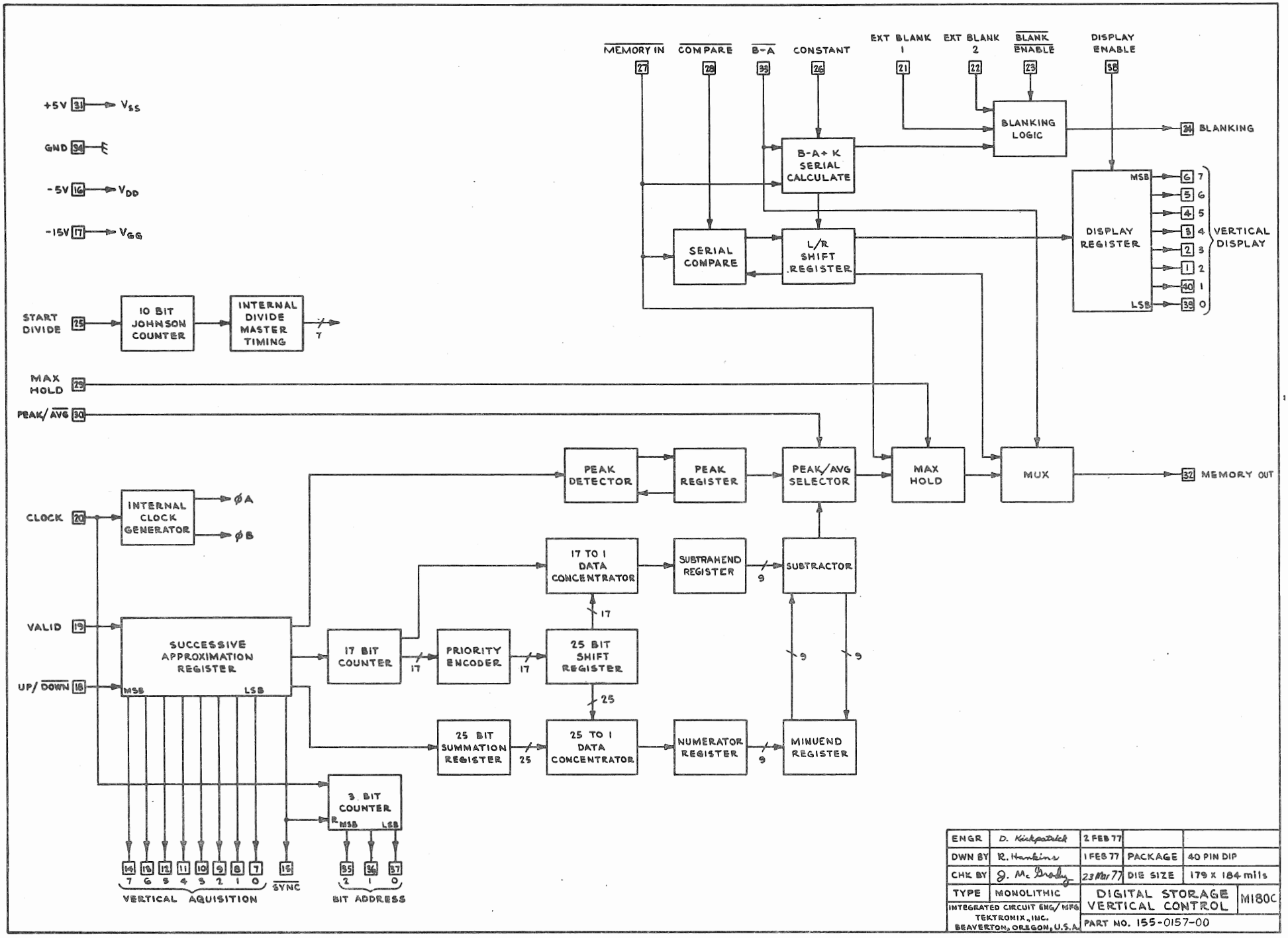
The M180 and M181 acquire a low speed, low repetition rate waveform, store the waveform in a digital form, and then redisplay the waveform at a higher rate. Also, the waveform may be digitally processed to provide several types of displays. The waveform is segmented into 1024 horizontal locations. An eight bit vertical value is computed for each horizontal location and stored in an external RAM. The memory can be split into two smaller memories of 512 locations. One waveform can be retained for comparison with a waveform acquired later.

The M180 constantly digitizes a waveform using the successive approximation technique. All vertical values are summed for a single horizontal location. The number of vertical values is counted. These two numbers are divided giving an average value. Also, the largest vertical value is retained. The process begins anew at each horizontal location. The largest value or the average value is then selected and stored. The selected value can be compared with the current memory content and the larger of the two stored.

The M181 determines the horizontal position using a 10-Bit tracking ADC. A programmable logic array in the M181 controls the display. The user can display either half of the memory, both halves interlaced, or the algebraic difference between the two halves. The M181 controls the addressing of memory. Provisions exist for external circuitry to read and modify the memory.

Either circuit by itself is useless, but the two together form a complete digital package. The memory and the analog portion of the A/D and D/A converters are external.

PROCESS	PSF (AMI MOS)
POWER SUPPLY	+5/50 mA, -5/50 mA, -15/10 µA
PACKAGE	40 Pin Dual-In-Line
DESIGNER	Don Kirkpatrick
INSTRUMENT USAGE	7L5 7L13 7L18 49X



ENGR	D. Kirkpatrick	2 FEB 77		
DWN BY	R. Hankins	1 FEB 77	PACKAGE	40 PIN DIP
CHK BY	J. McGrady	23 Mar 77	DIE SIZE	179 x 184 mils
TYPE	MONOLITHIC	DIGITAL STORAGE VERTICAL CONTROL		M180C
INTEGRATED CIRCUIT ENG/MFG TEKTRONIX, INC. BEAVERTON, OREGON, U.S.A.		PART NO. 155-0157-00		