

SM3618XX

5V~150V
5V
<±3%
60mA~3A
95%

BUCK

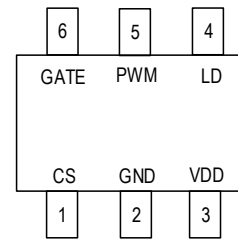
1MHz

PWM 65536

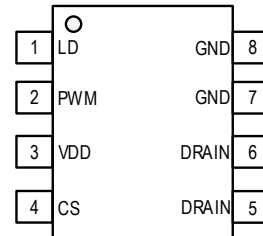
SOT23-6 SOP8

LCD

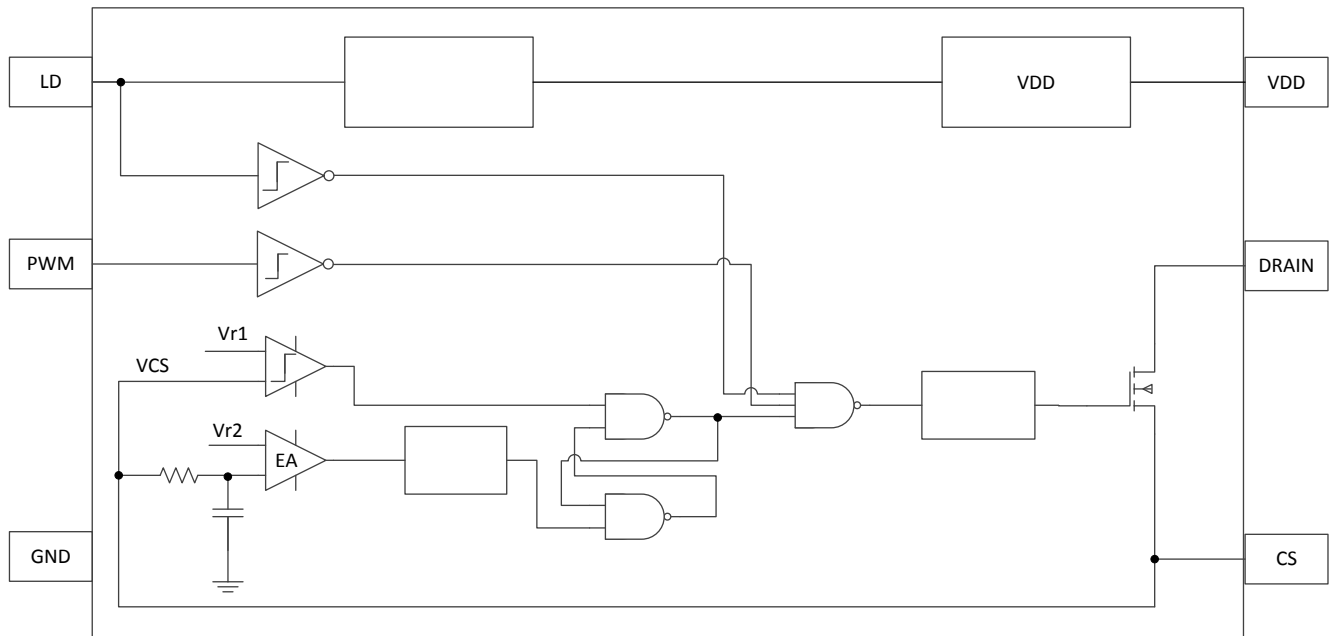
SM3618XX	LED	PWM	LED
	5V~150V		1M
95%	R _{CS}		DIM
PWM		PWM	
65536		±3%	



SOT23-6



SOP8



1 SOT23-6

1	CS	
2	GND	
3	VDD	
4	LD	
5	PWM	PWM
6	GATE	MOS

2 SOP8

1	LD	
2	PWM	PWM
3	VDD	
4	CS	
5 6	DRAIN	MOS DRAIN
7 8	GND	

业务电话：400-033-6518

注：如需最新资料或技术支持，请与我们联系。

SOP8 SM3618①②

①	A	MOS	60V	SOP8
	C	MOS	100V	
	E	MOS	150V	
②	A	MOS	2A	
	B	MOS	3A	

SOT23-6 SM3618③

③	T	MOS	SOT23-6

SM3618XX	SOP8	100000 /	4000 /	13
SM3618T	SOT23-6	-	3000 /	7

1

T_A=25°C

VDD	VDD	-0.3~7.0		V	
V _{CS}	CS	-0.3~7.0		V	
V _{DIM}	DIM	-0.3~7.0		V	
V _{LD}	LD	-0.3~7.0		V	
R _{θJA}	PN	2	SOT23-6	210	°C/W
			SOP8	130	
P _D	3		SOT23-6	0.35	W
			SOP8	0.5	
T _J		-40~150		°C	
T _{STG}		-55~150		°C	
V _{ESD}	HBM	>2		KV	

1

2 R_{θJA} T_A=25°C

JEDEC JESD51

3

T_{JMAX} R_{θJA}

T_A

P_D = (T_{JMAX}-T_A) / R_{θJA}

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V _{LD-HALF}	LD	VDD=5V	5.6	6	-	V
I _{LD-HALF}	LD	VLD=6V VDD=5V	13	100	-	μA
T _{DIM-MIN}	DIM	VDD=5V	30	-	-	nS



