

REGISTER 5-2: STATUS REGISTER

U-0	U-0	U-0	R/W-x	R/W-x	R/W-x	R/W-x	R/W-x	
—	—	—	N	OV	Z	DC	C	
bit 7								bit 0

bit 7-5 **Unimplemented: Read as '0'**

bit 4 **N: Negative bit**

This bit is used for signed arithmetic (2's complement). It indicates whether the result was negative (ALU MSB = 1).

- 1 = Result was negative
- 0 = Result was positive

bit 3 **OV: Overflow bit**

This bit is used for signed arithmetic (2's complement). It indicates an overflow of the 7-bit magnitude which causes the sign bit (bit 7 of the result) to change state.

- 1 = Overflow occurred for signed arithmetic (in this arithmetic operation)
- 0 = No overflow occurred

bit 2 **Z: Zero bit**

- 1 = The result of an arithmetic or logic operation is zero
- 0 = The result of an arithmetic or logic operation is not zero

bit 1 **DC: Digit Carry/borrow bit**

For *ADDWF*, *ADDLW*, *SUBLW* and *SUBWF* instructions:

- 1 = A carry-out from the 4th low-order bit of the result occurred
- 0 = No carry-out from the 4th low-order bit of the result

Note: For borrow, the polarity is reversed. A subtraction is executed by adding the 2's complement of the second operand. For rotate (*RRF*, *RLF*) instructions, this bit is loaded with either bit 4 or bit 3 of the source register.

bit 0 **C: Carry/borrow bit**

For *ADDWF*, *ADDLW*, *SUBLW* and *SUBWF* instructions:

- 1 = A carry-out from the Most Significant bit of the result occurred
- 0 = No carry-out from the Most Significant bit of the result occurred

Note: For borrow, the polarity is reversed. A subtraction is executed by adding the 2's complement of the second operand. For rotate (*RRF*, *RLF*) instructions, this bit is loaded with either the high or low-order bit of the source register.

Legend:			
R = Readable bit	W = Writable bit	U = Unimplemented bit, read as '0'	
-n = Value at POR	'1' = Bit is set	'0' = Bit is cleared	x = Bit is unknown