SUBWFB

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SUBWFB		Subtract W from f with Borrow		
Synt	tax:	[label]	SUBWFB f[,d [,a]
Operands:		$0 \le f \le 255$ $d \in [0,1]$ $a \in [0,1]$		
Operation:		$(f) - (W) - (\overline{C}) \rightarrow dest$		
Status Affected:		N, OV, C, DC, Z		
Encoding:		0101	0101 10da ffff ffff	
Description:		Subtract W and the carry flag (borrow) from register 'f' (2's complement method). If 'd' is 0, the result is stored in W. If 'd' is 1, the result is stored back in register 'f' (default). If 'a' is 0, the Access Bank will be selected, overriding the BSR value. If 'a' is 1, then the bank will be selected as per the BSR value (default).		
Words:		1		
Cycles: 1				
Q C	Cycle Activity			
	Q1	Q2	Q3	Q4
	Decode	Read register 'f'	Process Data	Write to destination
Example 1:		SUBWFB	REG, 1, 0	
Before Instruc			, ,	
	Before Instru	ıction	, ,	
	Before Instru REG	= 0x19	(0001 100	-
	REG W	= 0x19 = 0x0D		-
	REG	= 0x19 = 0x0D = 1	(0001 100	-
	REG W C	= 0x19 = 0x0D = 1	(0001 100	1)
	REG W C After Instruct REG W	= 0x19 = 0x0D = 1 ion = 0x0C = 0x0D	(0001 100 (0000 110	1)
	REG W C After Instruct REG W C	= 0x19 = 0x0D = 1 ion = 0x0C = 0x0D = 1 = 0	(0001 100 (0000 110 (0000 101 (0000 110	1)
,	REG W C After Instruct REG W C Z N	= 0x19 = 0x0D = 1 ion = 0x0C = 0x0D = 1 = 0 = 0	(0001 100 (0000 110 (0000 101 (0000 110 ; result is po	1)
Exar	REG W C After Instruct REG W C Z N mple 2:	= 0x19 = 0x0D = 1 ion = 0x0C = 0x0D = 1 = 0 = 0	(0001 100 (0000 110 (0000 101 (0000 110	1)
Exar	REG W C After Instruct REG W C Z N nple 2: Before Instru	= 0x19 = 0x0D = 1 ion = 0x0C = 0x0D = 1 = 0 = 0 subwfb	(0001 100 (0000 110 (0000 101 (0000 110 ; result is po	1) 1) 1) sitive
Exar	REG W C After Instruct REG W C Z N mple 2: Before Instru	= 0x19 = 0x0D = 1 ion = 0x0C = 0x0D = 1 = 0 = 0 SUBWFB	(0001 100 (0000 101 (0000 110 ; result is po	1) 1) 1) sitive
Exar	REG W C After Instruct REG W C Z N nple 2: Before Instru	= 0x19 = 0x0D = 1 ion = 0x0C = 0x0D = 1 = 0 = 0 subwfb	(0001 100 (0000 110 (0000 101 (0000 110 ; result is po	1) 1) 1) sitive
<u>Exar</u>	REG W C After Instruct REG W C Z N nple 2: Before Instru REG W C After Instruct	= 0x19 = 0x0D = 1 ion = 0x0C = 0x0D = 1 = 0 = 0 SUBWFB action = 0x1B = 0x1A = 0	(0001 100 (0000 110 (0000 110 ; result is po REG, 0, 0 (0001 101 (0001 101	1) 1) 1) sitive 1) 0)
<u>Exar</u>	REG W C After Instruct REG W C Z N nple 2: Before Instru REG W C After Instruct	= 0x19 = 0x0D = 1 ion = 0x0C = 0x0D = 1 = 0 = 0 SUBWFB action = 0x1B = 0x1A = 0 ion = 0x1B	(0001 100 (0000 101 (0000 110 ; result is po	1) 1) 1) sitive 1) 0)
<u>Exar</u>	REG W C After Instruct REG W C Z N mple 2: Before Instru REG W C After Instruct REG W C	= 0x19 = 0x0D = 1 ion = 0x0C = 0x0D = 1 = 0 = 0 SUBWFB action = 0x1B = 0x1A = 0 ion = 0x1B = 0x00	(0001 100 (0000 110 (0000 110 ; result is po REG, 0, 0 (0001 101 (0001 101	1) 1) 1) sitive 1) 0)
<u>Exar</u>	REG W C After Instruct REG W C Z N mple 2: Before Instru REG W C After Instruct REG W C	= 0x19 = 0x0D = 1 ion = 0x0C = 0x0D = 1 = 0 SUBWFB action = 0x1B = 0x1A = 0 ion = 0x1B = 0x00 = 1 = 1	(0001 100 (0000 110 (0000 110 ; result is po REG, 0, 0 (0001 101 (0001 101	1) 1) 1) sitive 1) 0)
<u>Exar</u>	REG W C After Instruct REG W C Z N nple 2: Before Instru REG W C After Instruct	= 0x19 = 0x0D = 1 ion = 0x0C = 0x0D = 1 = 0 = 0 SUBWFB action = 0x1B = 0x1A = 0 ion = 0x1B = 0x00 = 1	(0001 100 (0000 110 (0000 101 (0000 110 ; result is po REG, 0, 0 (0001 101 (0001 101	1) 1) 1) sitive 1) 0)
Exar Exar	REG W C After Instruct REG W C Z N nple 2: Before Instruct REG W C After Instruct REG W C Z N	= 0x19 = 0x0D = 1 ion = 0x0C = 0x0D = 1 = 0 = 0 SUBWFB action = 0x1B = 0x1A = 0 ion = 0x1B = 0x00 = 1 = 0 SUBWFB	(0001 100 (0000 110 (0000 110 ; result is po REG, 0, 0 (0001 101 (0001 101 ; result is ze	1) 1) 1) sitive 1) 0)
Exar Exar	REG W C After Instruct REG W C Z N mple 2: Before Instruct REG W C After Instruct REG W C Z N	= 0x19 = 0x0D = 1 ion = 0x0C = 0x0D = 1 = 0 = 0 SUBWFB action = 0x1B = 0x1A = 0 ion = 0x1B = 0x00 = 1 = 0 SUBWFB	(0001 100 (0000 110 (0000 110 ; result is po REG, 0, 0 (0001 101 (0001 101 ; result is ze	1) 1) 1) 1) sitive 1) 0) 1)

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