6

VDD=5V

SM3618XX LED LED PWM
5V 1M 95% R_{CS}
DIM PWM PWM 65536 ±3%
BUCK CCM

SM3618XX VDD VDD 4.3V VDD
5V VDD

$$VDD = VIN - I1 * R1(V)$$

I1 R1
I1 VDD

R1

47uF 0.6A

R1

VIN	5V	12V	24V	48V	56V
R3	100Ω	1K	2.7K	6.2K	7.5K

SM3618XX CS
CS R_{CS} DIM LD 1.2V
CCM CCM

$$I_{OUT} = \frac{V_{EA-REF}}{R_{CS}} (mA) \quad V_{EA-REF} = 205mV$$

SM3618XX PFM SM3618XX
CCM

$$I = \frac{V_{CS} - V_{EA-REF}}{R_{CS}}$$

$$T_{on} = \frac{I_{PK} L}{VIN - V_{D1} - V_{LED} - I_{OUT} * (R_L + R_{DS-ON} + R_{CS})}$$

$$T_{off} = \frac{I_{PK} L}{V_{D2} + V_{LED} + I_{OUT} * R_L}$$

$$F_{sw} = \frac{1}{T_{off} + T_{on}}$$

V_{D1}

V_{D2}

V_{LED}

R_L

R_{DS-ON}

MOS

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I_{out}
 50K~1M
 CS
 SM3618XX PWM
 1.2V
 0 100% I_{out}
 LD 0.25~1.2V
 6V
 PWM 0.1V
 PWM
 65536
 DIM
 LD 0.1V
 LD PWM
 LD
 0.8V
 PWM
 30nS
 LD
 PWM
 LD
 PWM

$$I_{F(AVG)} \geq \frac{3 \times I_{OUT} \times T_{off}}{T_{off} + T_{on}}$$

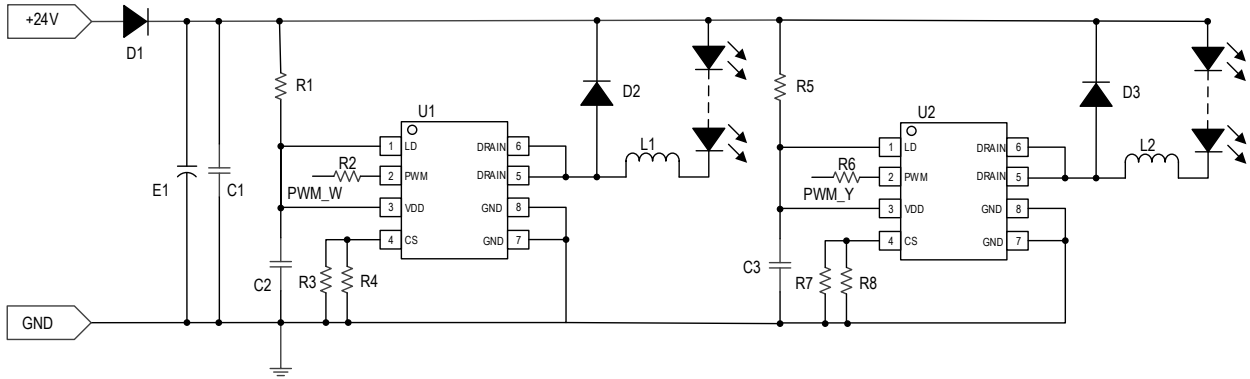
VDD
 VDD 1uF
 ESR X5R X7R
 MOS VDD MOS
 VDD
 125

$$P_{D(max)} = \frac{T_j - T_a}{R_{JA}}$$

T_j IC T_a R JA
 $P_D(W) = I_{out}^2 \times R_{DS(ON)} \times V_{out}/V_{IN}$
 I_{out} $R_{DS(ON)}$ V_{out} V_{IN}

