MCP4100——LED

1

MCP4100 10mA

65mA LEDs 6-1

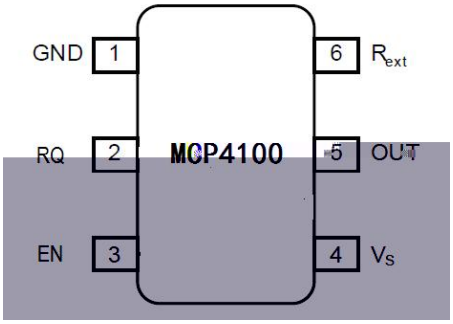
MCP4100 MCP4100 65mA

2

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

-

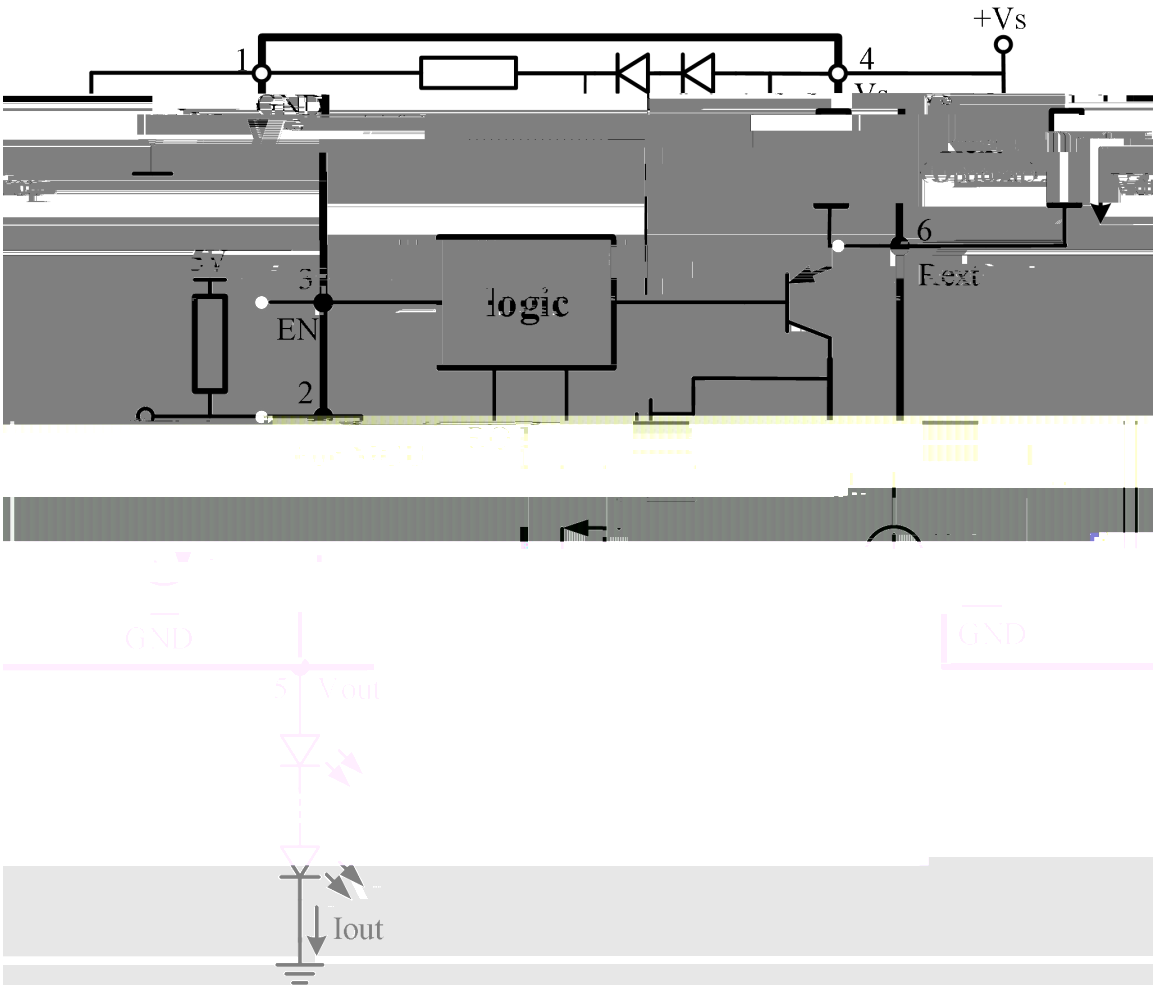
3



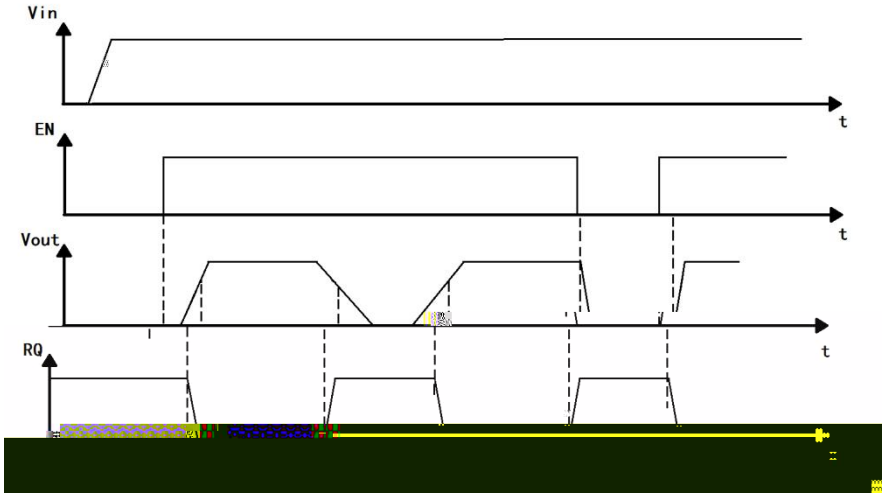
3-1 MCP4100C (SOT23-6)

