# MCP4100——LED

## 1

MCP4100 10mA

65mA LEDs 6-1

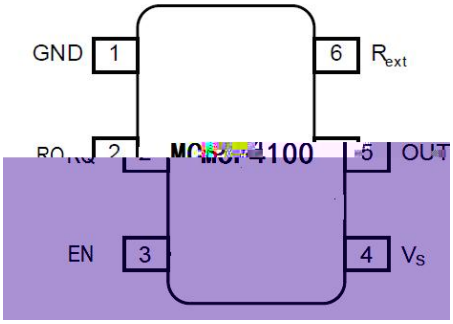
MCP4100 MCP4100 65mA

2

- LED 10mA
- 65mA
- 42V
- 
- 1.4V
- SOT23-6 750mW
- AEC-Q100
- RoHS

- 

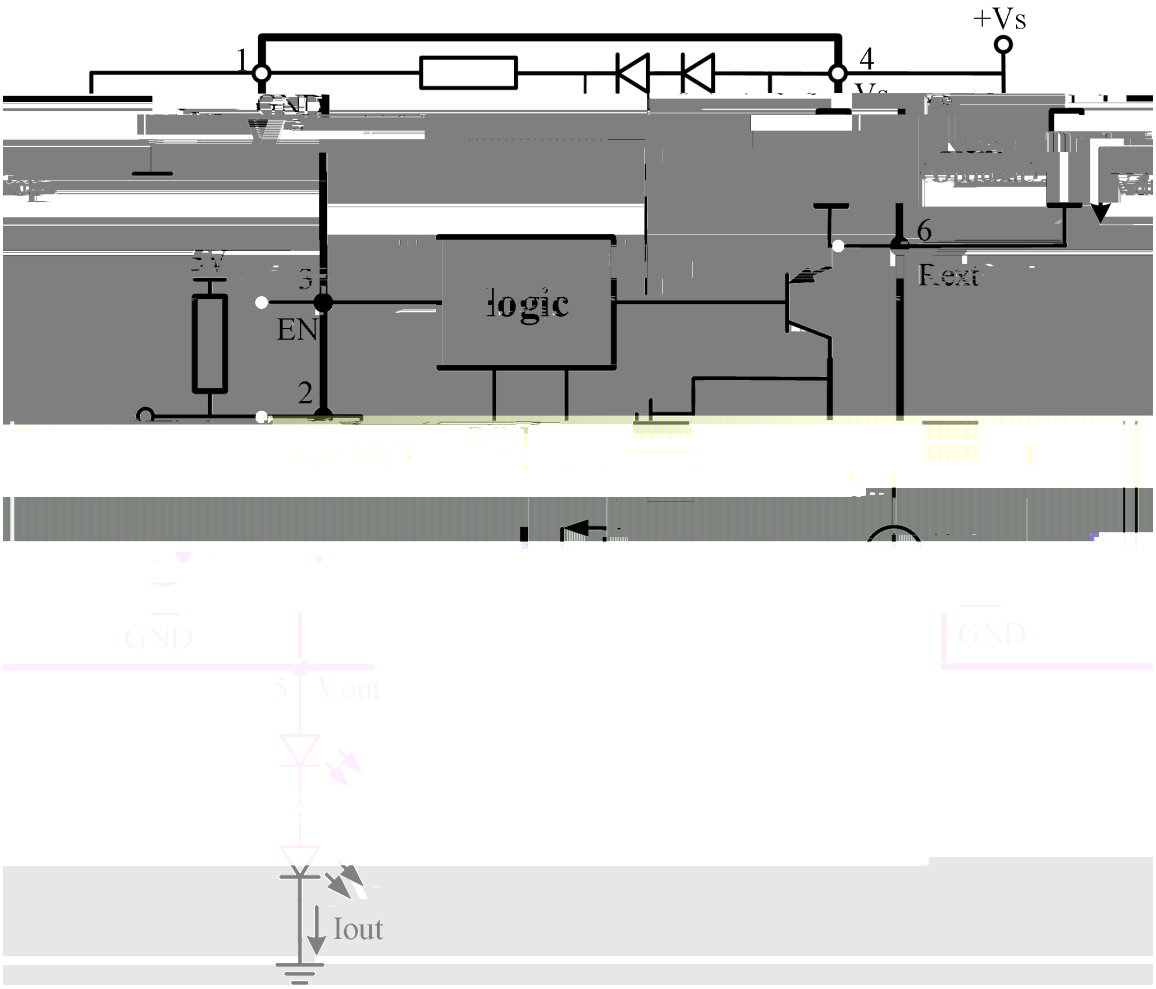
# 3



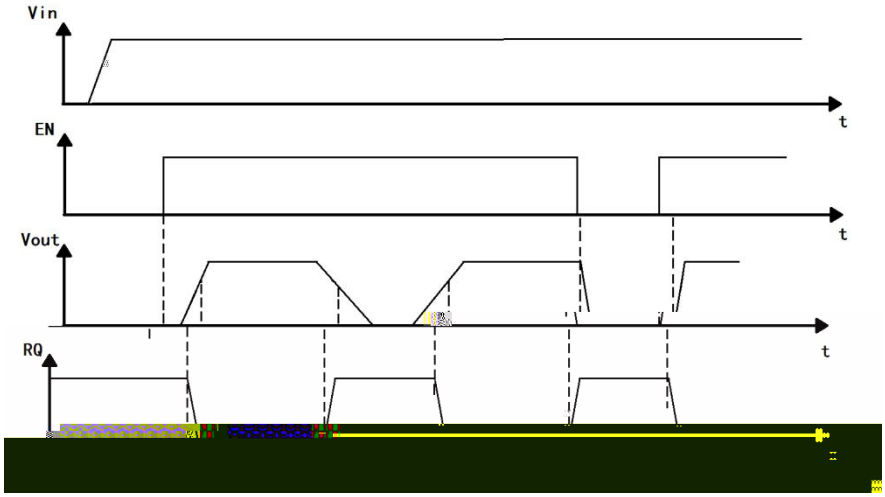

3-1 MCP4100C (SOT23-6)

