

HT4169 Transmission IC for RFID read only

Summary

HT4169 is the RFID read transmission circuit that is formed by CMOS. The electronic power is provided by the electronic coil of HT4169's 2 pins, and the operation pulse is provided through the same path. HT4169's application is to adjust radio frequency to make 64 bits data loading on RF. This is the reason that HT4169 can transfer data by RFID.

Outside circuit

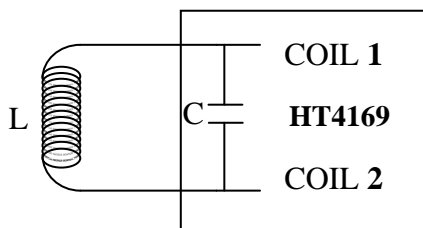
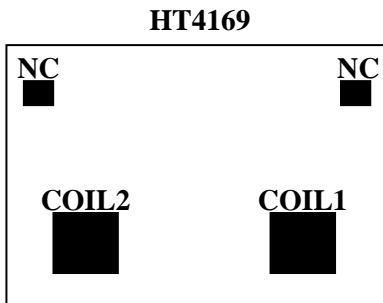


Fig.(一)

IC capacitor 17pF in HT4169

HT4169's pin Assignment



COIL1 / CLOCK INPUT
COIL2 / DATA TRANSMISSION
PAD size 106um*106um
Chip size 658um*391um
Fig.(二)

Electronic condition

Parameter	Min	Typical	Max	Unit
operation temperature	-40		+85	°C
operation voltage	3.5	5		V
operation frequency		13.56		MHz
storage temperature	-55		+200	°C
ESD capability		2000		V

Table (一)

Code Format

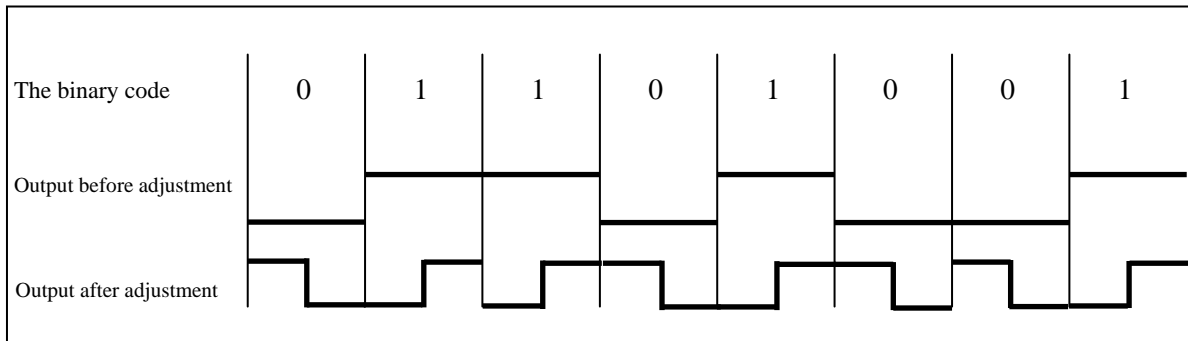


Fig.(三)

TIMING

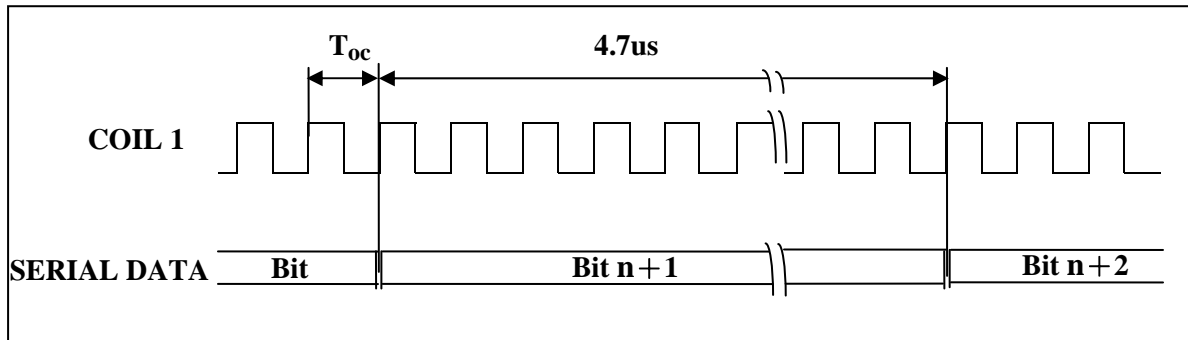


Fig.(四)

IC BLOCK

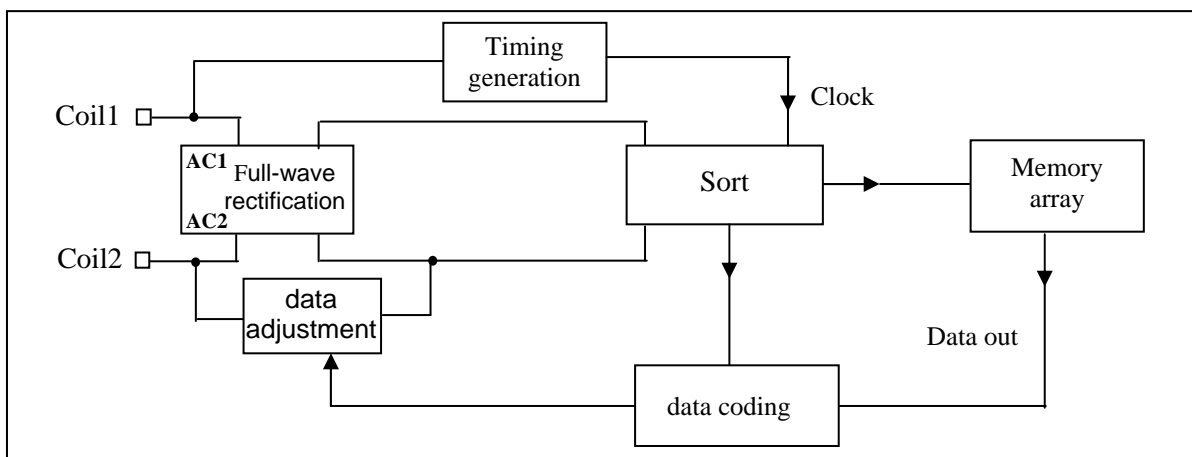


Fig.(五)

MEMORY ARRAY

16 bits start code	40 bits serial number	8 bits Cyclical Redundancy Check
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Table (二)

Cyclical Redundancy Check (CRC)

CRC = Cooperate with the need of the customer.

CRC Assembly Language Procedure

DO_CRC:	PUSH ACC	;save the accumulator
	PUSH B	;save the B register
	PUSH ACC	;save bits to be shifted
	MOV B, #8	;set shift=8 bits
CRC_LOOP:	XRL A, CRC	;calculate CRC
	RRC A	;move it to the carry
	MOV A, CRC	;get the last CRC value
	JNC ZERO	;skip if data=0
	XRL A, #??H	;update the CRC value
ZERO:	RRC A	;position the new CRC
	MOV CRC, A	;store the new CRC
	POP ACC	;get the remaining bits
	RR A	;position the next bit
	PUSH ACC	;save the remaining bits
	DJNZ	;repeat for 8 bits
	B, CRC_LOOP	;clean up the stack
	POP ACC	;restore the B register
	POP B	;restore the
	POP ACC	accumulator
	RET	

Table (三)