

HT51469 MCU RFID decode chip

HT51469 MCU is a RFID decode chip, used for reading HT4169 card. When HT51469 MCU has read data from HT4169 card, then it will output with the Wiegand 26、Wiegand 34、RS232 or ABA format through DATA0 and DATA1 pin.

一、Product spec :

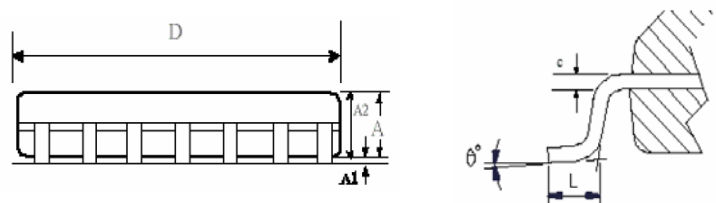
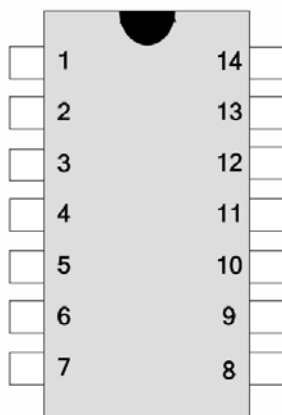
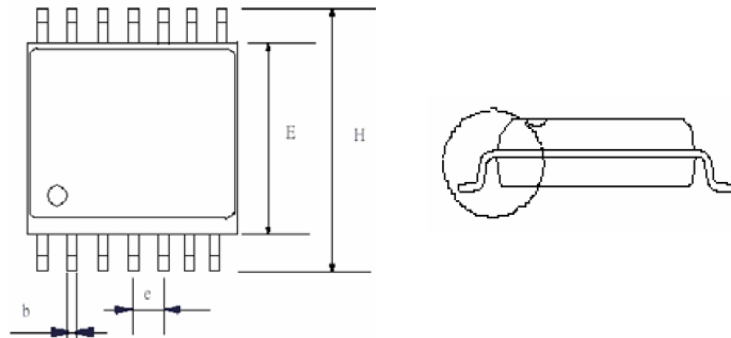
Type	HT51469 MCU
Output format	Wiegand 26、Wiegand 34、RS232、ABA
Size	8.75 (Length)×6.20(Width)×1.75(Thickness) m/m

二、Technology condition :

Operation voltage	2.1V ~ 5.5V
Operation frequency	13.56MHz
Input voltage	V _{ss} -0.3V ~ V _{dd} +0.5V
Output voltage	V _{ss} -0.3V ~ V _{dd} +0.5V
Operation temperature	- 40℃ ~ + 85℃
Storage temperature	- 65℃ ~ + 150℃
Storage humidity	5 ~ 95% RH

三、Dimension of chip :

Symbol	Min	Normal	Max
A	1.350		1.750
A1	0.100		0.250
b	0.330		0.510
c	0.190		0.250
E	3.800		4.000
H	5.800		6.200
D	8.550		8.750
L	0.600		1.270
e	1.27(TYP)		
θ'	0		8