3.1 MCP4100C

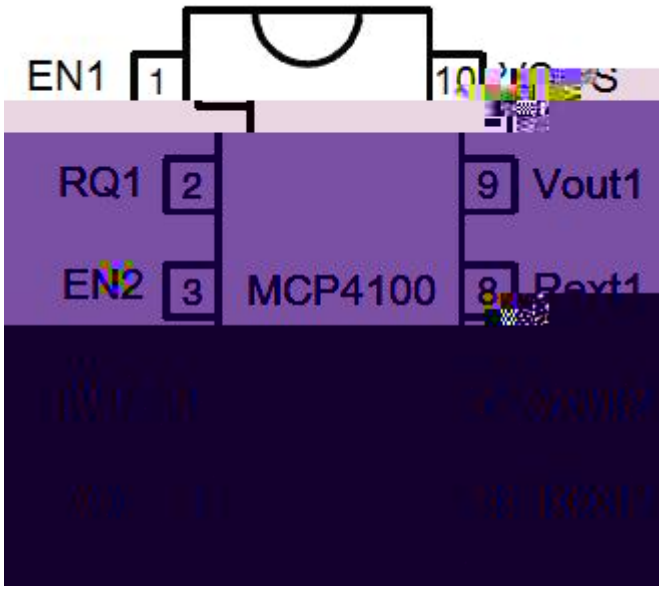
| PIN | |
|---|---|
| 1 | GND |
| 2 | RQ |




3-2 MCP4100




3-3 MCP4100




3-4 MCP4100C2 (SSOP10L)

3.2 MCP4100C2

| PIN | | |
|---|---|---|
| 1 | EN1 | 1 |
| 2 | RQ1 | 1 |
| 3 | EN2 | 2 |
| 4 | RQ2 | 2 |
| 5 | GND | |
| 6 | Rext2 | 2 |
| 7 | Vout2 | 2 |
| 8 | Rext1 | 1 |
| 9 | Vout1 | 1 |
| 10 | VS | |

# 4

### 4.1 Ta=25

| | | | | | | |
|---|---|---|---|---|---|---|
| | | **Min** | **Typ** | **Max** | | |
| | Vs | - | - | 42 | V | |
| | VEN | - | | 7 | V | |
| | Iout | - | 65 | 100 | mA | |
| | Vout | - | - | 40 | V | |
| | VR | - | - | 0.7 | V | |
| | Ptot | - | - | 750 | mW | |
| | Tj | - | - | 150 | | |
| | Tstg | -40 | - | 150 | | |

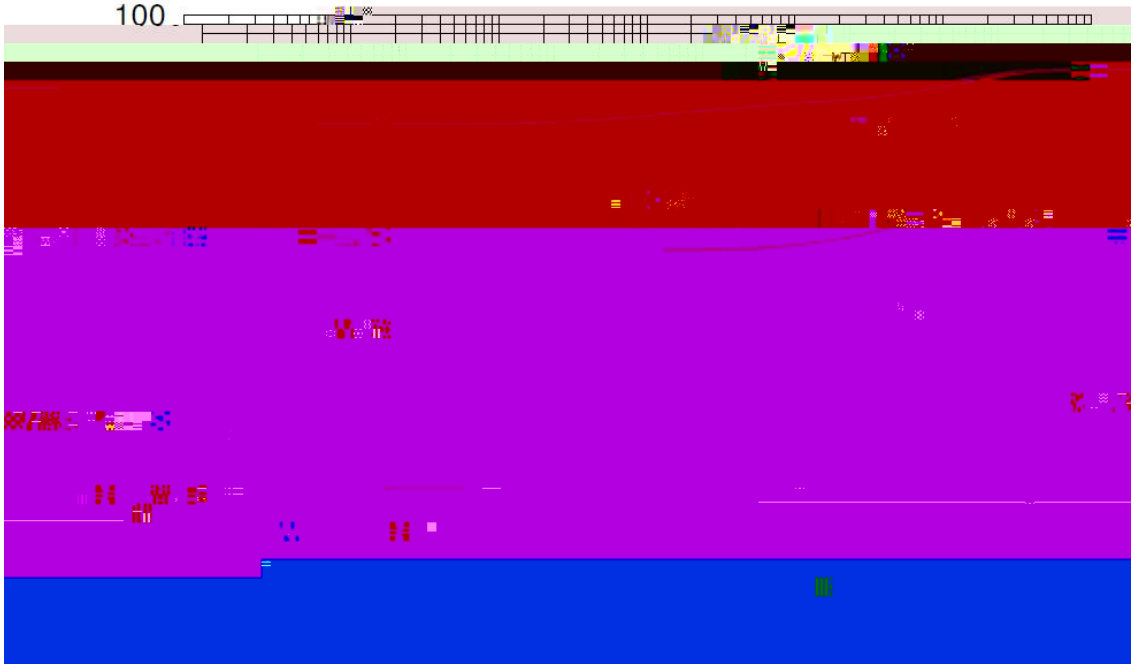
### 4.2 $T_A$=25 MCP4100

| | | | | | | |
|---|---|---|---|---|---|---|
| | | **Min** | **Typ** | **Max** | | |
| | Rthj-a | - | - | 220 | K/W | MCP4100C |
| | Rthj-a | - | - | 170 | K/W | MCP4100C2 |

