FM02 -039XGA

应用手册

目录

1 应用电路
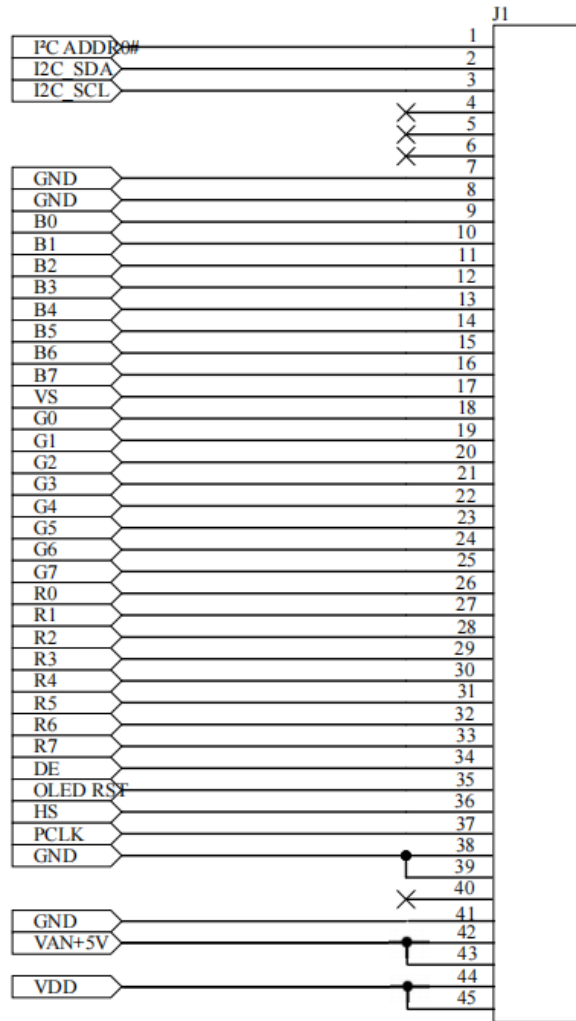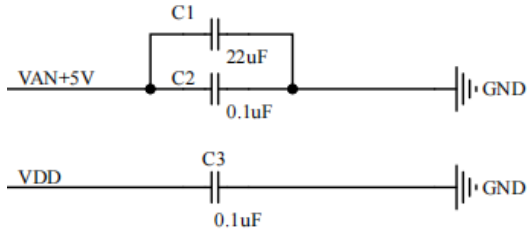
连接器金手指设计参考 MOLEX 503566-4502