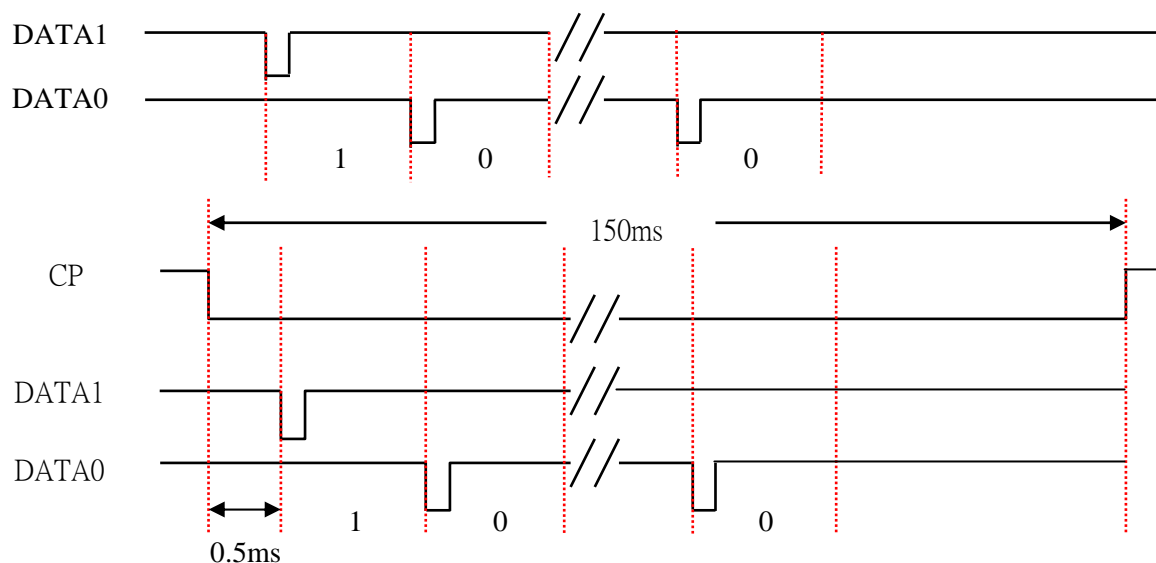


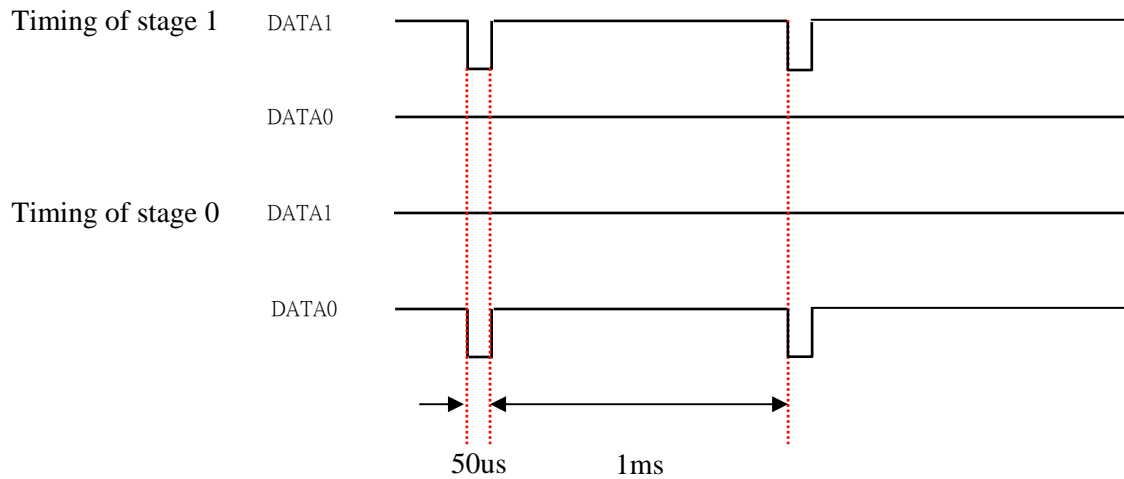
四、Pin assignment and electronic parameter :