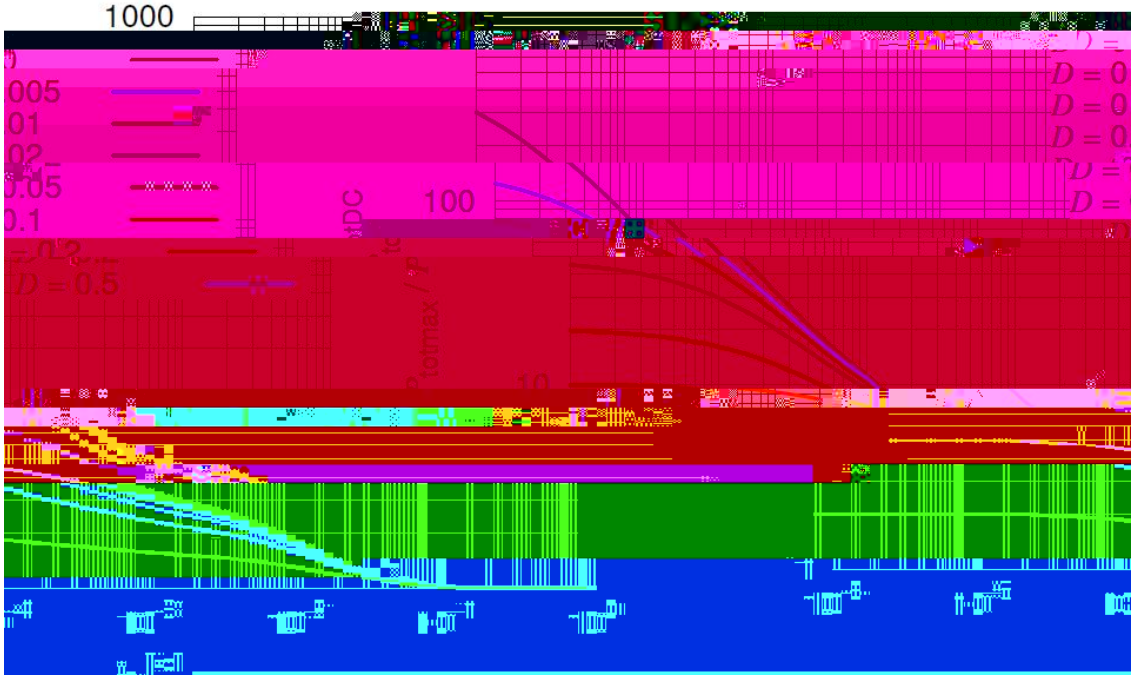
## 5



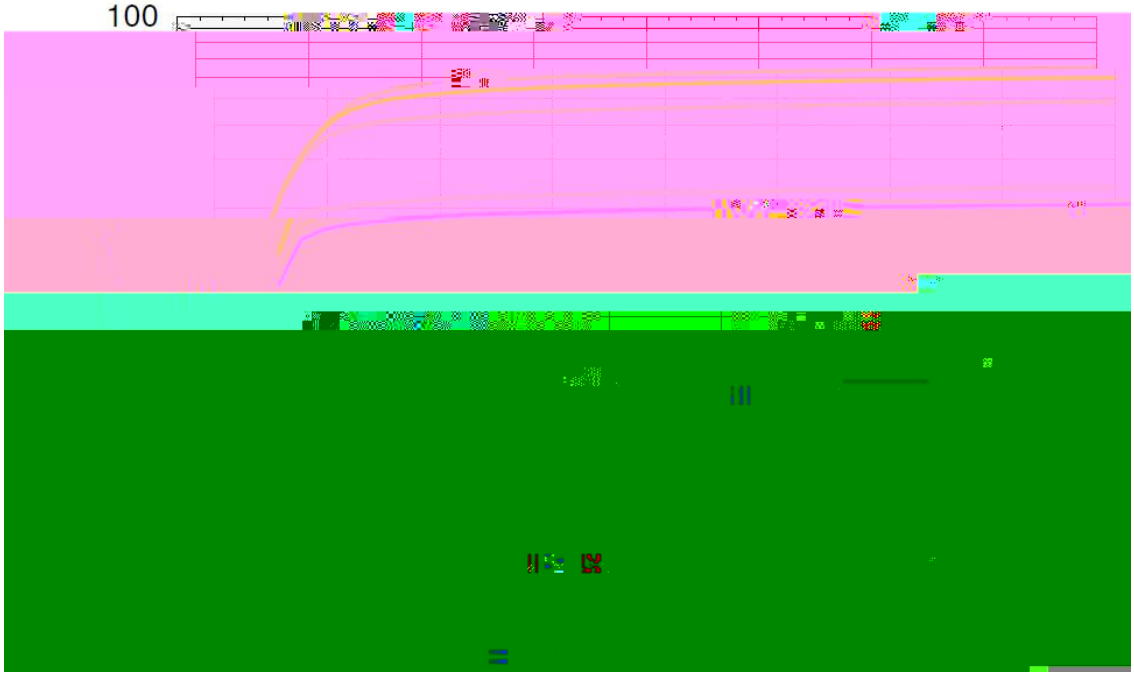

5-1 $P_{tot}=f \quad T_S$




5-2 $R_{thJS} \quad f(t_p)$

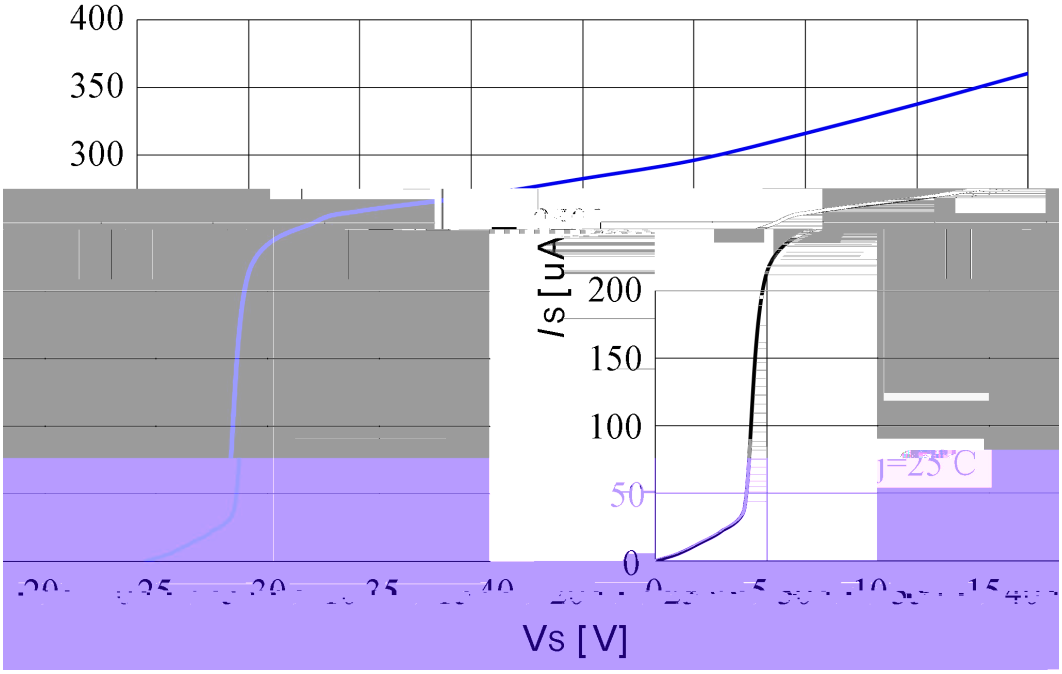



