

k01 datasheet

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Introduction

Features

WIP

Zero Page	Stack	Standard RAM	Interrupt Vector	Restart Vector
0000 - 00ff	0100 - 01ff	0200 - fffb	fffc - fffd	fffe - ffff

Links

OpCode Matrix

	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
0	stp imp	lda imp	lda imm	lda dir	lda da	lda db	lda dc	lda in	lda zp	lda zpa	lda zpb	lda zpc	sta imp		sta dir	sta da
1		sta db	sta dc	sta in	sta zp	sta zpa	sta zpb	sta zpc								
2																
3																
4																
5																
6																
7																
8																
9																
a															nop imp	
b																
c																
d																
e																
f																

Instruction Set

Instruction Abbreviation - Full Name

Description
Calculation

c	Carry flag	Changes/Calculation
z	Zero flag	Changes/Calculation
n	Negative flag	Changes/Calculation
v	oVerflow flag	Changes/Calculation
i	Interrupt disable flag	Changes/Calculation
b	Break flag	Changes/Calculation
p	Parity flag	Changes/Calculation
a	Adjust flag	Changes/Calculation

Addressing Mode	OpCode	Bytes	Cycles
Mode	Hex Value	#	#
...	...	...	...

LDA - Load Accumulator

Puts value into the accumulator

$A, Z, N, P = M$

c	Carry flag	No change
z	Zero flag	$T == 0$
n	Negative flag	$T \& 0b10000000 > 0$
v	oVerflow flag	No change
i	Interrupt disable flag	No change
b	Break flag	No change
p	Parity flag	$T[0] \wedge T[1] \wedge T[2] \wedge T[3] \dots$
a	Adjust flag	No change

Addressing Mode	OpCode	Bytes	Cycles
Implied	\$01	1	
Immediate	\$02	2	2
Direct	\$03	3	5
Direct,A	\$04	3	
Direct,B	\$05	3	
Direct,C	\$06	3	
Indirect	\$07	3	
Zero Page	\$08	2	
Zero Page,A	\$09	2	
Zero Page,B	\$0a	2	
Zero Page,C	\$0b	2	

STA - STore Accumulator

Puts value of Accumulator in memory

$$M = A$$

c	Carry flag	No change
z	Zero flag	No change
n	Negative flag	No change
v	oVerflow flag	No change
i	Interrupt disable flag	No change
b	Break flag	No change
p	Parity flag	No change
a	Adjust flag	No change

Addressing Mode	OpCode	Bytes	Cycles
Implied		1	
Direct		3	
Direct,A		3	
Direct,B		3	
Direct,C		3	
Indirect		3	
Zero Page		2	
Zero Page,A		2	
Zero Page,B		2	
Zero Page,C		2	

NOP - No OPeration

Does nothing

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c	Carry flag	No change
z	Zero flag	No change
n	Negative flag	No change
v	oVerflow flag	No change
i	Interrupt disable flag	No change
b	Break flag	No change
p	Parity flag	No change
a	Adjust flag	No change

Addressing Mode	OpCode	Bytes	Cycles
Implied	ea	1	

STP - SToP

Halts CPU execution

A,Z,N,P = T

c	Carry flag	No change
z	Zero flag	No change
n	Negative flag	No change
v	oVerflow flag	No change
i	Interrupt disable flag	No change
b	Break flag	No change
p	Parity flag	No change
a	Adjust flag	No change

Addressing Mode	OpCode	Bytes	Cycles
Implied		1	