DECFSZ

< Previous instruction: DECF | Instruction index | Next instruction: GOTO >

DECFSZ   Decrement f, skip if 0

Syntax:	[*label*] DECFSZ f [,d [,a]]
Operands:	$0 \le f \le 255$ $d \in [0,1]$ $a \in [0,1]$
Operation:	$(f) - 1 \rightarrow dest$, skip if result = 0
Status Affected:	None

Encoding:

0010	11da	ffff	ffff

Description:

The contents of register 'f' are decremented. If 'd' is 0, the result is placed in W. If 'd' is 1, the result is placed back in register 'f' (default). If the result is 0, the next instruction, which is already fetched, is discarded, and a NOP is executed instead, making it a two-cycle instruction. If 'a' is 0, the Access Bank will be selected, overriding the BSR value. If 'a' = 1, then the bank will be selected as per the BSR value (default).

Words:	1
Cycles:	1(2)

Note: 3 cycles if skip and followed by a 2-word instruction.

Q Cycle Activity:

Q1	Q2	Q3	Q4
Decode	Read register 'f'	Process Data	Write to destination

If skip:

Q1	Q2	Q3	Q4
No operation	No operation	No operation	No operation

If skip and followed by 2-word instruction:

Q1	Q2	Q3	Q4
No operation	No operation	No operation	No operation
No operation	No operation	No operation	No operation

Example:

```
          HERE      DECFSZ    CNT, 1, 1
                    GOTO      LOOP
          CONTINUE
```

Before Instruction

PC   =   Address (HERE)

After Instruction

```
    CNT    =    CNT - 1
    If CNT =    0;
        PC =    Address (CONTINUE)
    If CNT ≠    0;
        PC =    Address (HERE+2)
```

< Previous instruction: DECF | Instruction index | Next instruction: GOTO >

< Previous instruction: DECF | Instruction index | Next instruction: GOTO >