

| | | | |
|-----------|---|---------|---|
| | | | |
| NC | | 1,10 | (GND VDD) |
| DAI | + | 2 | DMX512 + |
| REXT | | 3 | REXT GND OUTR/G/BW |
| PORT | | 4 | "1" , 5V "0" |
| SPWM | | 5 | "1" , 5V OUT 3.3KHZ "0" OUT 800HZ |
| VDD | | 7 | 5V |
| ADRI | | 6 | |
| ADRO | | 11 | |
| DAO | | 12 | |
| OUTR/G/BW | | 9,13-15 | LED |
| GND | | 8,16 | |

| | | | | |
|----------|-------|------|--------|----|
| | | | | |
| | | | | |
| SM16511P | SOP16 | 50 / | 4000 / | 13 |

Ta = 25°C

| | | | |
|------------|----------------------|---------------|----|
| | | | |
| | VDD | -0.5——+5.5 | V |
| OUTR/G/B/W | V _{OUT} | 25 | V |
| | V _{IT} | -0.5——VDD+0.5 | V |
| LED | I _{OL1} | 70 | mA |
| | R _{TH(j-a)} | 90 | /W |
| | T _{OPT} | -40——+125 | |
| | T _{STG} | -65——+150 | |
| ESD | V _{ESD} | >2K | V |

Ta = 25°C

| | | | | | | |
|------------------|-------------------|---|-----|------|-----|----|
| | | | | | | |
| | VDD | — | 5 | — | 24 | V |
| LED | F _{PWM} | SPWM 1" VDD=5.0V OUT 120 5V | — | 3.3K | — | HZ |
| | | SPWM 0" VDD=5.0V OUT 120 5V | — | 800 | — | HZ |
| OUTR/G/B/W | I _{OUT} | VDD = 5.0V | 17 | — | 60 | mA |
| V _{OUT} | V _{OUT} | I _{OUT} =17mA | | 0.7 | | V |
| | | I _{OUT} =35mA | | 1.0 | | V |
| REXT | V _{REXT} | VDD=5.0V DAI VDD REXT PWM OUTR/G/B/W DAO | — | 1.20 | — | V |
| DAI | V _{IH} | VDD = 5.0V | 3.3 | — | — | V |
| | V _{IL} | VDD = 5.0V | — | — | 1.7 | V |
| ADRO | I _{OH} | ADRO | -50 | — | -65 | mA |
| | I _{OL} | ADRO | 50 | — | 55 | mA |
| | I _{DD} | VDD = 5.0V ,REXT | — | 3.6 | — | mA |
| OUTR/G/B/W | I _{leak} | VDD = 5.0V, VDS=30V | — | — | 1 | uA |