2 初始化代码

ADDR0 接 VDD 时：
0.39 显示屏 I2C 地址：0x1E
EEPROM I2C 地址：0XA4

ADDR0 接 GND 时：
0.39 显示屏 I2C 地址：0x1C
EEPROM I2C 地址：0XA0

亮度调节寄存器，共 16 位数据（分高 8 位与低 8 位），可调范围 0x0000~0xffff
```
    oled039_WriteData(0x10，0x07,0x01) // data gain adjust enable
    oled039_WriteData(0x10，0x08,0xff) // 亮度调节高 8 位
    oled039_WriteData(0x10，0x09,0xff) // 亮度调节低 8 位
```

```
void oled039_init(void)
{
    oled039_WriteData(0x00，0x60,0x0b) //电流或时钟控制
    oled039_WriteData(0x00，0x3c,0x80) // system set
    oled039_WriteData(0x10，0x68,0x81) // system set
    oled039_WriteData(0x10，0x69,0x01) // system set
    oled039_WriteData(0x10，0x85,0x02) // system set
    oled039_WriteData(0x10，0x87,0x02) // system set
    oled039_WriteData(0x10，0x86,0x01) // system set
    oled039_WriteData(0x10，0x88,0x01) // system set
    oled039_WriteData(0x10，0x92,0x40) // system set
    oled039_WriteData(0x20，0x6f,0x00) // luminance_sel
    oled039_WriteData(0x20，0x30,0x01) // system set
    oled039_WriteData(0x20，0x53,0x00) // h_channel_start
    oled039_WriteData(0x20，0x54,0x81) // h_channel_end
    oled039_WriteData(0x20，0x41,0x08) // h_front_dummy
    oled039_WriteData(0x20，0x42,0x08) // h_back_dummy
    oled039_WriteData(0x20，0xd0,0x11) // system set
    oled039_WriteData(0x20，0xd1,0x01) // system set
    oled039_WriteData(0x20，0xd3,0x00) // system set
    oled039_WriteData(0x20，0x31,0x31) // dgma_en
    oled039_WriteData(0x00，0x12,0x00) // system set
    oled039_WriteData(0x10，0x90,0x00) // system set
    oled039_WriteData(0x20，0x86,0x03) // system set
```

```
    oled039_WriteData(0x20，0x85,0x00) // system set
    oled039_WriteData(0x20，0x07,0x00) // vactive
    oled039_WriteData(0x20，0x08,0x03) // vactive
    oled039_WriteData(0x20，0x28,0x00) // update_vsetting
    oled039_WriteData(0x20，0x28,0x01) // update_vsetting
    oled039_WriteData(0x20，0x00,0x01) // vsetting_en
    oled039_WriteData(0x20，0x5c,0x37) // vgam_top_set_total
    oled039_WriteData(0x00，0x68,0xff) // vcom_vset _0[7:0]
    oled039_WriteData(0x00，0x69,0x00) // vcom_vset _0[9:8]
    oled039_WriteData(0x10，0x00,0x03)  // system set
    oled039_WriteData(0x10, 0x63, 0x80); //系统启动
    oled039_WriteData(0x10, 0x61, 0x80); //系统睡眠
    oled039_WriteData(0x10, 0x62, 0x80);  //系统显示
    oled039_WriteData(0x20, 0x1a, 0x99); //系统启动
    oled039_WriteData(0x20, 0x1b, 0x04); //系统睡眠

    oled039_WriteData (0x20, 0xf0,0x01);
    oled039_WriteData (0x00, 0x55,0x29);
    oled039_WriteData (0x00, 0x11,0xff);
    oled039_WriteData (0x00, 0x26,0x01);
    oled039_WriteData (0x20, 0x1a,0x99);
    oled039_WriteData (0x20, 0x1b,0x04);

    Oled039GammaRead();
}

void Oled039GammaRead(void)            //Gamma 读取
{
  unsigned char gammaTab[128];
  EEPROM_ReadBlock(0,&gammaTab,128); //一次读取 整个 EEPROM 128 字节
  __delay_ms(10);

    oled039_WriteData(0x00, 0x69, gammaTab[0]);          //VCOM 电压

    oled039_WriteData(0x00, 0x68, gammaTab[1]);

    oled039_WriteData(0x21, 0x00, 0x01);

    oled039_WriteData(0x21, 0x01, gammaTab[3]);  // gamma top R

    oled039_WriteData(0x21, 0x06, 0x01);

    oled039_WriteData(0x21, 0x07, gammaTab[5]); //gamma top G

    oled039_WriteData(0x21, 0x0c, 0x01);

    oled039_WriteData(0x21, 0x0d, gammaTab[7]); //gamma top B
```

