

## DESCRIPTION

The MK 50281 is a five-function (+, −, X, ÷, %), 8-digit calculator featuring automatic constant, floating negative sign, algebraic entry, floating decimal point, chain calculations, credit balance, leading zero suppression, display blanking during calculations and internal clock oscillator. A floating negative sign eliminates the need for a ninth digit. A store/recall memory allows the contents of the display register to be placed in memory for subsequent recall on demand.

## OUTPUTS

The digit outputs,  $D_1$ – $D_{11}$ , are selected (conduct to  $V_{SS}$ ) sequentially. Note that there is inter-digit blanking. The digit lines are also fed back to the chip (min. level = ) as keyboard inputs.

The segment outputs (SA–SG, Sdp) select the appropriate seven-segment code (with decimal point) for each digit as that digit is selected. \*\* A segment output conducts to  $V_{SS}$  when selected. When not selected, a segment output is in an open-drain state. The resultant display font is shown. \* Segment output current is controlled by the  $I_{set}$  input (see direct drive).

\*leading zeros are blanked

\*\*The floating negative sign is always selected during the digit position to the immediate left of the most significant digit

## DIRECT DRIVE

The regulated segment outputs of the MK 50281 are capable of sourcing up to mA for the purpose of driving the segments of common cathode LED displays.  $I_{set}$  (pin 24) regulates the segment output current. Placing a resistor between pin 24 and  $V_{DD}$  determines the peak segment current in the following manner

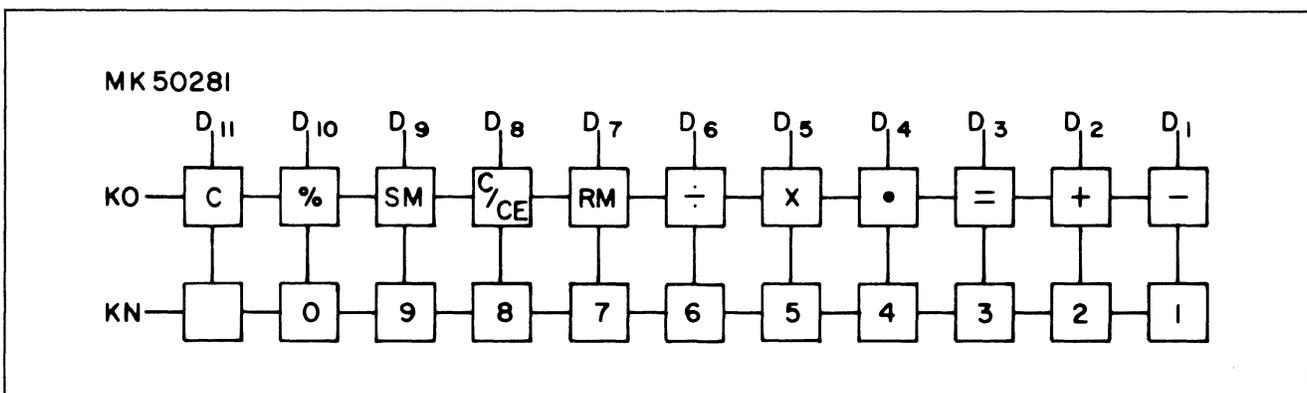
$$\text{Peak current} = 10 \times \frac{V_{DD}}{R}$$


## OVERFLOW

Attempting an entry of more than 8 digits exceeds the capacity of the MK 50281 and results in an entry overflow condition. This causes the display to blink repetitively as an overflow indication. All keys except C/CE will be inoperative. These, however, may be used to clear the overflow condition in the course of their usual function.

A calculated result in excess of 8 digits exceeds the capacity of the MK 50281 and produces a result overflow condition. This causes the display to blink repetitively as an overflow condition. The display will contain the correct answer (÷ by  $10^8$  to 8 significant decimal places). All keys except C/CE will be inoperative. This may be used to clear the overflow condition in the course of its usual function.

## KEY MATRIX



% - Computes and displays a percentage of a number which may be added to (tax) or subtracted from (discount) the original value.

SM - Store the display to the memory register.

RM - Recalls the memory register to the display.