



Snowdragon Industrial Co.,Ltd

DATA SHEET

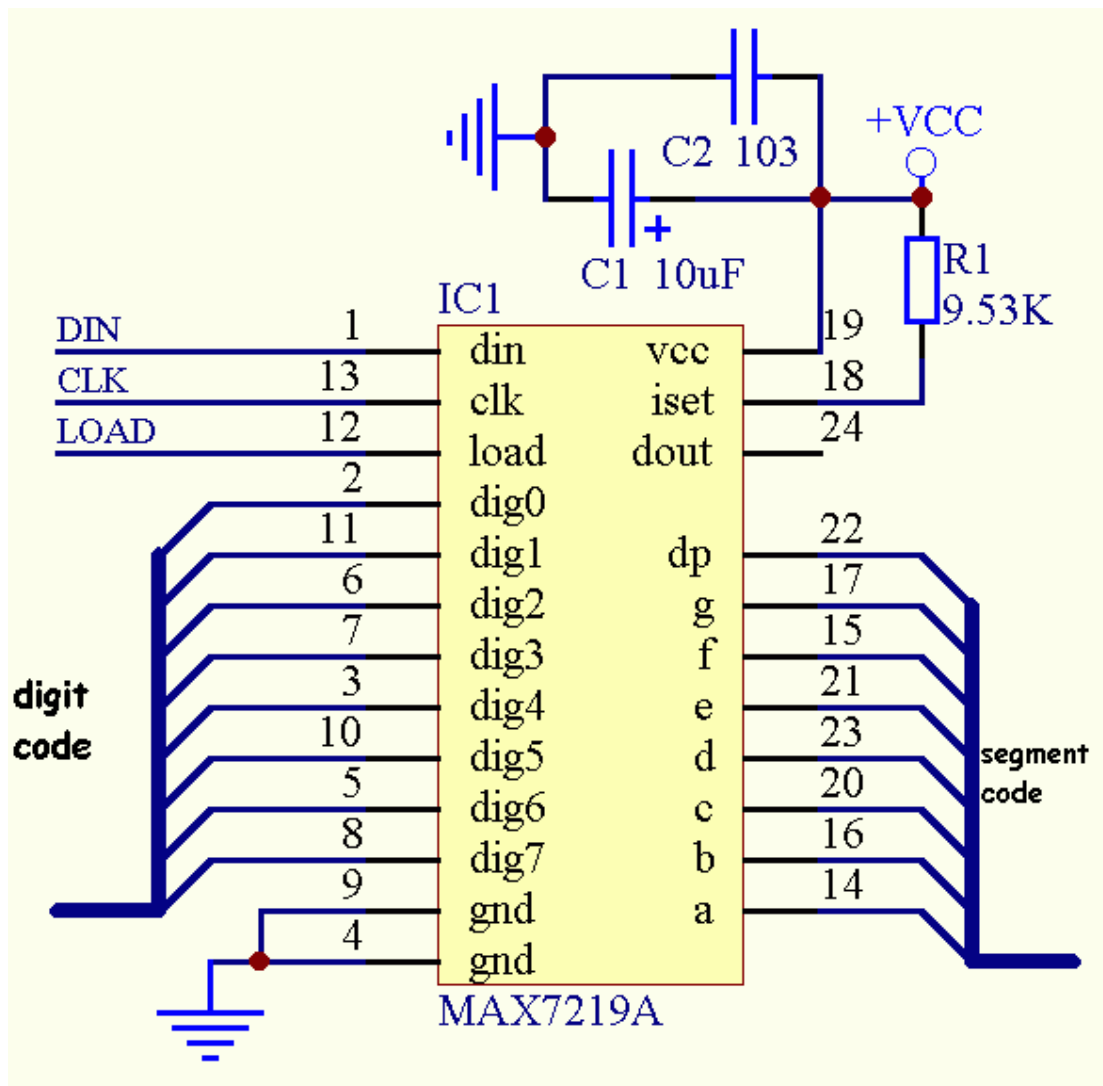
Led 7 segment display specifications

Maximum Absolute Parameters Ta=25°C

Parameters	Red	Highbright Red	Yellowgreen	Yellow	Blue	unit
Reverse voltage Vr	5	5	5	5	5	V
Forward voltage If	20	20	20	20	20	mA
Peak current Ipeak	150	150	150	150	150	mA
Power consumption Pt	120	105	105	105	200	mW
Operating temperature Ta	-40 to 80°C					
Storage temperature Tsta	-40 to 85°C					

Photoelectric Parameters Ta=25°C

Emitting color	Wavelength		Forward voltage drop		Reverse current	light intensity
	nm		IF=20mA (v)		VR=5V (uA)	IF=20mA (ucd)
	λ P	Δ λ	TYP	MAX	MAX	TYP
Red	660	90	2.25	2.5	20	500
High bright red	645	20	1.8	2.0	20	3500
Yellow green	570	30	2.2	2.5	20	2500
Yellow	585	35	2.1	2.4	20	2000
Blue	470	40	3.3	4.0	20	2000



Special digital display circuit 8279& MAX7219 are Commonly used but very few people use the the former because in recent years this kind of production stopped; more and more people use the latter one because it is easy-to-use, flexible, simple to connect, also it does not occupy data memory space .

MAX7219 is a eight serial led digital display in common cathode with dynamic scan driver circuit, the peak current paragraph can be up to 40mA, the maximum scan rate for the serial is 10MHz, a typical scan rate is 1300Hz, only three single-chip with I / O port can complete eight digit LED displays control display & drive, The external circuit only needs one resistance to set the peak current , at the same time the display brightness can be set by the software; it also can be cascaded, if more than eight digits led display 's control display needs completing .It is worth mentioning that, when it is shut down ,not only single-chip can transmit data and modify its control pattern, but also the chip's power consumption is only 150uA. The circuit is very simple, the control is very convenient .

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The chart below is a typical connection method of MAX7219:

The following is MAX7219's C51 source procedures :

```
#include <reg52.h>
#include <stdio.h>
typedef unsigned char uchar;
sbit DIN=P1^0;
sbit CLK=P1^1;
sbit LOAD=P1^2;

void send(uchar add,uchar dat) //sending 16 bytes function
{ uchar ADS,i,j;
LOAD=0;
i=0;
while(i<16)
{
    if(i<8)
        {ADS=add;}
    else {ADS=dat;}
        for(j=8;j>=1;j--)
            {

                DIN=ADS&0x80;
                ADS=ADS<<1;
                CLK=1;
                CLK=0;
            }
        i=i+8;
    }
LOAD=1;
}
main()
{
    send(0x0c,0x01); //Initialization MAX7219
```

```
send(0x0b,0x07);
send(0x0a,0xf5);
send(0x09,0xff);
while(1)
{
send(0x01,0x81); // display 1-8 & decimal point on eight pieces of display
send(0x02,0x82);
send(0x03,0x83);
send(0x04,0x84);
send(0x05,0x85);
send(0x06,0x86);
send(0x07,0x86);
send(0x08,0x88);
}
}
```