5-3 $P_{tot\max} / P_{totDC}$ $f(t_p)$



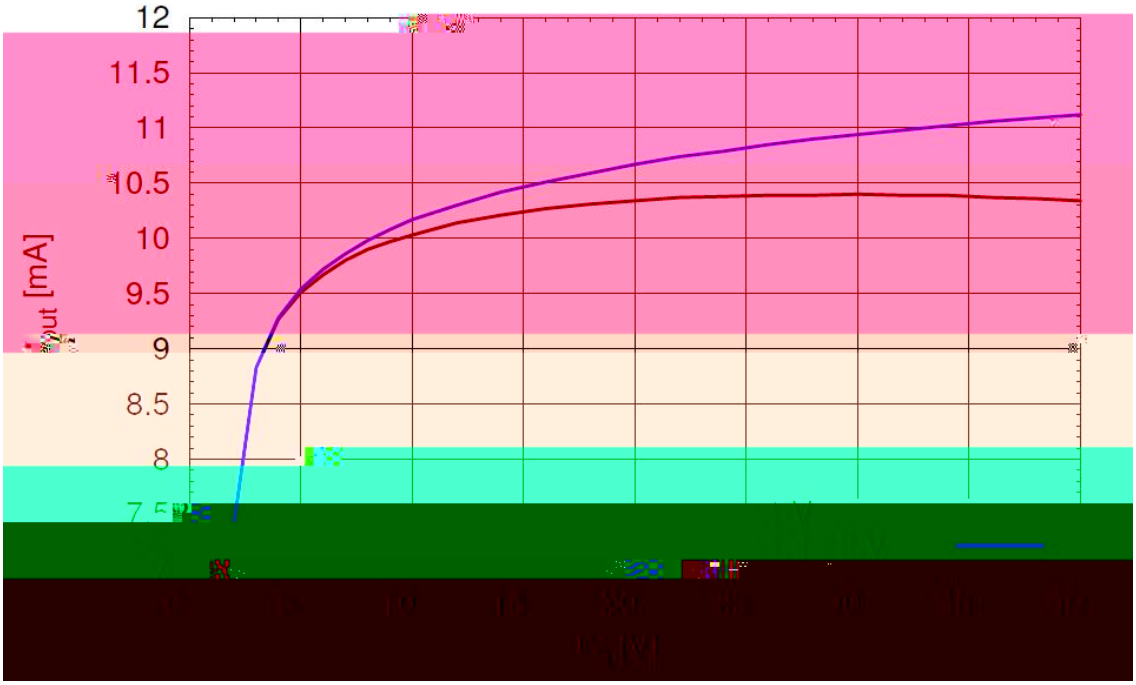

5-4

$I_{out}$ $f(V_S), V_S$ $V_{out}$ 1.4V $R_{EXT}$



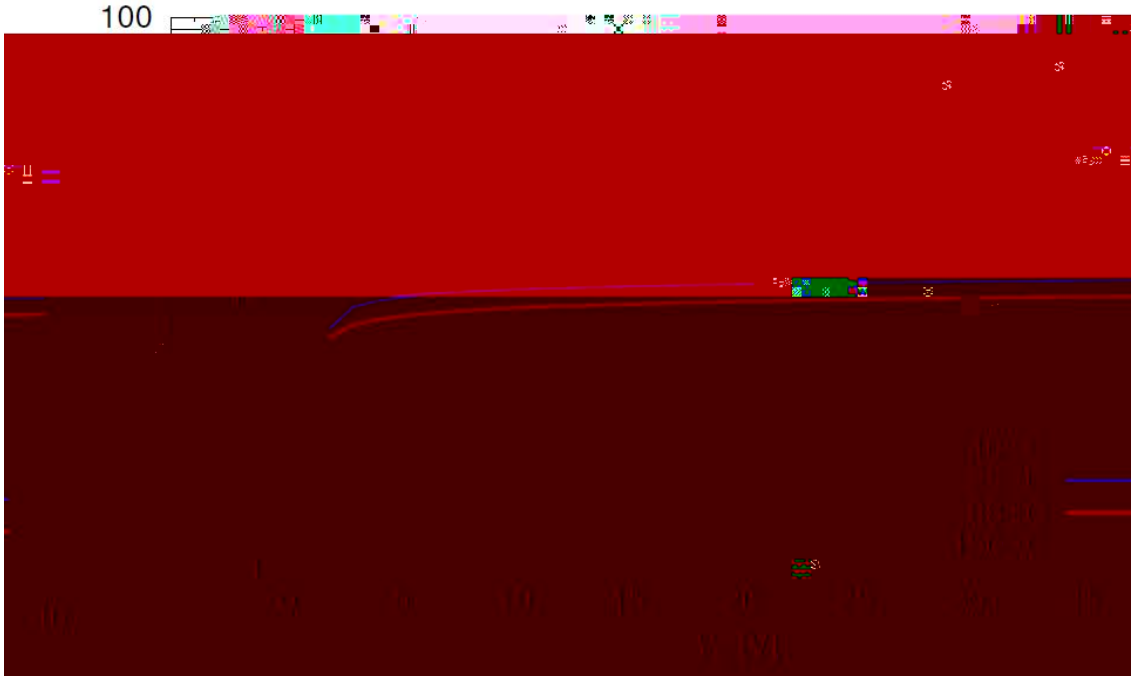

5-5

$I_S$ $f(V_S), T_A$