oled039_WriteData(0x10, 0x18, 0x31);   //选择 17 点 dgma 模式

```
//Gamma R0  41-8
oled039_WriteData(0x40, 0x22, gammaTab[8]);
oled039_WriteData(0x40, 0x23, gammaTab[9]);
oled039_WriteData(0x40, 0x24, gammaTab[10]);
oled039_WriteData(0x40, 0x25, gammaTab[11]);
oled039_WriteData(0x40, 0x26, gammaTab[12]);
oled039_WriteData(0x40, 0x27, gammaTab[13]);
oled039_WriteData(0x40, 0x28, gammaTab[14]);
oled039_WriteData(0x40, 0x29, gammaTab[15]);
oled039_WriteData(0x40, 0x2A, gammaTab[16]);
oled039_WriteData(0x40, 0x2B, gammaTab[17]);
oled039_WriteData(0x40, 0x2C, gammaTab[18]);
oled039_WriteData(0x40, 0x2D, gammaTab[19]);
oled039_WriteData(0x40, 0x2E, gammaTab[20]);
oled039_WriteData(0x40, 0x2F, gammaTab[21]);
oled039_WriteData(0x40, 0x30, gammaTab[22]);
oled039_WriteData(0x40, 0x31, gammaTab[23]);
oled039_WriteData(0x40, 0x32, gammaTab[24]);
oled039_WriteData(0x40, 0x33, gammaTab[25]);
oled039_WriteData(0x40, 0x34, gammaTab[26]);
oled039_WriteData(0x40, 0x35, gammaTab[27]);
oled039_WriteData(0x40, 0x36, gammaTab[28]);
oled039_WriteData(0x40, 0x37, gammaTab[29]);
oled039_WriteData(0x40, 0x38, gammaTab[30]);
oled039_WriteData(0x40, 0x39, gammaTab[31]);
oled039_WriteData(0x40, 0x3A, gammaTab[32]);
oled039_WriteData(0x40, 0x3B, gammaTab[33]);
oled039_WriteData(0x40, 0x3C, gammaTab[34]);
oled039_WriteData(0x40, 0x3D, gammaTab[35]);
oled039_WriteData(0x40, 0x3E, gammaTab[36]);
oled039_WriteData(0x40, 0x3F, gammaTab[37]);
```

```
oled039_WriteData(0x40, 0x40, gammaTab[38]);
oled039_WriteData(0x40, 0x41, gammaTab[39]);
oled039_WriteData(0x40, 0x42, gammaTab[40]);
oled039_WriteData(0x40, 0x43, gammaTab[41]);
//Gamma G0 75-42
oled039_WriteData(0x40, 0x44, gammaTab[42]);
oled039_WriteData(0x40, 0x45, gammaTab[43]);
oled039_WriteData(0x40, 0x46, gammaTab[44]);
oled039_WriteData(0x40, 0x47, gammaTab[45]);
oled039_WriteData(0x40, 0x48, gammaTab[46]);
oled039_WriteData(0x40, 0x49, gammaTab[47]);
oled039_WriteData(0x40, 0x4A, gammaTab[48]);
oled039_WriteData(0x40, 0x4B, gammaTab[49]);
oled039_WriteData(0x40, 0x4C, gammaTab[50]);
oled039_WriteData(0x40, 0x4D, gammaTab[51]);
oled039_WriteData(0x40, 0x4E, gammaTab[52]);
oled039_WriteData(0x40, 0x4F, gammaTab[53]);
oled039_WriteData(0x40, 0x50, gammaTab[54]);
oled039_WriteData(0x40, 0x51, gammaTab[55]);
oled039_WriteData(0x40, 0x52, gammaTab[56]);
oled039_WriteData(0x40, 0x53, gammaTab[57]);
oled039_WriteData(0x40, 0x54, gammaTab[58]);
oled039_WriteData(0x40, 0x55, gammaTab[59]);
oled039_WriteData(0x40, 0x56, gammaTab[60]);
oled039_WriteData(0x40, 0x57, gammaTab[61]);
oled039_WriteData(0x40, 0x58, gammaTab[62]);
oled039_WriteData(0x40, 0x59, gammaTab[63]);
oled039_WriteData(0x40, 0x5A, gammaTab[64]);
oled039_WriteData(0x40, 0x5B, gammaTab[65]);
oled039_WriteData(0x40, 0x5C, gammaTab[66]);
oled039_WriteData(0x40, 0x5D, gammaTab[67]);
oled039_WriteData(0x40, 0x5E, gammaTab[68]);
oled039_WriteData(0x40, 0x5F, gammaTab[69]);