3.1 MCP4100C

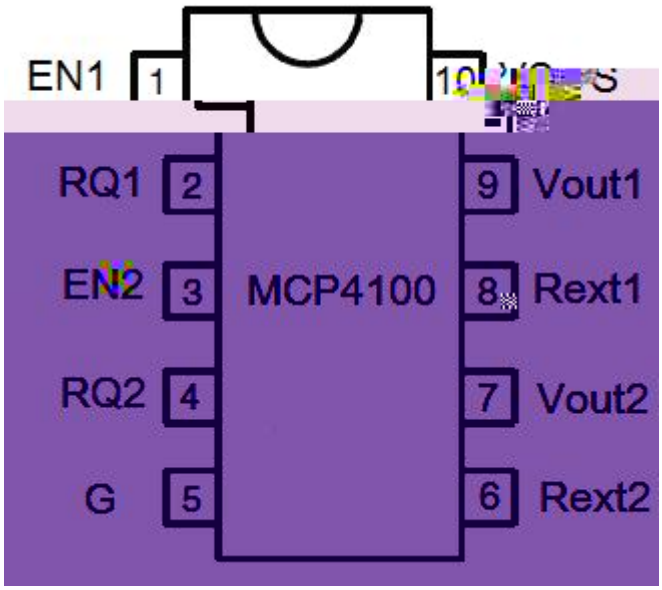
PIN	
1	GND
2	RQ



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

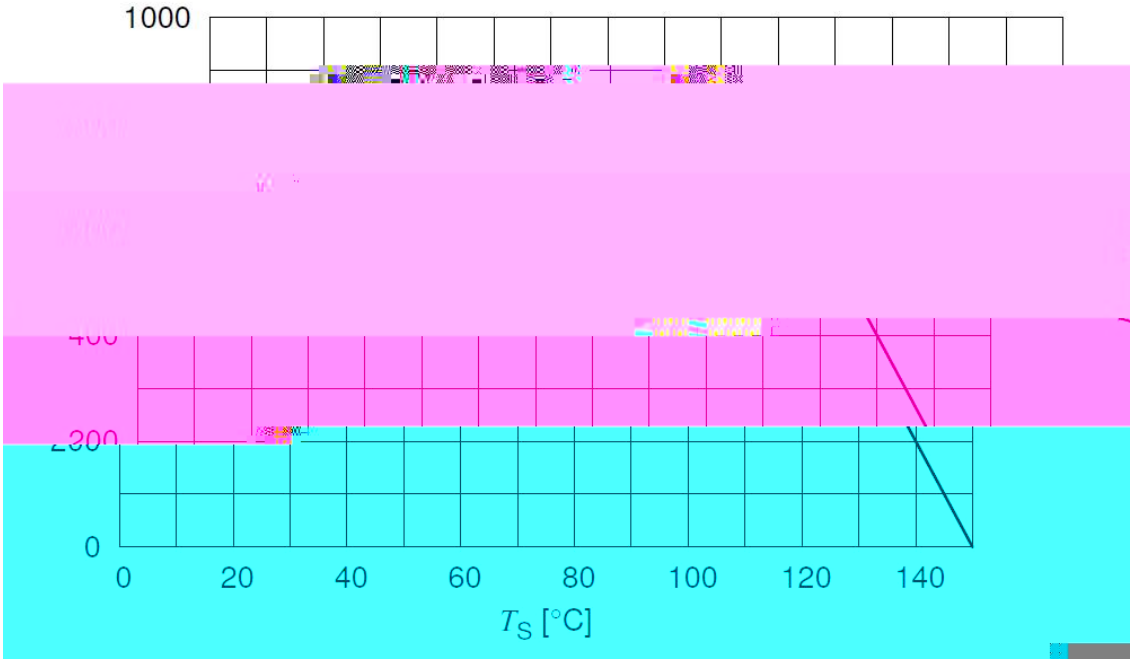
4.1 Ta=25

		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		