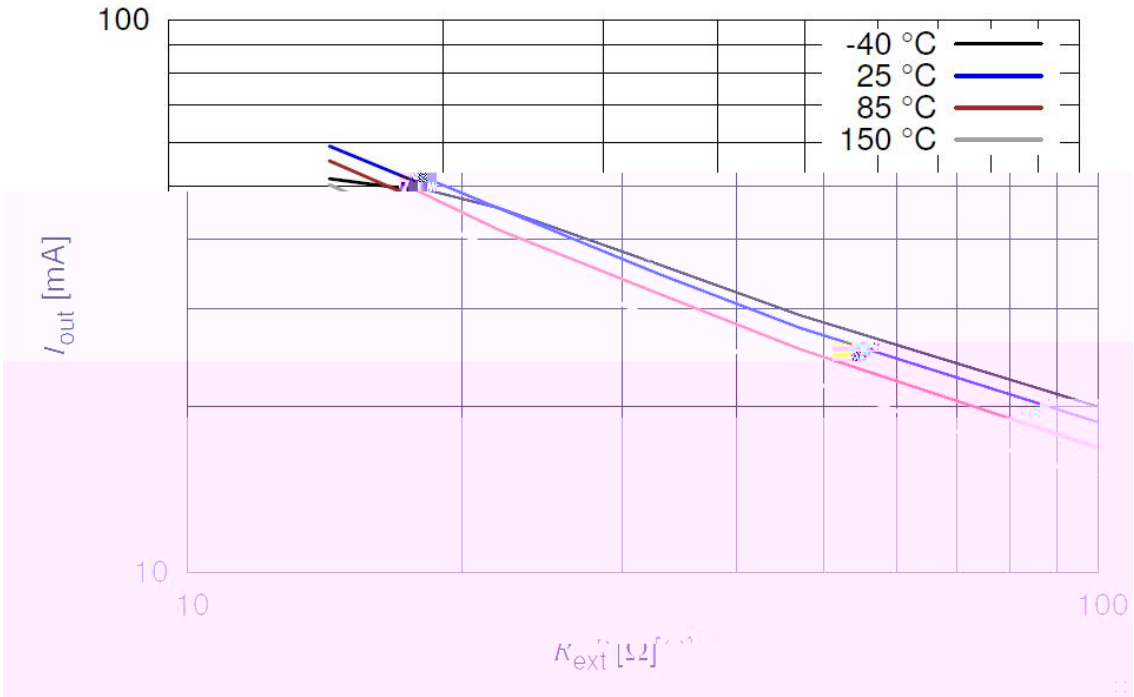

5-6

$I_{out}$ $f(V_S), V_S$ $V_{out}$



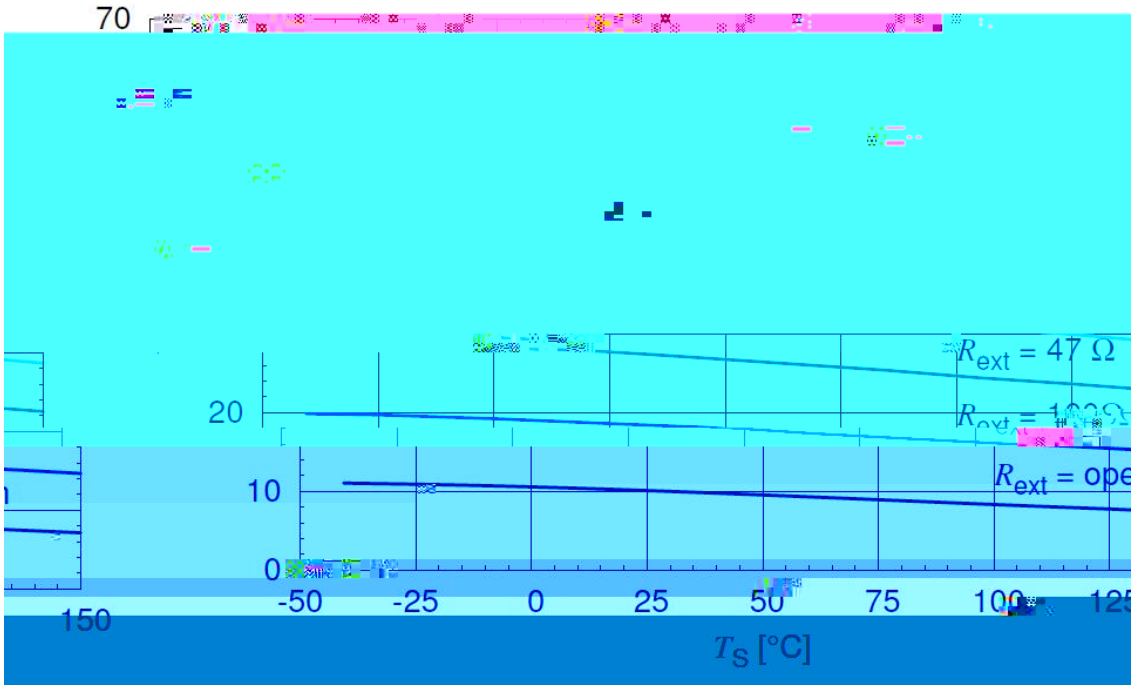

5-7

$I_{out}$ $f(V_S), V_S$ $V_{out}$ $1.4V, T_A$



