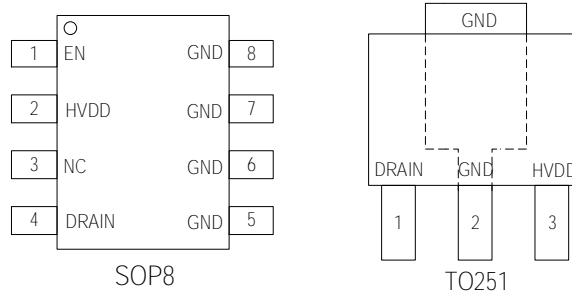


SM7015NA

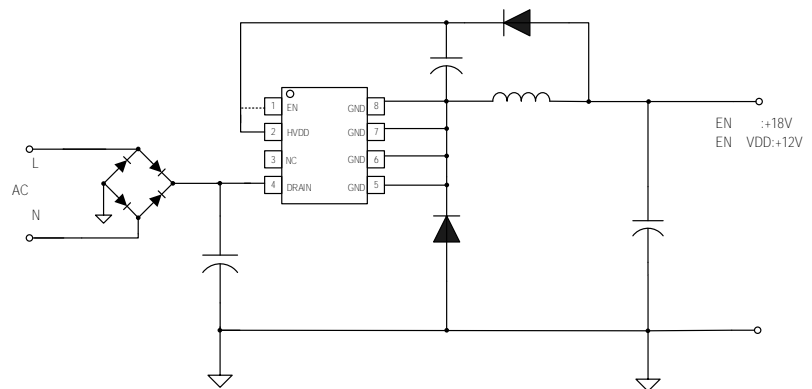
- ◆ 85Vac~265Vac
- ◆ BUCK
- ◆ 500V
- ◆ 100mW@220Vac
- ◆ 66.5KHz
- ◆ PWM
- ◆ EMC
- ◆ EMC
- ◆ SOP8 TO251

SM7015NA
85Vac~265Vac
CS
SM7015NA 12V/18V
SM7015NA 500V
PCB



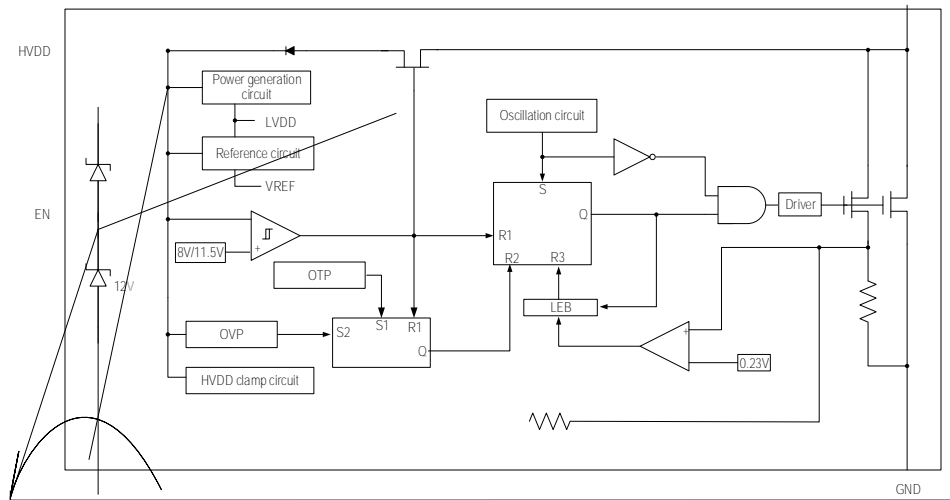
		1	2
SM7015NA SOP8	85Vac~265Vac	150mA	180 mA
	180Vac~265Vac	180 mA	200mA
SM7015NA TO251	85Vac~265Vac	180 mA	200mA
	180Vac~265Vac	200mA	250mA