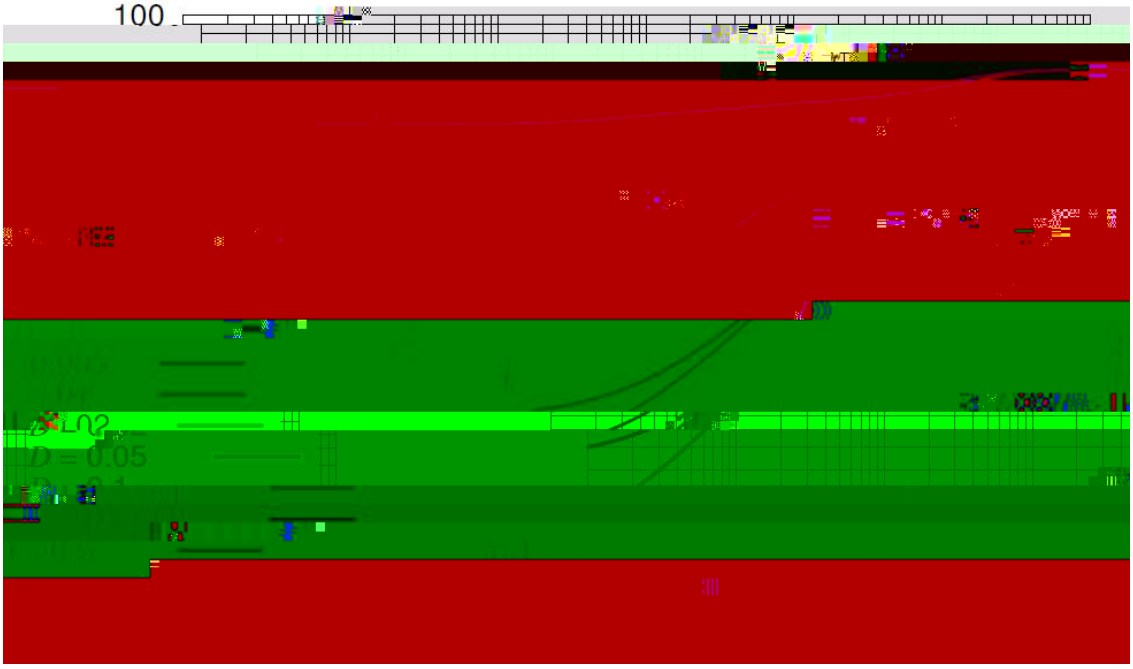
4.2 T_A=25 MCP4100

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

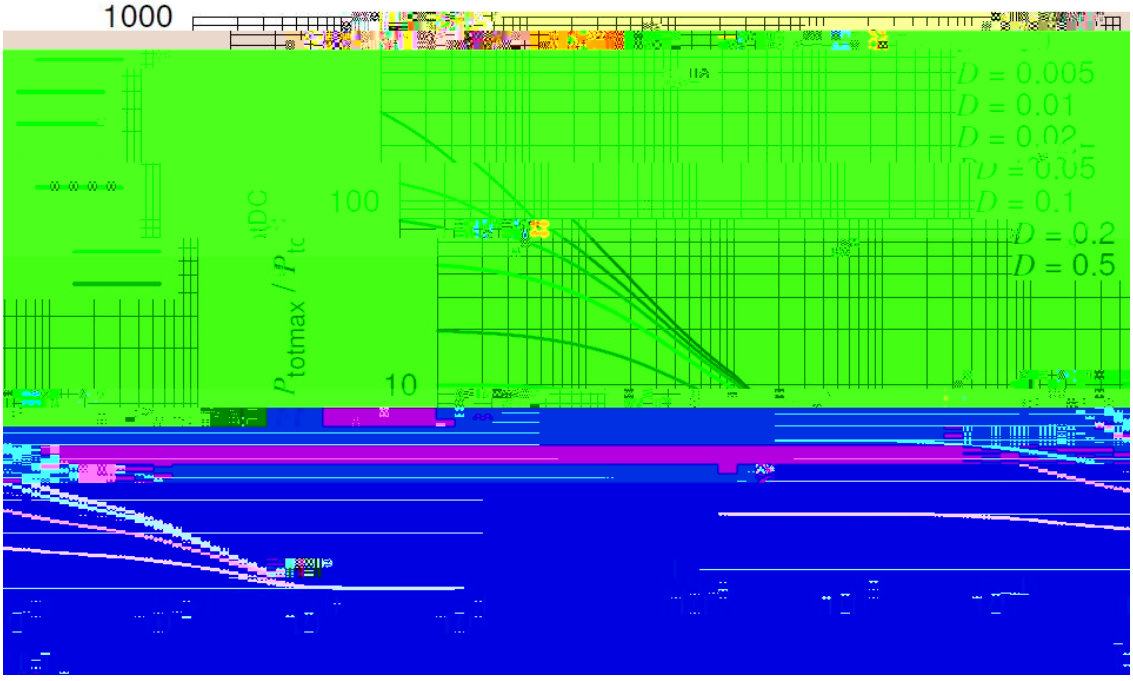
5



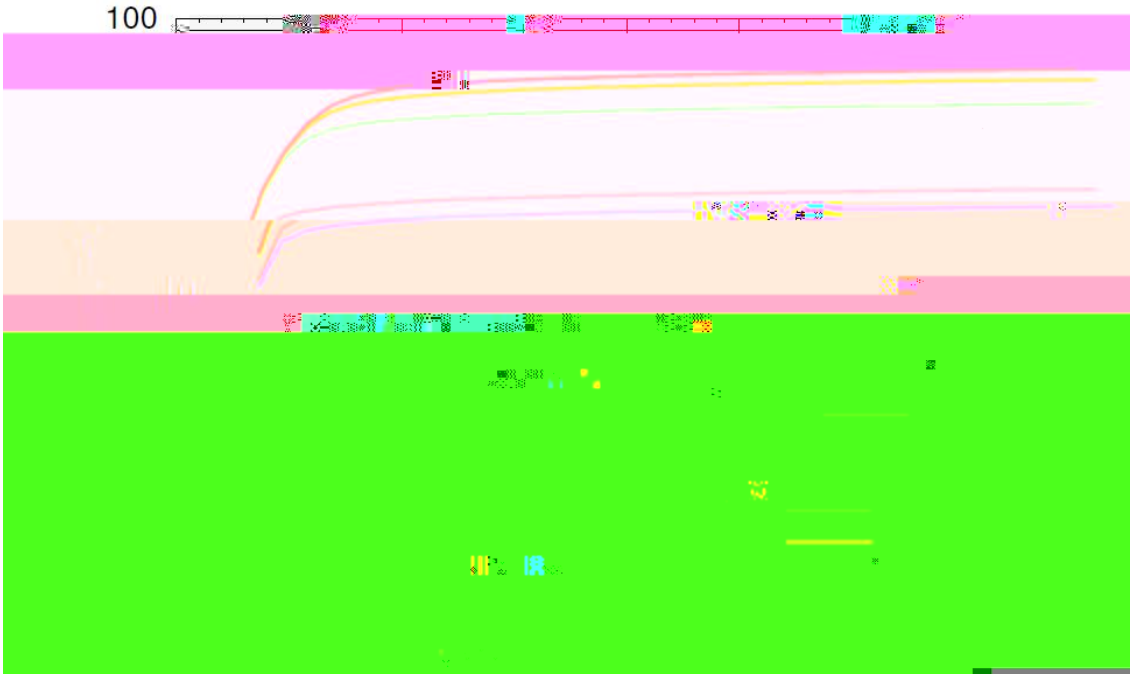
5-1 P_{tot}=f T_S