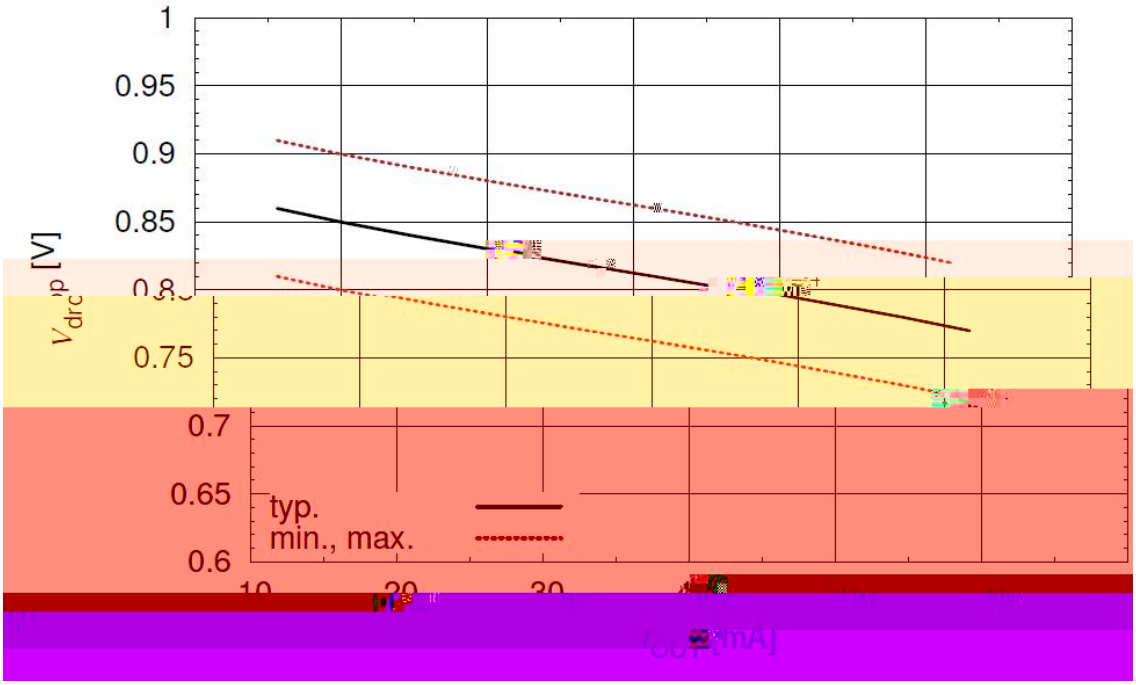

5-8

*out* *S* $V_S$ $V$ $V_S$ $V_{out}$ $V$ $T_A$




5-9

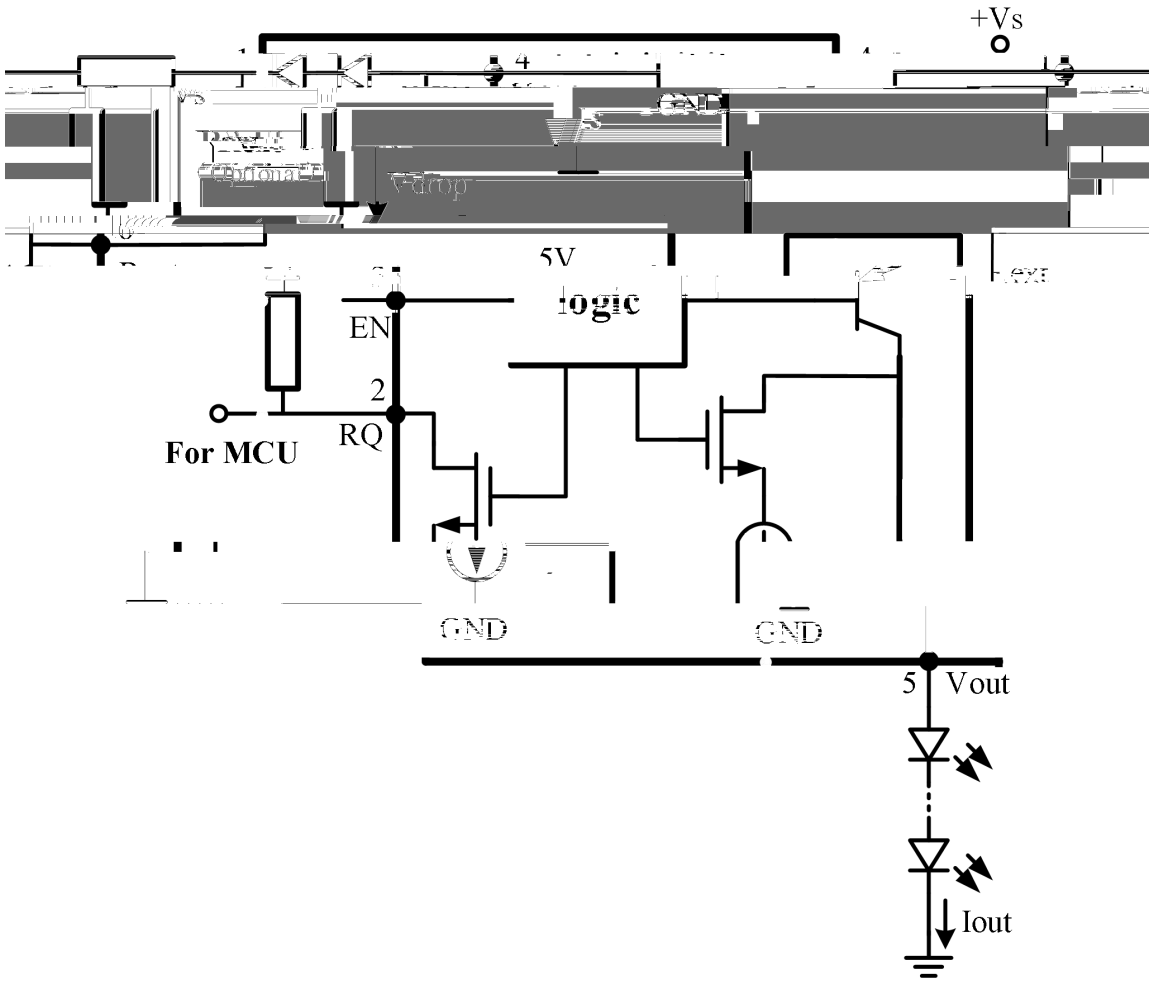
$I_{out}$ $f(T_S), V_S$ $10V, V_S$ $V_{out}$ $1.4V, R_{ext}$