1 75 2Hour
2 75 2Minute

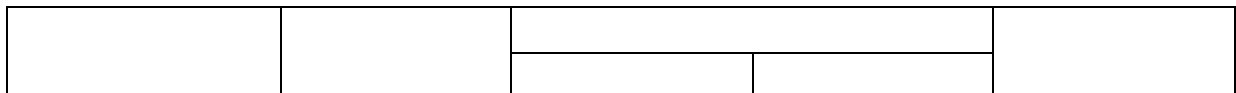


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		SOP8			
1	EN	EN	HVDD	12V	EN 18V
2	HVDD				
3	NC				
4	DRAIN	MOS		DRAIN	
5,6,7,8	GND	MOS		SOURCE	
TO251		12V	SM7015NA-12	18V	SM7015NA-18
1	DRAIN	MOS		DRAIN	
2	GND	MOS		SOURCE	
3	HVDD				

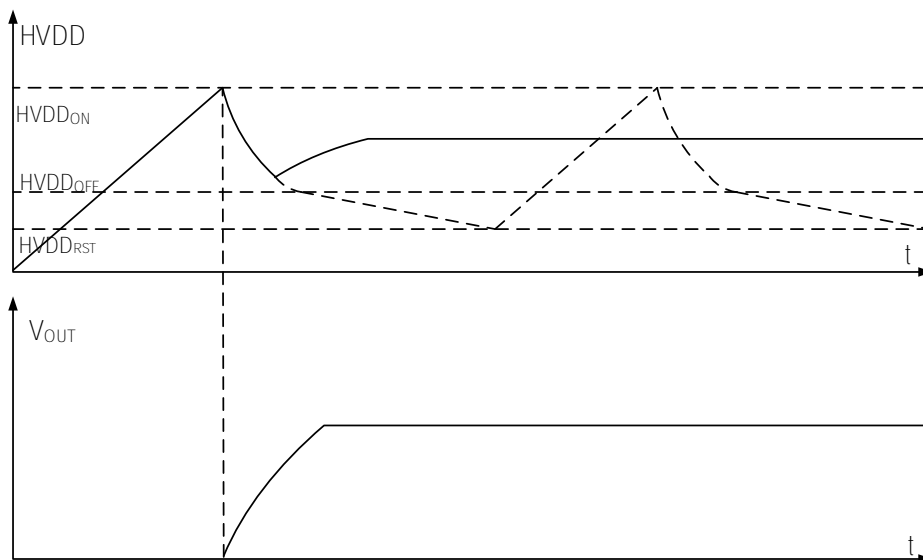
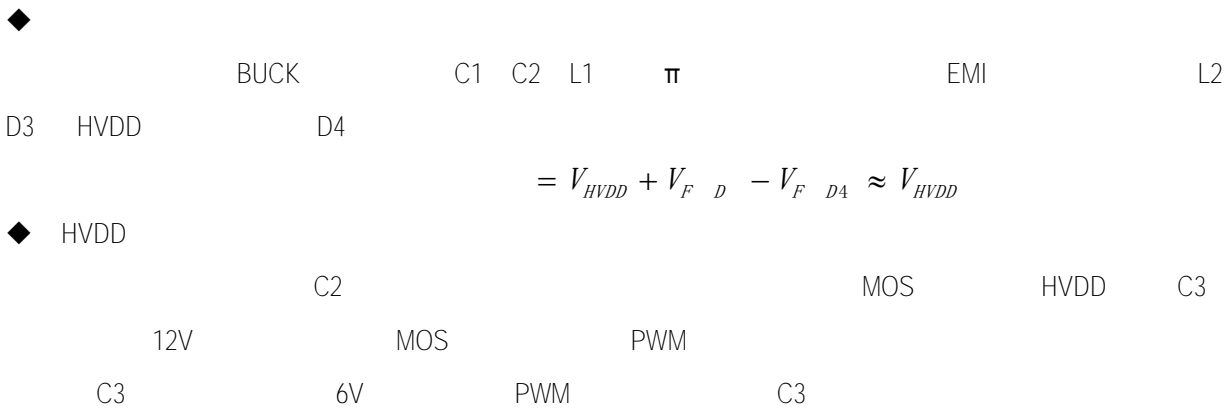
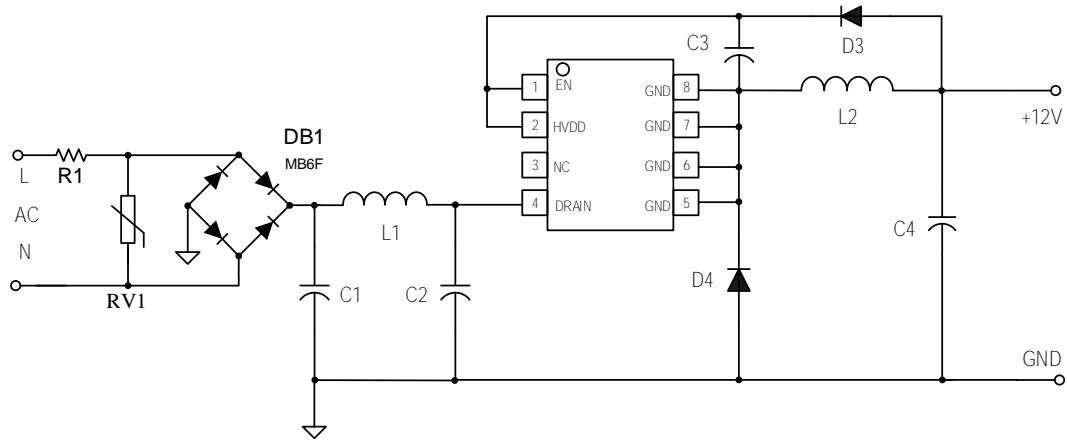