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

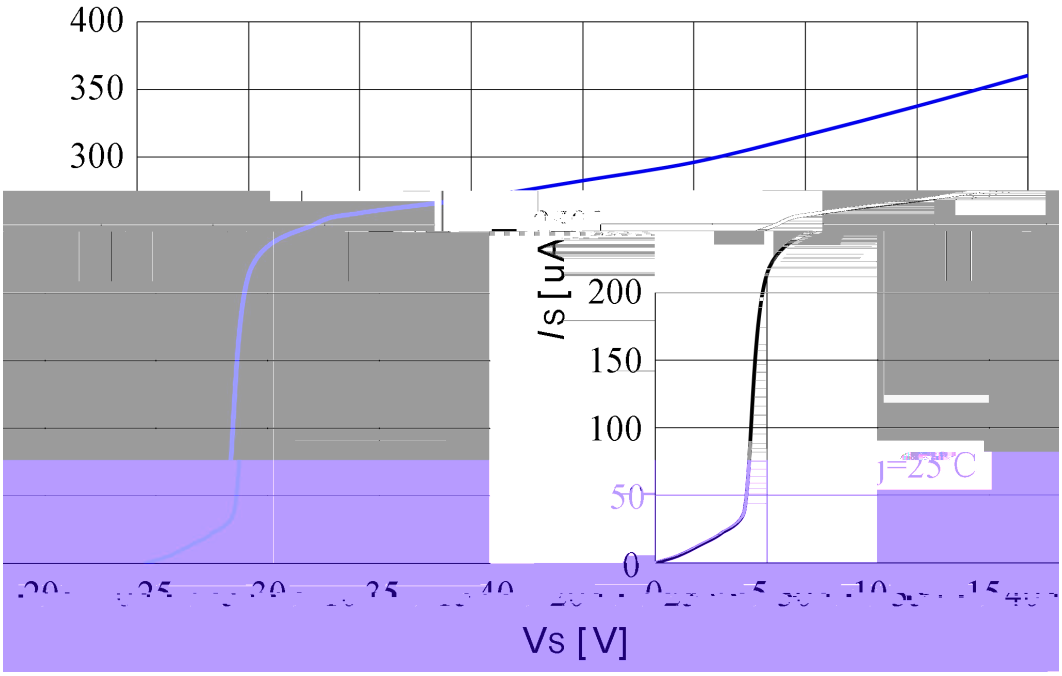


5-3 $P_{tot\max} / P_{totDC}$ $f(t_p)$



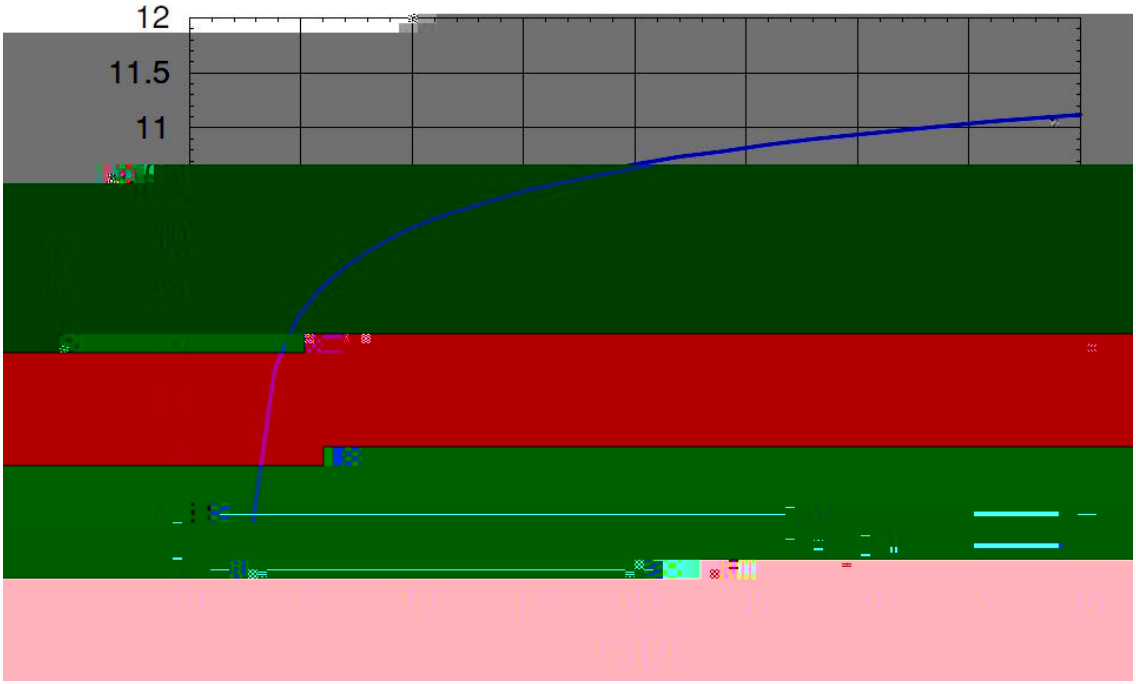
5-4

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