REXT

OUTR/G/B/W

17mA

17mA-60mA

= + —

REXT

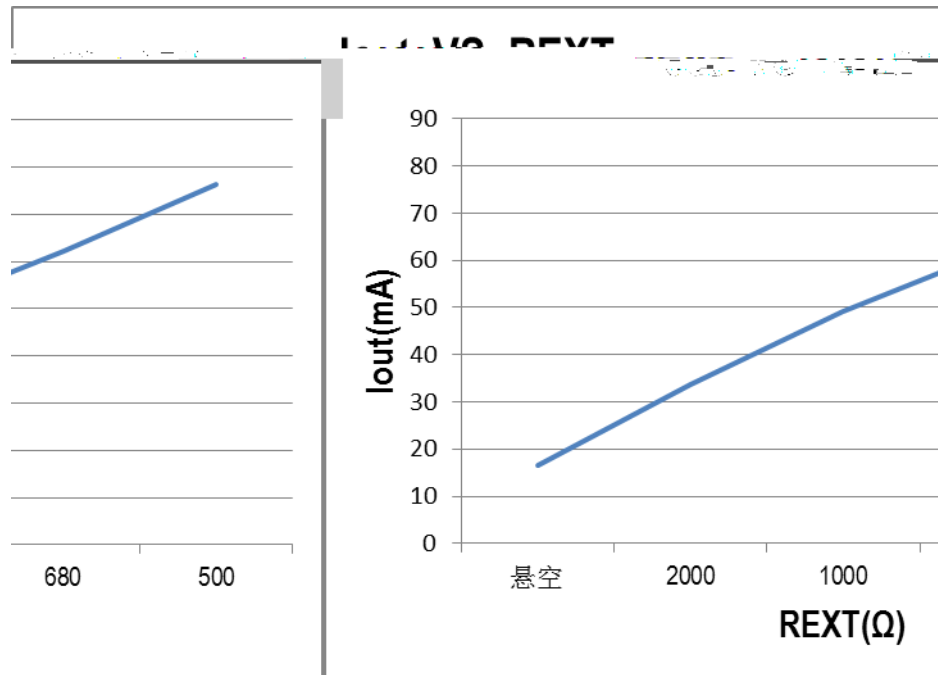
17mA

34mA, REXT

2K

Iout

REXT



1 SM16511P

Iout

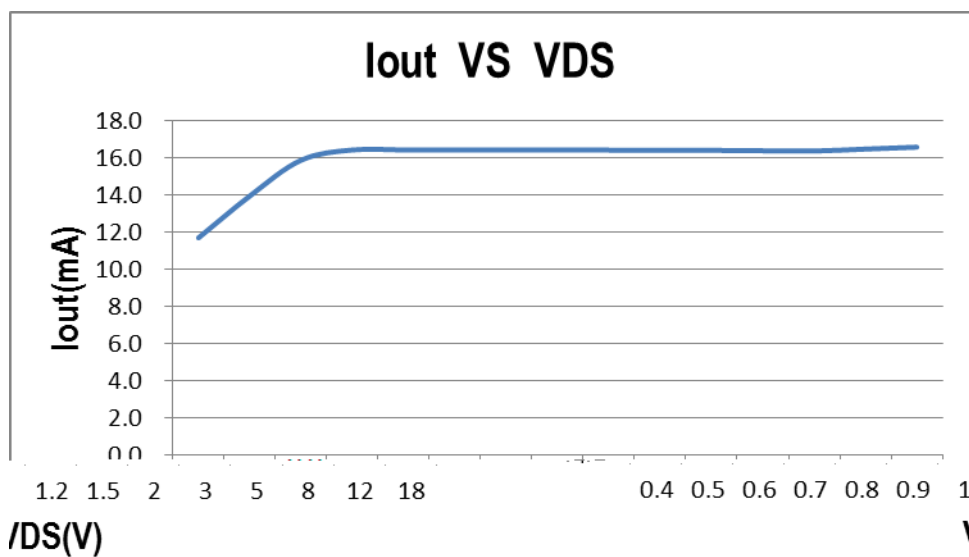
REXT

REXT

Iout

OUTR/G/B/W

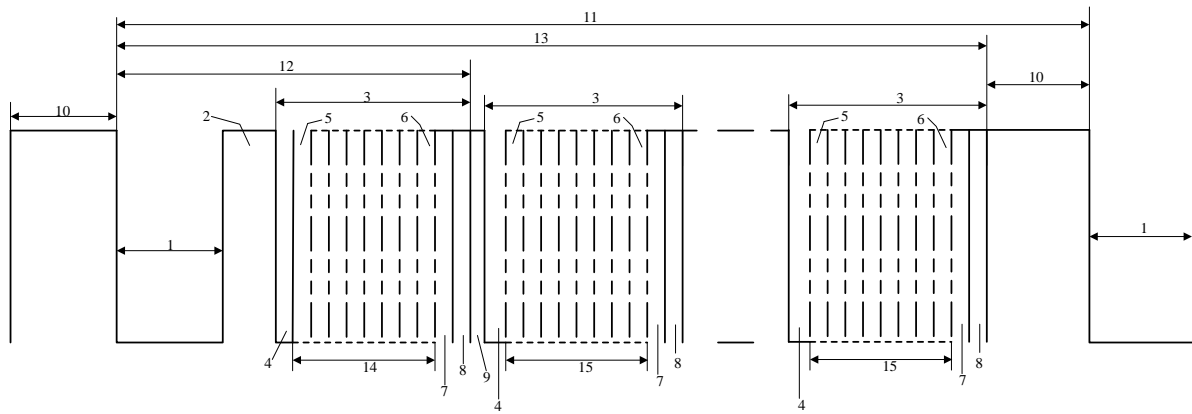
VDS



2 SM16511P

Iout

VDS



3 DMX512(1990)

Figuer Key

- 1- "SPACE" for BREAK
- 2- "MARK" After BREAK (MAB)
- 3- Slot Time
- 4- START Bit
- 5- LEAST SIGNIFICANT Data BIT
- 6- MOST SIGNIFICANT Data BIT
- 7- STOP Bit
- 8- STOP Bit
- 9- "MARK" Time Between slots
- 10- "MARK" Before BREAK (MBB)
- 11- BREAK to BREAK Time
- 12- RESET Sequence (BREAK,MAB,START Code)
- 13- DMX512 Packet
- 14- START CODE (Slot 0 Data)
- 15- SLOT 1 DATA
- 16- SLOT nnn DATA (Maximun 512)

