CPFSLT

Compare f with W, skip if f < W

Syntax:

[label] CPFSLT f[,a]

Operands:

 $0 \le f \le 255$

 $a \in [0,1]$

Operation:

(f) - (W),

skip if (f) < (W)

(unsigned comparison)

Status Affected:

None

Encoding:

Description:

0110 000a ffff

Compares the contents of data

memory location 'f' to the contents of W by performing an unsigned

ffff

subtraction.

If the contents of 'f' are less than the contents of 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. If 'a' is 1, the BSR will not be overridden

(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 | Process | No |
| | register 'f' | Data | operation |

If skip:

| Q1 | Q2 | Q3 | Q4 |
|-----------|-----------|-----------|-----------|
| No | No | No | No |
| operation | operation | operation | 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: CPFSLT REG, 1 HERE

> NLESS LESS

Before Instruction

PC W Address (HERE)

=

After Instruction

If REG W; <

PC Address (LESS) =

If REG W; ≥

PC Address (NLESS)

< Previous instruction: <u>CPFSGT</u> | Instruction <u>index</u> | Next instruction: <u>DAW</u> >