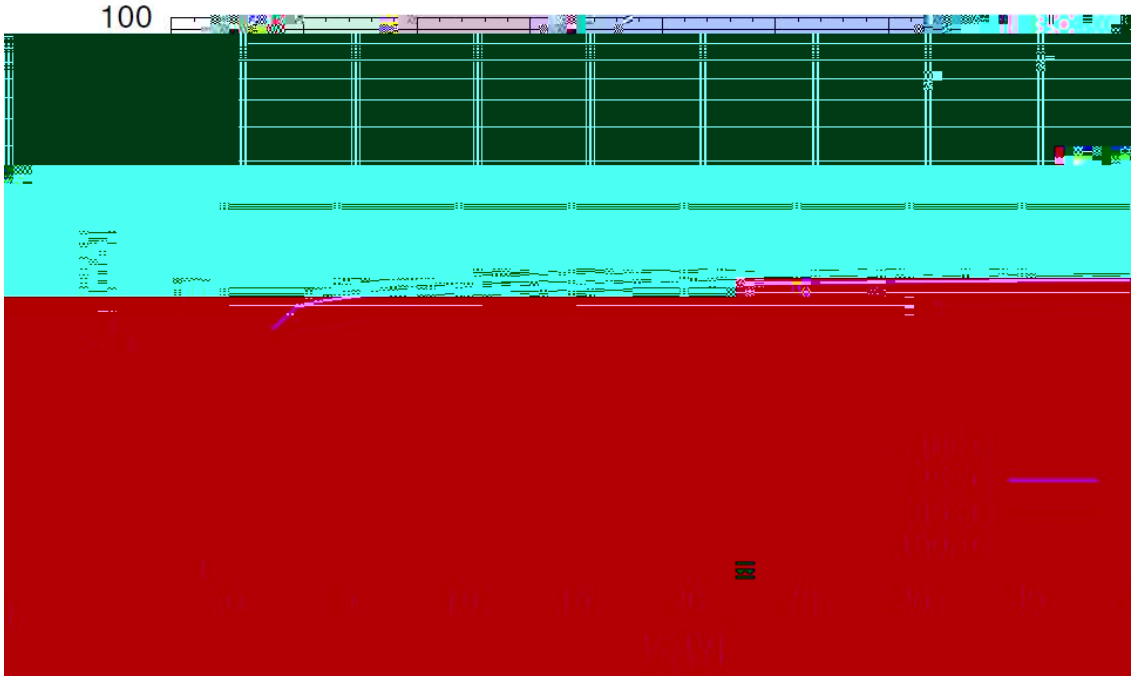
5-5

I_S $f(V_S), T_A$



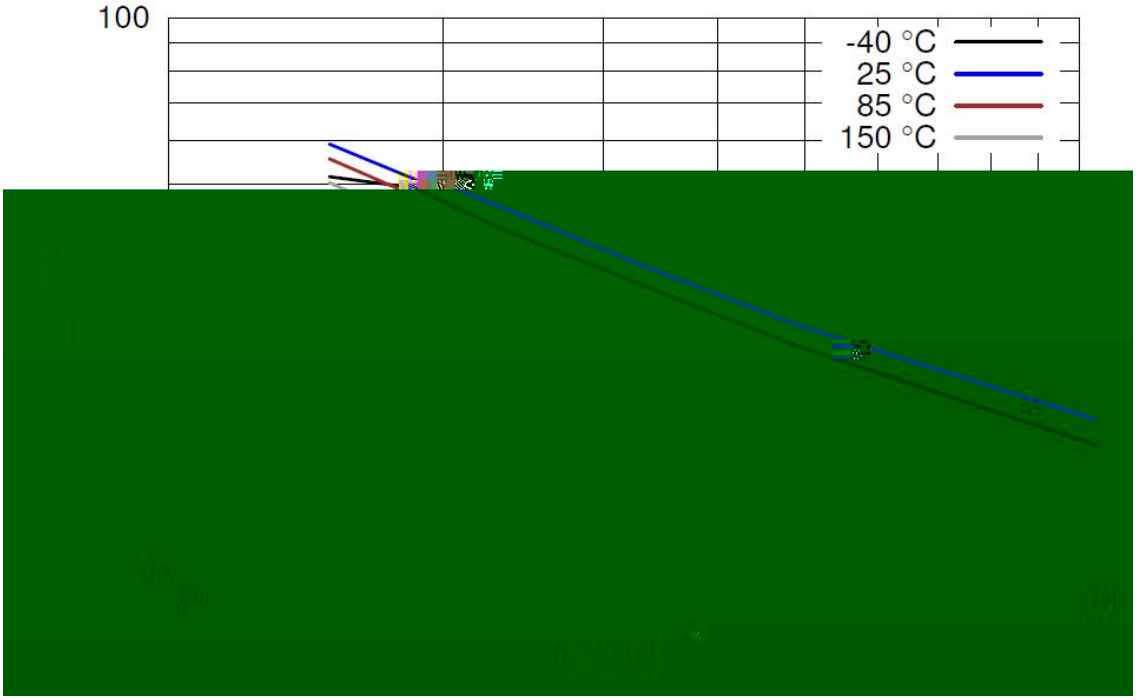
5-6

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



5-7

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



