

### **BR (0000) Instruction Cycle**

|      |    |    |    |    |    |   |           |   |   |   |   |   |   |   |   |
|------|----|----|----|----|----|---|-----------|---|---|---|---|---|---|---|---|
| 15   | 14 | 13 | 12 | 11 | 10 | 9 | 8         | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| 0000 |    |    |    | n  | z  | p | PCoffset9 |   |   |   |   |   |   |   |   |

#### Instruction Fetch

**MAR  $\leftarrow$  PC**

**PC  $\leftarrow$  PC + 1**

**MDR  $\leftarrow$  memory[MAR]**

**IR  $\leftarrow$  MDR**

#### Decode

**IR[15:12] decoded**

#### Evaluate Address

n/a

#### Operand Fetch

n/a

#### Execute

**PC  $\leftarrow$  (IR[11] and N) or (IR[10] and Z) or (IR[9] and P) ?**

**PC + sign\_ext<sub>16</sub>( IR[8:0] ) : PC**

#### Store Result

n/a