5-10

$V_{drop}$ $f(I_{out}), I_{out}$ $10mA \sim 65mA$

# 6




6-1

**1**

MCP4100 LED 6-1

Rext MCP4100 10mA 65mA Rext 5-8 Rext

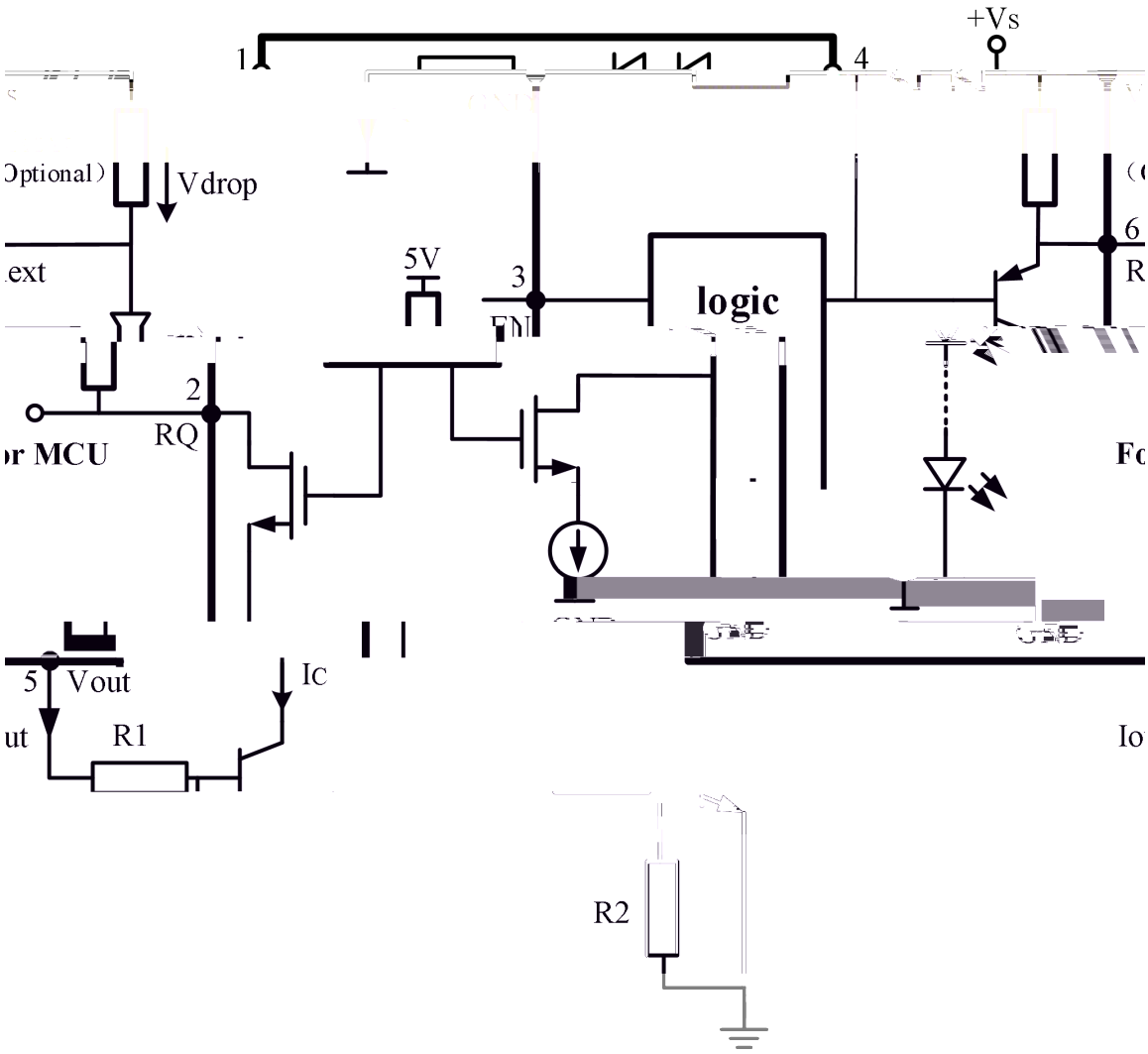
Rint Rext

**RQ**

RQ 6-1 RQ MOS Vout

**VRQH** RQ MOS RQ ñ0ò Vout **VRQL**

RQ RQ

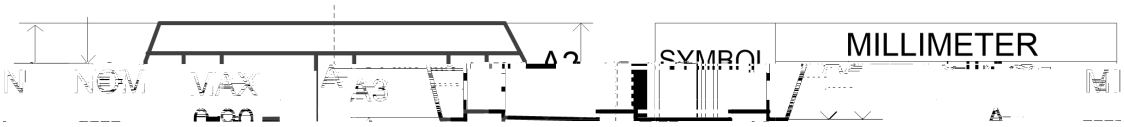

+Vs
1
4
Optional)
Vdrop
ext
5V
3
logic
6
R
2
RQ
or MCU
Fc
5
Vout
Ic
ut
R1
Io
R2

6-2