oled039_WriteData(0x40, 0x60, gammaTab[70]);
```

```
oled039_WriteData(0x40, 0x61, gammaTab[71]);
oled039_WriteData(0x40, 0x62, gammaTab[72]);
oled039_WriteData(0x40, 0x63, gammaTab[73]);
oled039_WriteData(0x40, 0x64, gammaTab[74]);
oled039_WriteData(0x40, 0x65, gammaTab[75]);
//Gamma B0  109-76
oled039_WriteData(0x40, 0x66, gammaTab[76]);
oled039_WriteData(0x40, 0x67, gammaTab[77]);
oled039_WriteData(0x40, 0x68, gammaTab[78]);
oled039_WriteData(0x40, 0x69, gammaTab[79]);
oled039_WriteData(0x40, 0x6A, gammaTab[80]);
oled039_WriteData(0x40, 0x6B, gammaTab[81]);
oled039_WriteData(0x40, 0x6C, gammaTab[82]);
oled039_WriteData(0x40, 0x6D, gammaTab[83]);
oled039_WriteData(0x40, 0x6E, gammaTab[84]);
oled039_WriteData(0x40, 0x6F, gammaTab[85]);
oled039_WriteData(0x40, 0x70, gammaTab[86]);
oled039_WriteData(0x40, 0x71, gammaTab[87]);
oled039_WriteData(0x40, 0x72, gammaTab[88]);
oled039_WriteData(0x40, 0x73, gammaTab[89]);
oled039_WriteData(0x40, 0x74, gammaTab[90]);
oled039_WriteData(0x40, 0x75, gammaTab[91]);
oled039_WriteData(0x40, 0x76, gammaTab[92]);
oled039_WriteData(0x40, 0x77, gammaTab[93]);
oled039_WriteData(0x40, 0x78, gammaTab[94]);
oled039_WriteData(0x40, 0x79, gammaTab[95]);
oled039_WriteData(0x40, 0x7A, gammaTab[96]);
oled039_WriteData(0x40, 0x7B, gammaTab[97]);
oled039_WriteData(0x40, 0x7C, gammaTab[98]);
oled039_WriteData(0x40, 0x7D, gammaTab[99]);
oled039_WriteData(0x40, 0x7E, gammaTab[100]);
oled039_WriteData(0x40, 0x7F, gammaTab[101]);
oled039_WriteData(0x40, 0x80, gammaTab[102]);
oled039_WriteData(0x40, 0x81, gammaTab[103]);
```

```
oled039_WriteData(0x40, 0x82, gammaTab[104]);
oled039_WriteData(0x40, 0x83, gammaTab[105]);
oled039_WriteData(0x40, 0x84, gammaTab[106]);
oled039_WriteData(0x40, 0x85, gammaTab[107]);
oled039_WriteData(0x40, 0x86, gammaTab[108]);
oled039_WriteData(0x40, 0x87, gammaTab[109]);



//Gamma 绑点
oled039_WriteData( 0x40, 0x21, gammaTab[110]);
oled039_WriteData( 0x40, 0x1f, gammaTab[111]);
oled039_WriteData( 0x40, 0x1d, gammaTab[112]);
oled039_WriteData( 0x40, 0x1b, gammaTab[113]);
oled039_WriteData( 0x40, 0x19, gammaTab[114]);
oled039_WriteData( 0x40, 0x17, gammaTab[115]);
oled039_WriteData( 0x40, 0x15, gammaTab[116]);
oled039_WriteData( 0x40, 0x13, gammaTab[117]);
oled039_WriteData( 0x40, 0x11, gammaTab[118]);
oled039_WriteData( 0x40, 0x0f, gammaTab[119]);
oled039_WriteData( 0x40, 0x0d, gammaTab[120]);
oled039_WriteData( 0x40, 0x0b, gammaTab[121]);
oled039_WriteData( 0x40, 0x09, gammaTab[122]);
oled039_WriteData( 0x40, 0x07, gammaTab[123]);
oled039_WriteData( 0x40, 0x05, gammaTab[124]);
oled039_WriteData( 0x40, 0x03, gammaTab[125]);
oled039_WriteData( 0x40, 0x01, gammaTab[126]);

oled039_WriteData( 0x10, 0x18, 0x11);          //Gamma 更新

//vgamma bottom
oled039_WriteData( 0x20, 0xe9, gammaTab[127]);
oled039_WriteData( 0x20, 0xeb, gammaTab[127]);
```

```
    oled039_WriteData( 0x20, 0xed, gammaTab[127]);


}
```