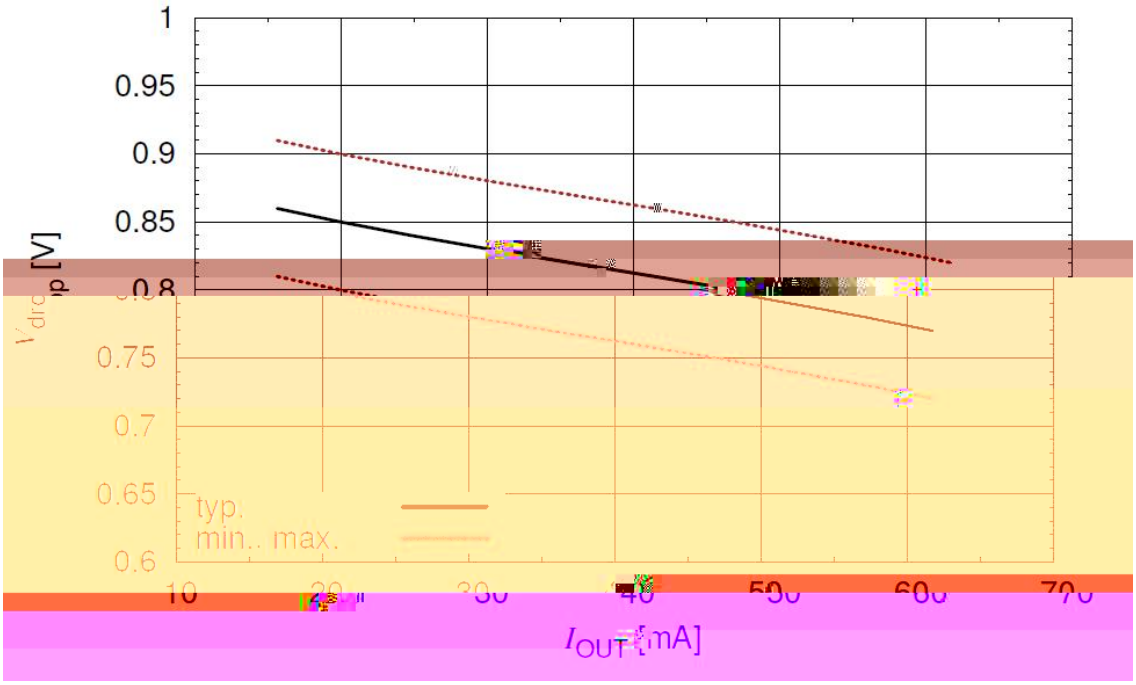
5-8

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



5-9

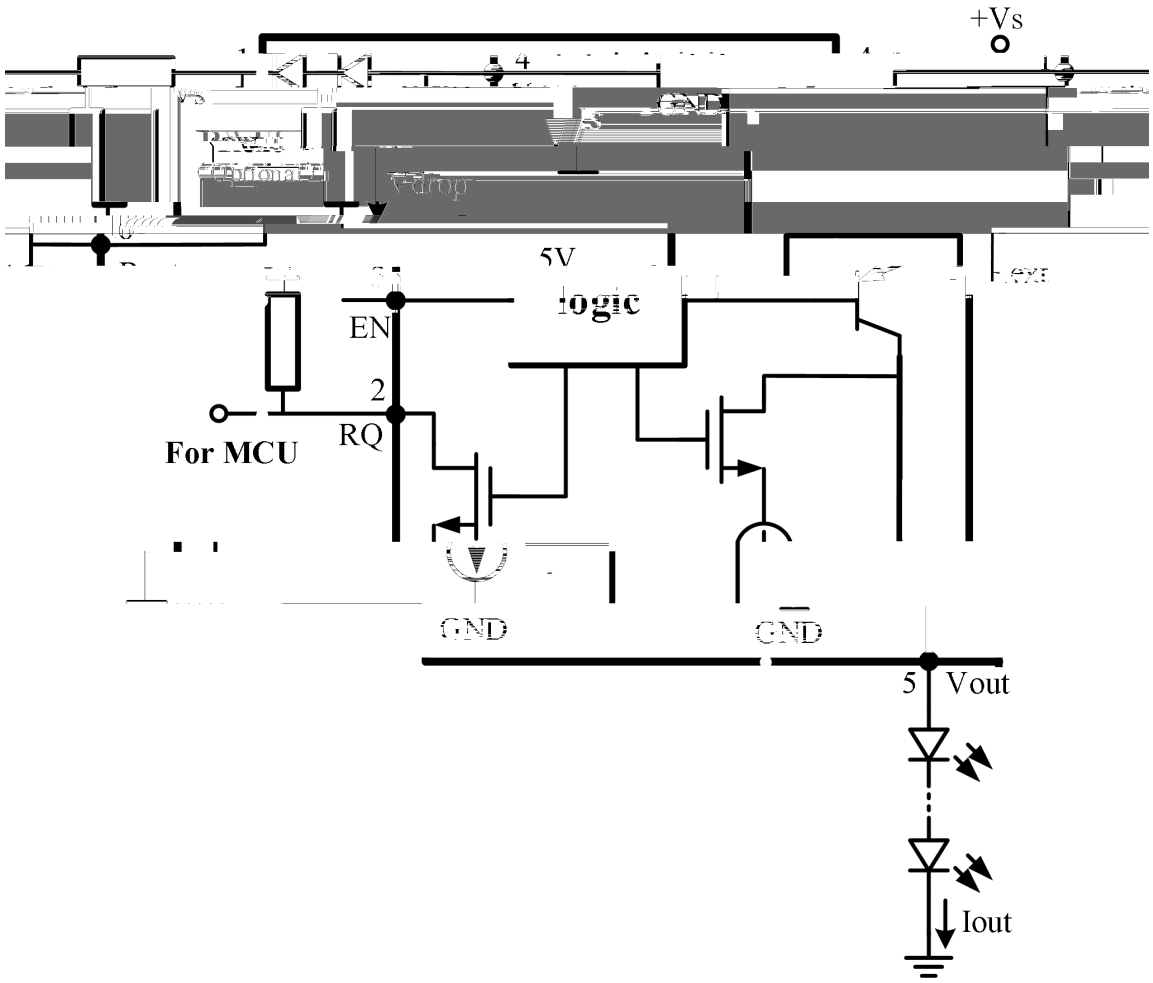
I_{out} $f(T_S), V_S$ $10V, V_S$ V_{out} $1.4V, R_{ext}$