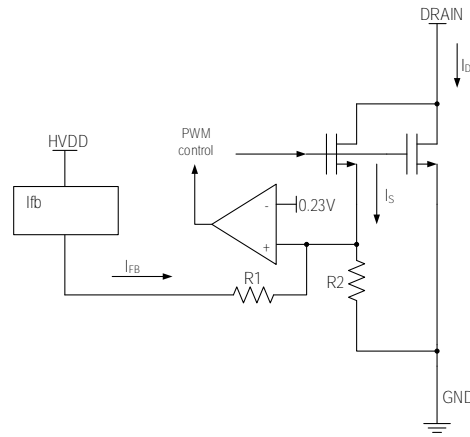
1

$T_A=25^{\circ}\text{C}$

V_{DS}	DRAIN	-0.3-500	V
HVDD	HVDD	-0.3-20	V

I_{HVDD}





MOS

I_D

I_S

I_S I_D

$$I_D = G_{ID} I_S$$

$$(I_S + I_{FB}) R_2 = 0.23V$$

$$I_S = \frac{0.23V}{R_2} - I_{FB}$$

$$I_D = G_{ID} \left(\frac{0.23V}{R_2} - I_{FB} \right)$$

I_{FB}

I_D

I_{FB}

I_D

I_{FB}

$(0.23V / R_2)$

PWM

◆ BUCK

BUCK

D

$$D = \frac{V_{out}}{V_{in_min}}$$