PIN	NAME	I/O	SYMBLE	MIN	TYP	MAX	DESCRIPTION
1	J2	I	Vi-H Vi-L	Vcc-0.2V	Vcc GND	Vcc+0.2V Vss+0.2V	NORMAL Lo:Wiegand 26/RS232 HI:Wiegand 34/ABA
2	J1	I	Vi-H Vi-L	Vcc-0.2V	Vcc GND	Vcc+0.2V Vss+0.2V	NORMAL Lo:Buzzer HI:CP
3	NC						
4	/Reset						External pull-high reset pin
5	Vss		GND				Ground
6	J3	I	Vi-H Vi-L	Vcc-0.2V	Vcc GND	Vcc+0.2V Vss+0.2V	NORMAL Lo:Not Continuous HI:Continuous
7	Data In	I	Vi-H Vi-L	Vcc-0.2V	Vcc GND	Vcc+0.2V Vss+0.2V	Digital data input
8	Data0	O	Vo-H Vo-L	Vcc-0.2V -	Vcc GND	Vcc+0.2V Vss+0.2V	Digital data output
9	Data1	O	Vo-H Vo-L	Vcc-0.2V -	Vcc GND	Vcc+0.2V Vss+0.2V	Digital data output
10	Vdd		Vcc	2.1V	5V	5.5V	Vcc
11	OSCO						Clock output of crystal / resonator oscillator
12	OSCI						Clock input of crystal / resonator oscillator
13	BEEP/LED CP	O					NORMAL=Low,ACTIVE=2.7KHZ NORMAL=Vcc,ACTIVE= Low Pulse 150ms
14	Select	I	Vi-H Vi-L	Vcc-0.2V	Vcc GND	Vcc+0.2V Vss+0.2V	HI:ASCII or ABA Low:Wiegand26 or Wiegand34

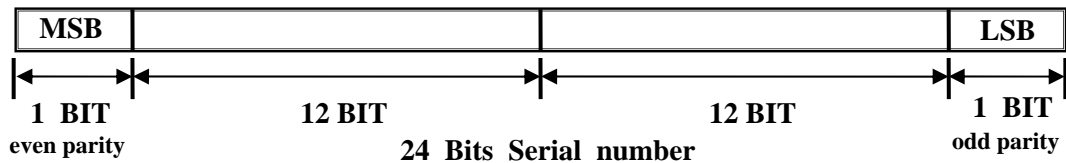
五、Wiegand code

1. Timing sequence



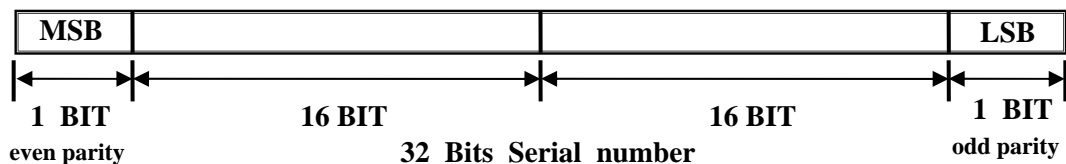


2. Format of data output



※ MSB will be send first ◦

※ MSB's 12 Bits is base on even parity , LSB's 12Bits is base on odd parity ◦



※ MSB will be send first ◦

※ MSB's 16 Bits is base on even parity , LSB's 16Bits is base on odd parity ◦

六、RS232 (ASCII)

