Table 3–17.MSP430 Instruction Set

Mnemonic		Description		V	N	Z	C
ADC(.B)†	dst	Add C to destination	dst + C → dst	*	*	*	*
ADD(.B)	src,dst	Add source to destination	src + dst → dst	*	*	*	*
ADDC(.B)	src,dst	Add source and C to destination	src + dst + C → dst	*	*	*	*
AND(.B)	src,dst	AND source and destination	src .and. dst → dst	0	*	*	*
BIC(.B)	src,dst	Clear bits in destination	.not.src .and. dst → dst	–	–	–	–
BIS(.B)	src,dst	Set bits in destination	src .or. dst → dst	–	–	–	–
BIT(.B)	src,dst	Test bits in destination	src .and. dst	0	*	*	*
BR†	dst	Branch to destination	dst → PC	–	–	–	–
CALL	dst	Call destination	PC+2 → stack, dst → PC	–	–	–	–
CLR(.B)†	dst	Clear destination	0 → dst	–	–	–	–
CLRC†		Clear C	0 → C	–	–	–	0
CLRN†		Clear N	0 → N	–	0	–	–
CLRZ†		Clear Z	0 → Z	–	–	0	–
CMP(.B)	src,dst	Compare source and destination	dst – src	*	*	*	*
DADC(.B)†	dst	Add C decimally to destination	dst + C → dst (decimally)	*	*	*	*
DADD(.B)	src,dst	Add source and C decimally to dst.	src + dst + C → dst (decimally)	*	*	*	*
DEC(.B)†	dst	Decrement destination	dst – 1 → dst	*	*	*	*
DECD(.B)†	dst	Double-decrement destination	dst – 2 → dst	*	*	*	*
DINT†		Disable interrupts	0 → GIE	–	–	–	–
EINT†		Enable interrupts	1 → GIE	–	–	–	–
INC(.B)†	dst	Increment destination	dst +1 → dst	*	*	*	*
INCD(.B)†	dst	Double-increment destination	dst+2 → dst	*	*	*	*
INV(.B)†	dst	Invert destination	.not.dst → dst	*	*	*	*
JC/JHS	label	Jump if C set/Jump if higher or same		–	–	–	–
JEQ/JZ	label	Jump if equal/Jump if Z set		–	–	–	–
JGE	label	Jump if greater or equal		–	–	–	–
JL	label	Jump if less		–	–	–	–
JMP	label	Jump	PC + 2 x offset → PC	–	–	–	–
JN	label	Jump if N set		–	–	–	–
JNC/JLO	label	Jump if C not set/Jump if lower		–	–	–	–
JNE/JNZ	label	Jump if not equal/Jump if Z not set		–	–	–	–
MOV(.B)	src,dst	Move source to destination	src → dst	–	–	–	–
NOP†		No operation		–	–	–	–
POP(.B)†	dst	Pop item from stack to destination	@SP → dst, SP+2 → SP	–	–	–	–
PUSH(.B)	src	Push source onto stack	SP – 2 → SP, src → @SP	–	–	–	–
RET†		Return from subroutine	@SP → PC, SP + 2 → SP	–	–	–	–
RETI		Return from interrupt		*	*	*	*
RLA(.B)†	dst	Rotate left arithmetically		*	*	*	*
RLC(.B)†	dst	Rotate left through C		*	*	*	*
RRA(.B)	dst	Rotate right arithmetically		0	*	*	*
RRC(.B)	dst	Rotate right through C		*	*	*	*
SBC(.B)†	dst	Subtract not(C) from destination	dst + 0FFFFh + C → dst	*	*	*	*
SETC†		Set C	1 → C	–	–	–	1
SETN†		Set N	1 → N	–	1	–	–
SETZ†		Set Z	1 → C	–	–	1	–
SUB(.B)	src,dst	Subtract source from destination	dst + .not.src + 1 → dst	*	*	*	*
SUBC(.B)	src,dst	Subtract source and not(C) from dst.	dst + .not.src + C → dst	*	*	*	*
SWPB	dst	Swap bytes		–	–	–	–
SXT	dst	Extend sign		0	*	*	*
TST(.B)†	dst	Test destination	dst + 0FFFFh + 1	0	*	*	1
XOR(.B)	src,dst	Exclusive OR source and destination	src .xor. dst → dst	*	*	*	*

† Emulated Instruction