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

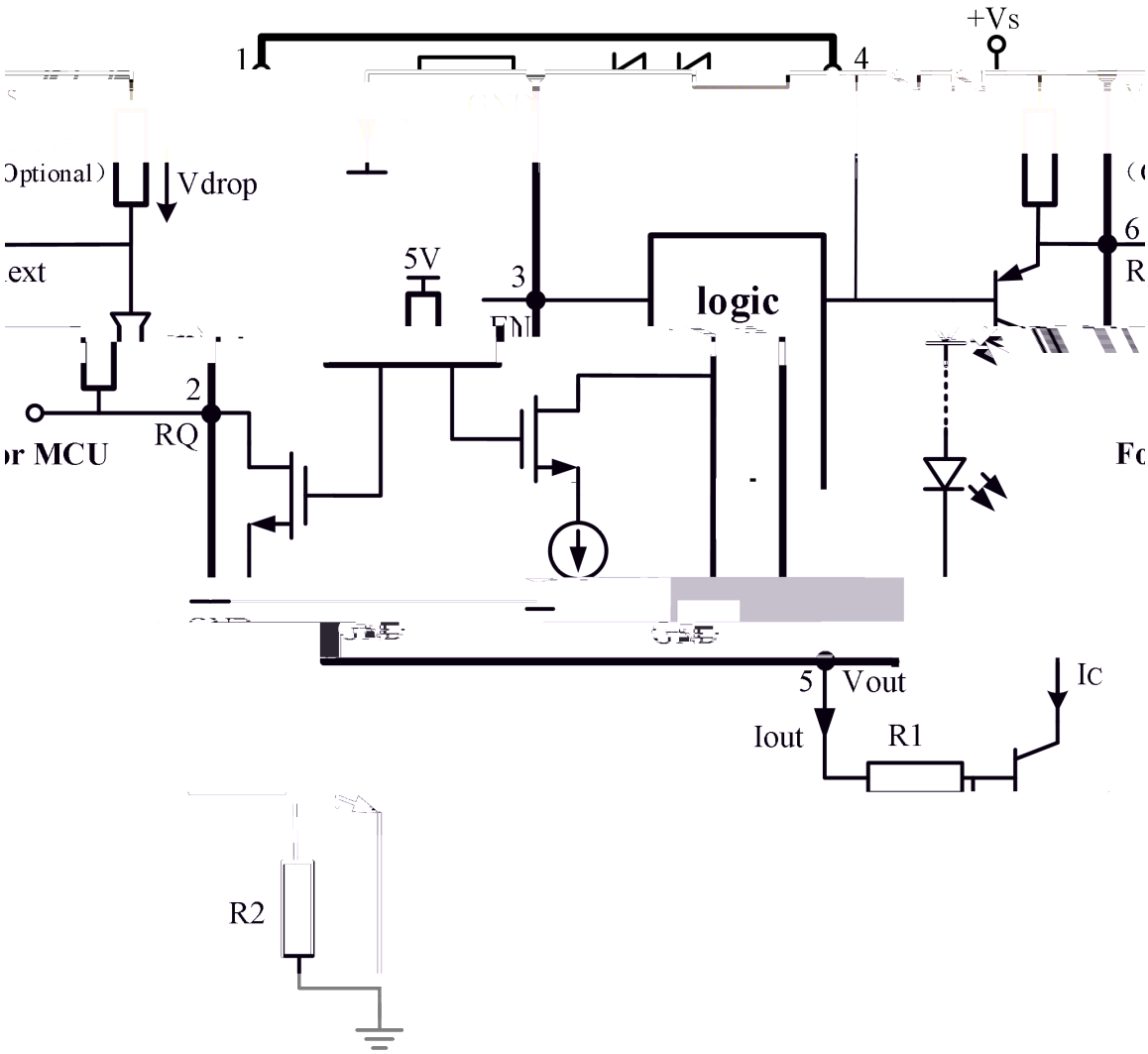
Rint Rext

RQ

RQ 6-1 RQ MOS Vout

VRQH RQ MOS RQ ñ0ò Vout **VRQL**

RQ RQ

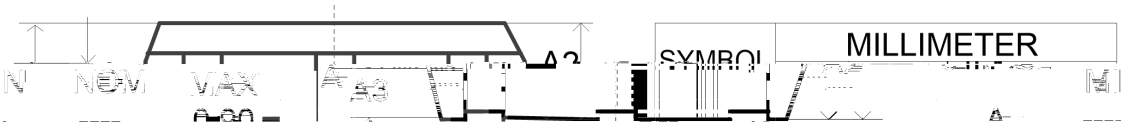

+Vs
1
4
Optional)
Vdrop
ext
5V
3
logic
6
R
2
RQ
or MCU
Fc
5
Vout
Ic
Iout
R1
R2

6-2