1.Format of data output

a.9600bps , N , 8 , 2 ◦

b.Data1 : TX not anti-mutually output ◦

c.Data0 : TX anti-mutually output ◦

d.CHECKSUM : 10 bytes data of card all do XOR calculation ◦

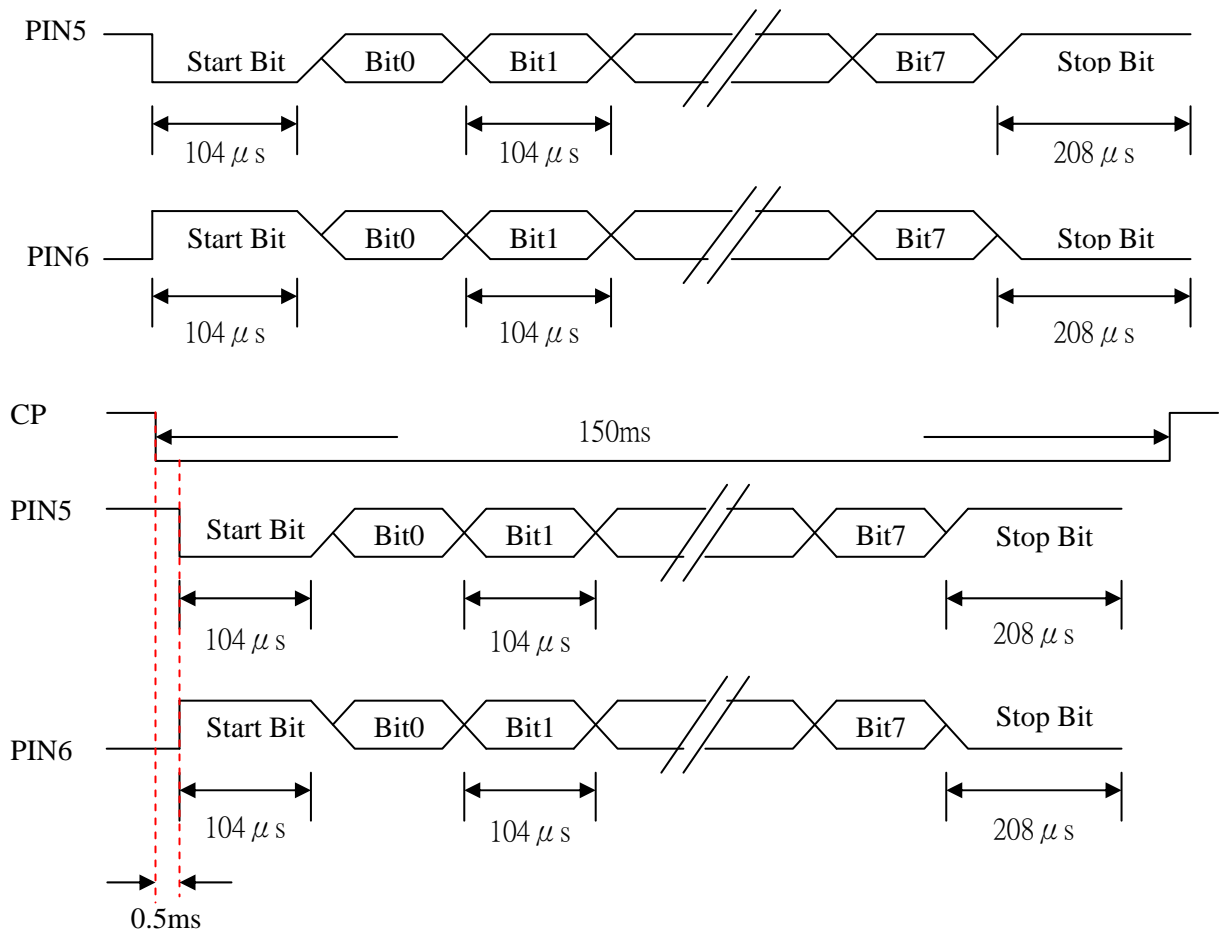
02	10 ASCII Data Characters	Checksum	03
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For example : The number of card is 63C2076BEC ◦

Output value : 36H 、 33H 、 43H 、 32H 、 30H 、 37H 、 36H 、 42H 、 45H 、 43H ◦

Checksum : (63H) XOR (C2H) XOR (07H) XOR (6BH) XOR (ECH) = 21H ◦

2. Timing sequence



七、ABA TRACK2

1.Format of data output

10Leading Zeros	SS	Data (10Ascii Char)	ES	LCR	5Ending Zeros
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- a.SS is the Start Character of 11010 ◦
- b.ES is the end Character of 11111 ◦
- c.LCR is the Longitudinal Redundancy Check ◦

For example : The number of card is 0000507369 ◦

ABA Data	B0	B1	B2	B3	P (odd parity)
Start Character	1	1	0	1	0
First Character	0	0	0	0	1
Second Character	0	0	0	0	1
Third Character	0	0	0	0	1
Fourth Character	0	0	0	0	1
Fifth Character	1	0	1	0	1
Sixth Character	0	0	0	0	1
Seventh Character	1	1	1	0	0
Eighth Character	1	1	0	0	1
Ninth Character	0	1	1	0	1
Tenth Character	1	0	0	1	1
End Character	1	1	1	1	1
Longitudinal Redundancy Check	0	1	0	1	1

2. Timing sequence