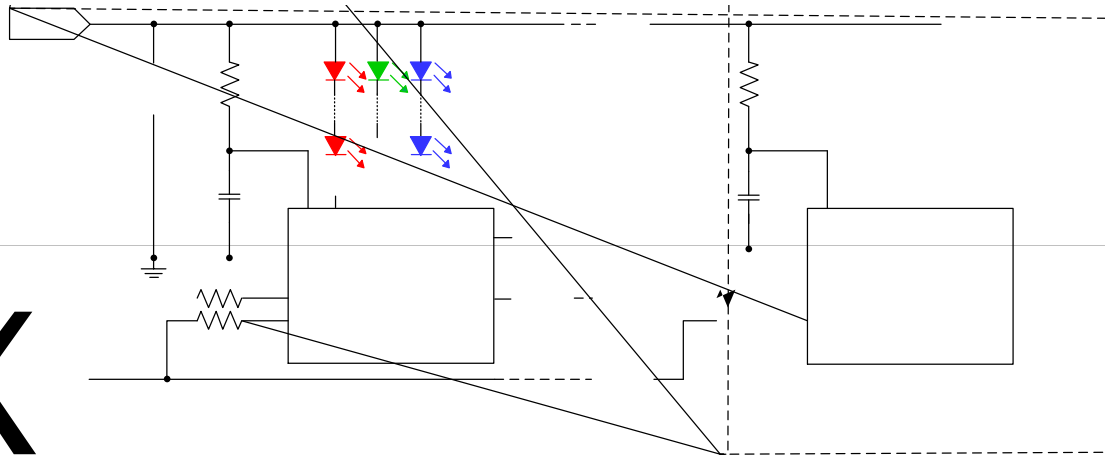
| Designation | Description | Min | Typical | Max | Unit |
|-------------|-----------------------------------|------|---------|------|--------|
| - | Bit Rate | 245 | 250 | 255 | kbit/s |
| - | Bit Time | 3.92 | 4 | 4.08 | us |
| - | Minimum Update Time for 513 slots | - | 22.7 | - | ms |
| - | Maximum Update Rate for 513 slots | - | 44 | - | /s |
| 1 | "SPACE" for BREAK | 88 | - | - | |