SM3618EA

18V/300mA



BOM

R1	R5	2.7K/1206	C1	100nF/50V	L1	L2	CDRH127-100
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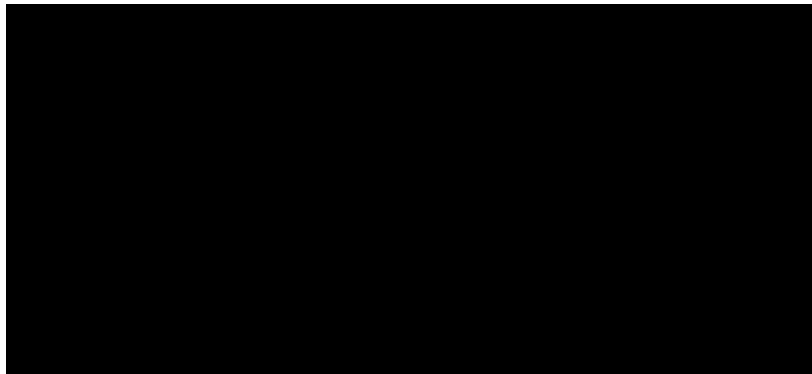
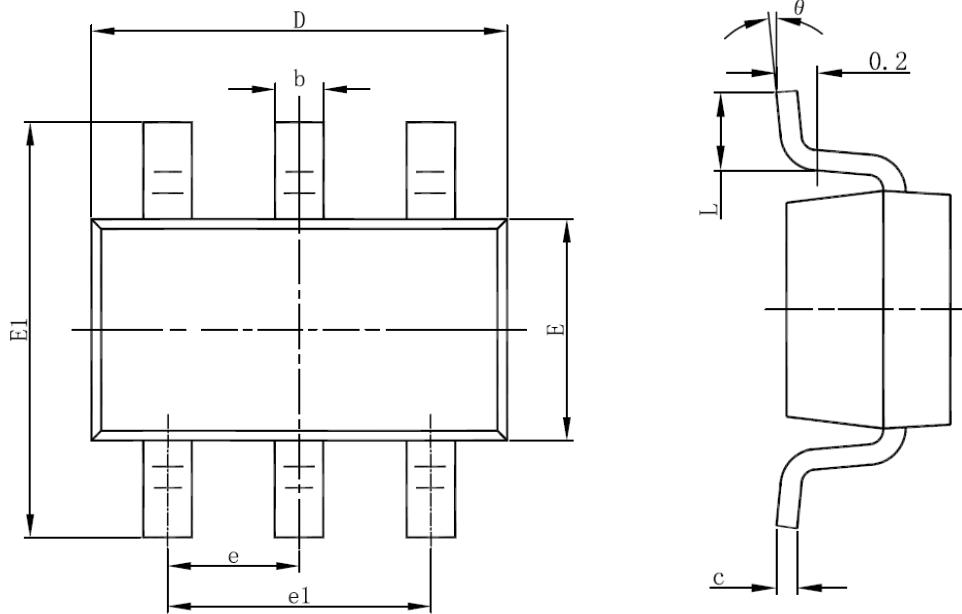
RoHs

J-STD-020

mm³ < 350

mm³ 350~2000

SOT23-6

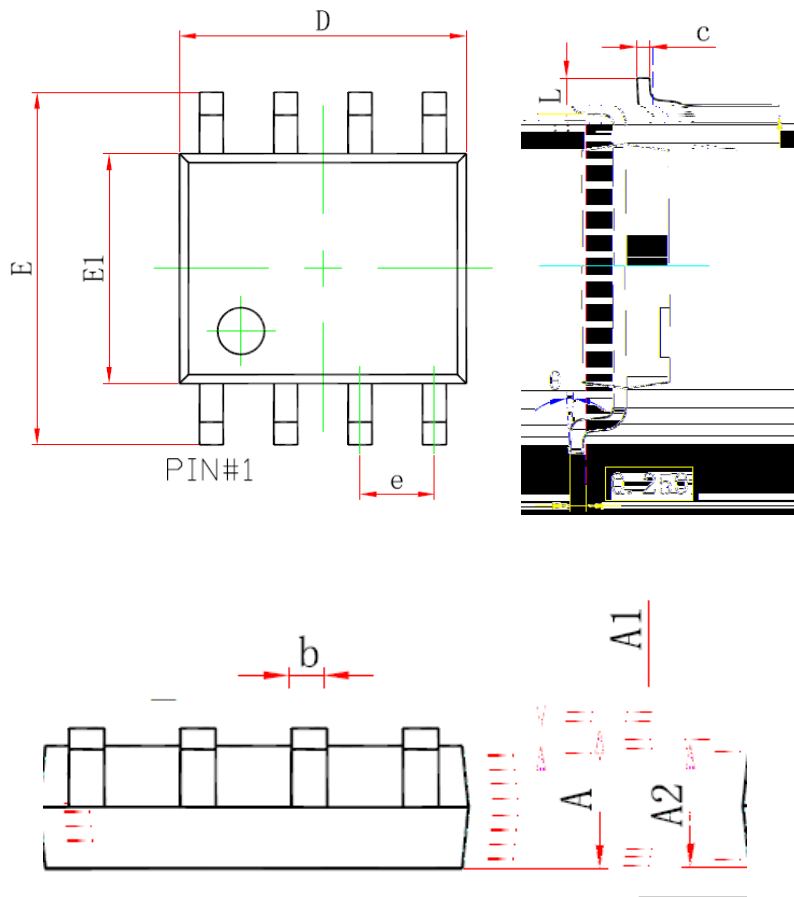


Symbol	Min(mm)	Max(mm)
A	0.95	1.45
A1	-	0.15
A2	0.95	1.35
b	0.2	0.7
c	0.05	0.35
D	2.7	3.3
E	1.4	1.9
E1	2.5	3.2
e	0.95(BSC)	
e1	1.9(BSC)	
L	0.2	0.8
θ	0°	10°

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SOP8



Symbol	Min(mm)	Max(mm)
A	1.25	1.95
A1	-	0.25
A2	1.25	1.75
b	0.25	0.7
c	0.1	0.35
D	4.6	5.3
e	1.27(BSC)	
E	5.7	6.4
E1	3.7	4.2
L	0.2	1.5
θ	0°	10°

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