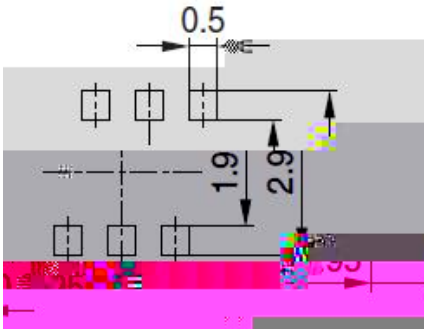
2

7 MCP4100

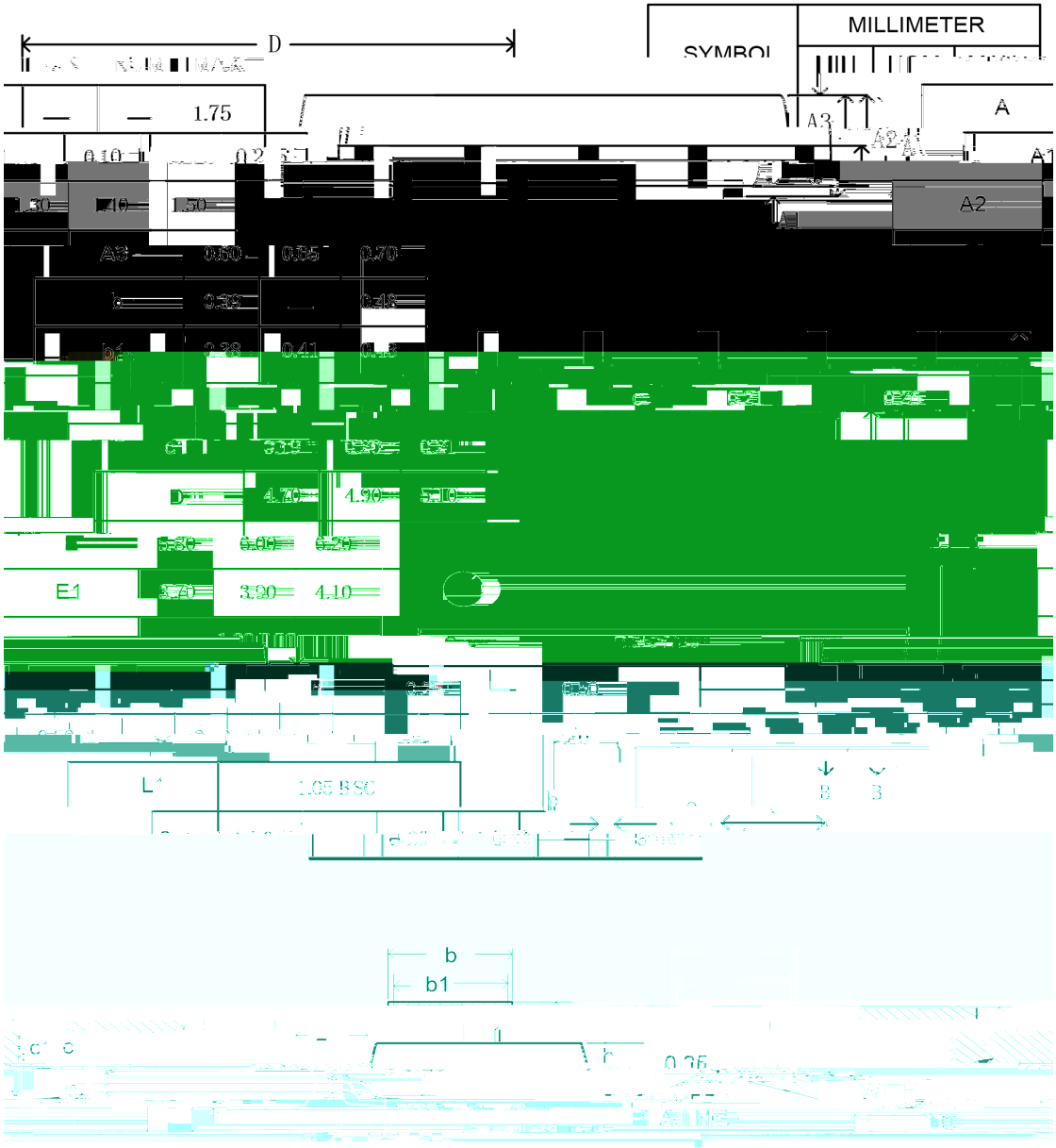
7.1 SOT23-6



7.2



7.2 SSOP10L


D
SYMBOL
MILLIMETER
1.75
A
A3
A2
A1
A2
0.10
1.30
1.40
1.50
A3
0.60
0.65
0.70
4.70
4.90
E1
3.90
4.10
L
1.05 BSC
B
B
b
b1
0.25

8

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