

CPFSEQ Compare f with W, skip if f = W

Syntax: [*label*] CPFSEQ f [,a]

Operands: $0 \leq f \leq 255$
 $a \in [0,1]$

Operation: (f) – (W),
 skip if (f) = (W)
 (unsigned comparison)

Status Affected: None

| | | | | |
|-----------|------|------|------|------|
| Encoding: | 0110 | 001a | ffff | ffff |
|-----------|------|------|------|------|

Description: Compares the contents of data memory location 'f' to the contents of W by performing an unsigned subtraction.
 If 'f' = W, then the fetched instruction is discarded and a NOP is executed instead, making this 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 | No operation |

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 CPFSEQ REG, 0
 NEQUAL :
 EQUAL :

Before Instruction

PC Address = HERE
 W = ?
 REG = ?

After Instruction

If REG = W;
 PC = Address (EQUAL)
 If REG ≠ W;
 PC = Address (NEQUAL)

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