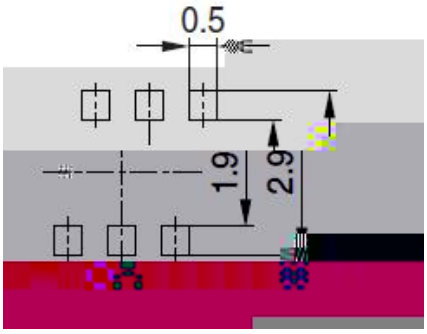
**2**

# 7 MCP4100

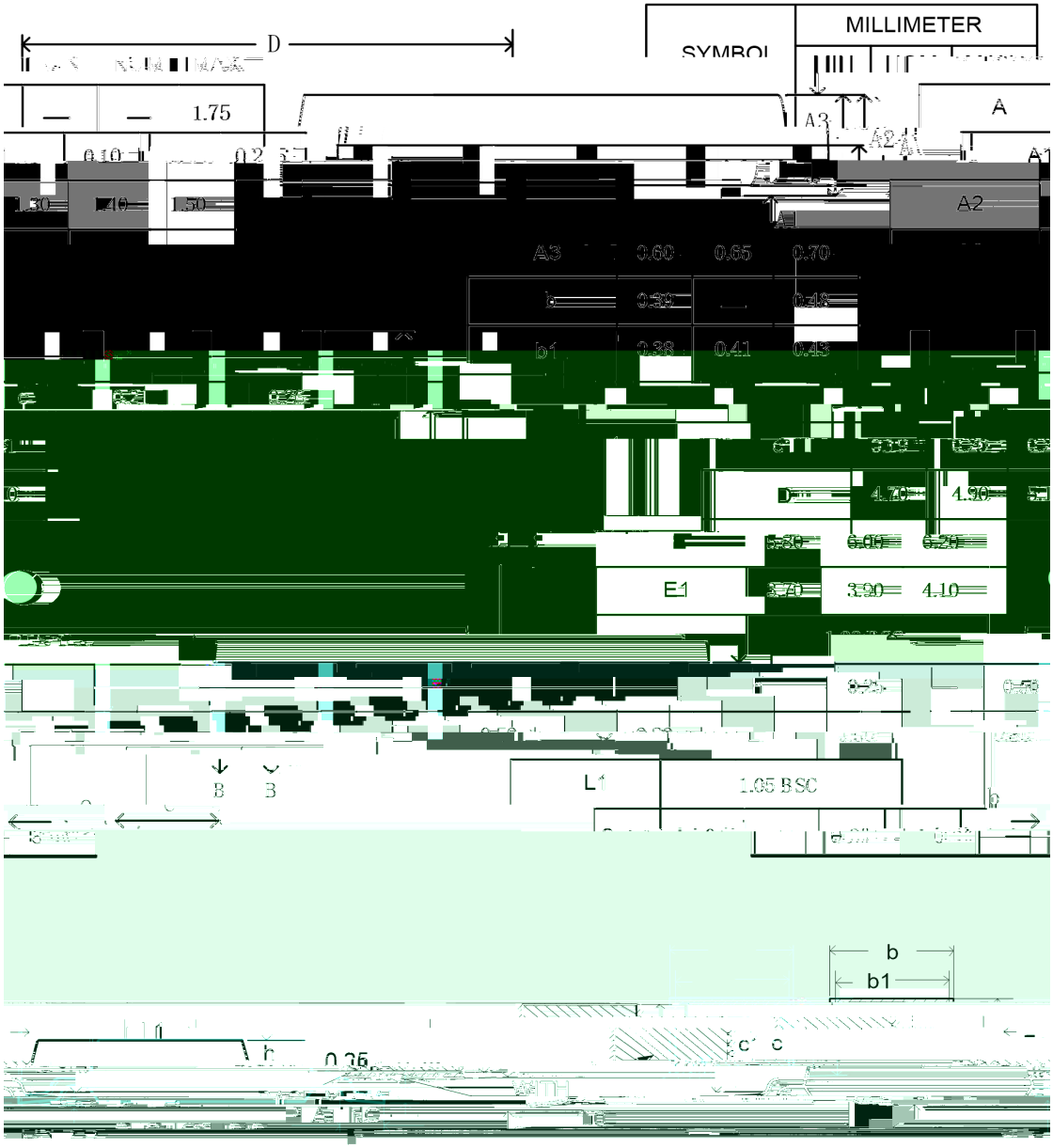
## 7.1 SOT23-6




## 7.2



## 7.2 SSOP10L


MILLIMETER
D
1.75
A
A1
A2
A3
0.60
0.65
0.70
b1
0.38
0.41
0.43
E1
4.10
L1
1.05 BSC
B
B
b
b1
0.25
c
c1

# 8

| | | | |
|---|---|---|---|
| MCP4100C | SOT23-6 | MCP4100C | 3000 pcs/ Tape&Reel |
| MCP4100C2 | SSOP10L | MCP4100C2 | 2500pcs/ Tape&Reel |