



TRUTH TABLE

FUNCTION	INPUTS					OUTPUTS		
	SeA	SeB	A0	B0	C _{in}	S0	S1	C _{out}
ADD	H	H	L	L	L	L	L	L
	H	H	L	L	H	L	L	L
	H	H	L	H	L	L	L	L
	H	H	L	H	H	L	L	L
SUBTRACT	H	H	L	L	L	L	L	L
	H	H	L	L	H	L	L	L
	H	H	L	H	L	L	L	L
	H	H	L	H	H	L	L	L
REVERSE SUBTRACT	H	L	L	L	L	L	L	L
	H	L	L	L	H	L	L	L
	H	L	L	H	L	L	L	L
	H	L	L	H	H	L	L	L

FUNCTION SELECT TABLE

SeA	SeB	Function
H	H	S = A plus B
H	L	S = A minus B
L	H	S = B minus A
L	L	S = B minus A minus B

$P_D = 360 \text{ mW typ/pkg (No Load)}$

$t_{pd} \text{ (typ)}$

$C_{in} \text{ to } C_{out} = 2.2 \text{ ns}$

$A0 \text{ to } S0 = 4.5 \text{ ns}$

$A0 \text{ to } C_{out} = 4.5 \text{ ns}$

Dual 2-Bit Adder/Subtractor

The MC10180 is a high speed, low power general-purpose adder/subtractor. It is designed to be used in special purpose adders/subtractors or in high speed multiplier arrays. The MC10180 can be used in any piece multiplier arrays. The MC10180 can be used in any piece of equipment where these operations are necessary.

Inputs for each adder are Carry-in, operand A, and operand B; outputs are Sum, $\overline{\text{Sum}}$, and Carry-out. The common Select inputs serve as a control line to invert A for subtract, and a control line to invert B. The speed is very fast, with Carry-in to Carry-out propagation delay of 2.2 ns and Operand in to Sum or Carry-out propagation delay of 4.5 ns.

MC10180

ARITHMETIC FUNCTIONS