DMX512 1990

1024

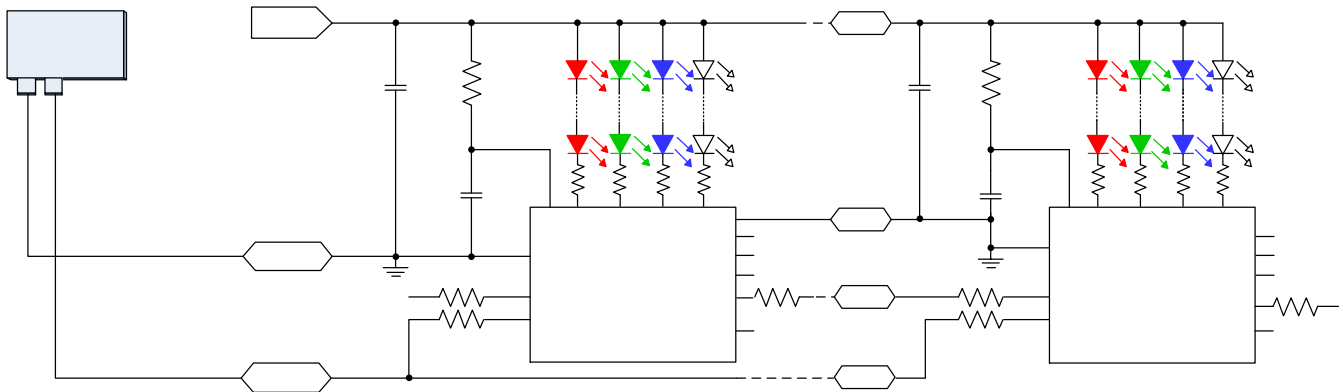
GND DAT

1 SM16511P RGB



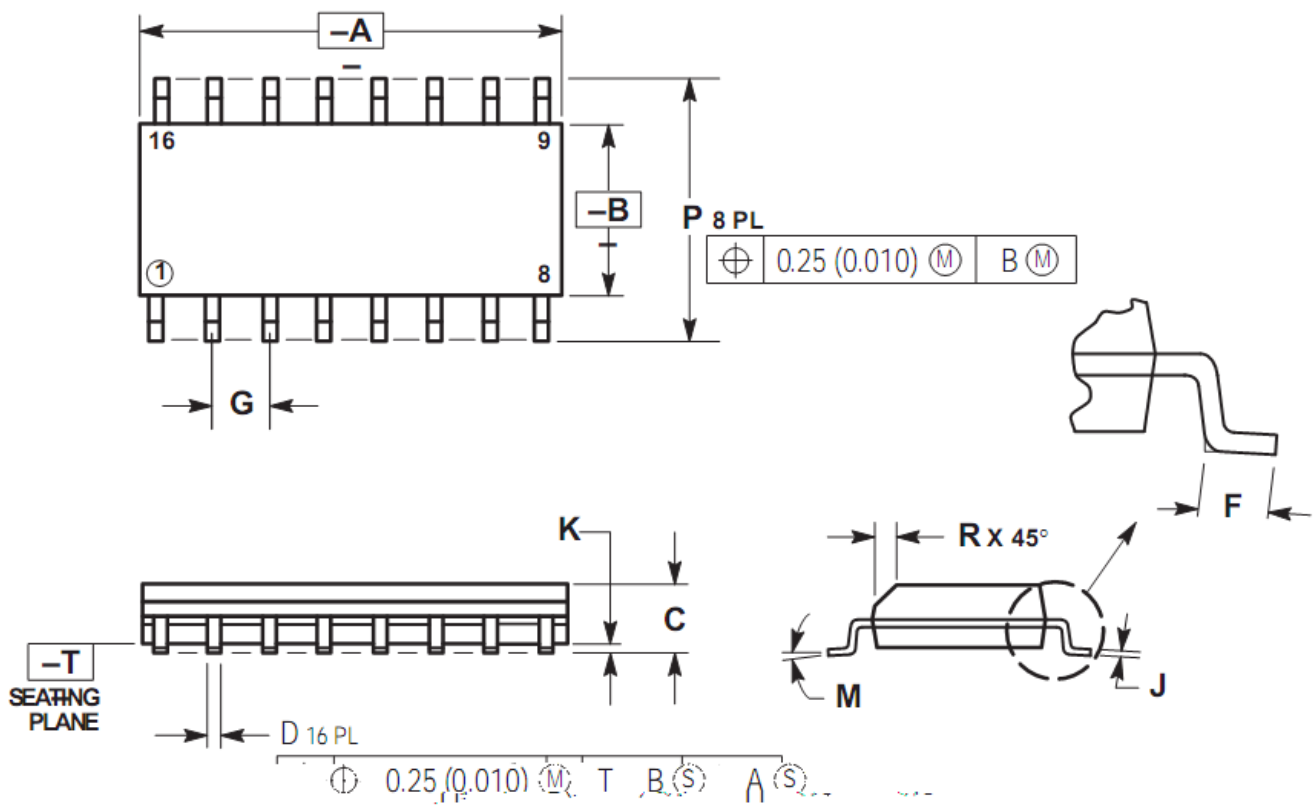
4 SM16511P RGB

2 SM16511P RGBW



5 SM16511P RGBW

SOP16



| Datasheet | | |
|-------------|---------|-------|
| Millimeters | | |
| | Min | Max |
| A | 9.80 | 10.16 |
| B | 3.80 | 4.04 |
| C | 1.35 | 1.80 |
| D | 0.25 | 0.510 |
| F | 0.40 | 1.27 |
| G | 1.27BSC | |
| J | 0.19 | 0.25 |
| K | 0.05 | 0.25 |
| M | 0° | 8° |
| P | 5.80 | 6.30 |
| R | 0.25 | 0.50 |