$K_{RF}=0.3$

$$K_{RF} = \frac{\Delta I}{2 I_{out}} = 0.3$$

BUCK

L

$$L = \frac{V_{out} (1 - D)}{\Delta I f_{osc}}$$

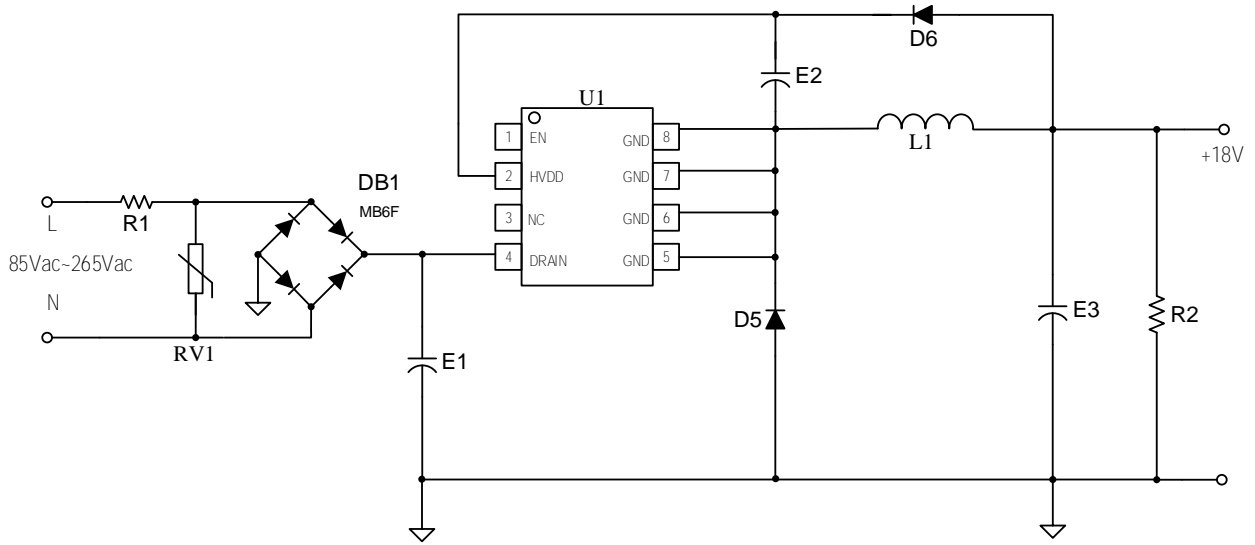
V_{out}

ΔI

f_{osc}

66.5KHz

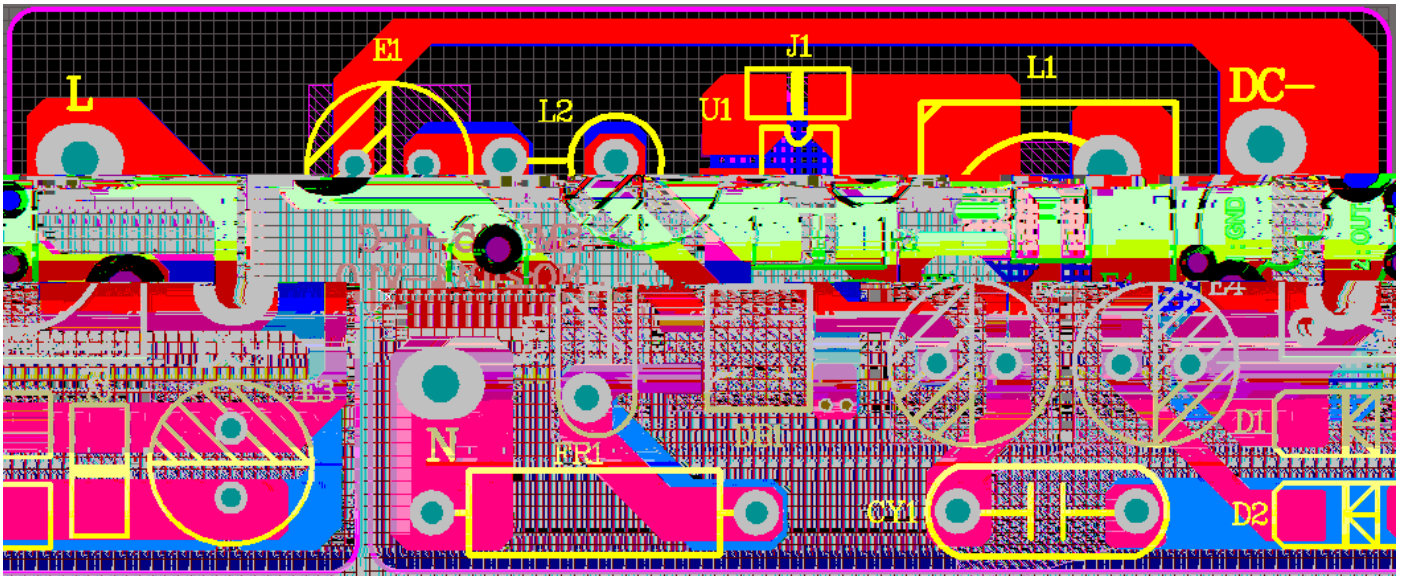
SM7015NA 18V/150mA



BOM

RV1	7D471	R1	22R/2W	E3	220uF/25V
DB1	MB6F	R2	11K/0805	L1	1.5mH
D5 D6	E1J	E1	2.2uF/400V		
U1	SM7015NA	E2	2.2uF/50V		

PCB layout

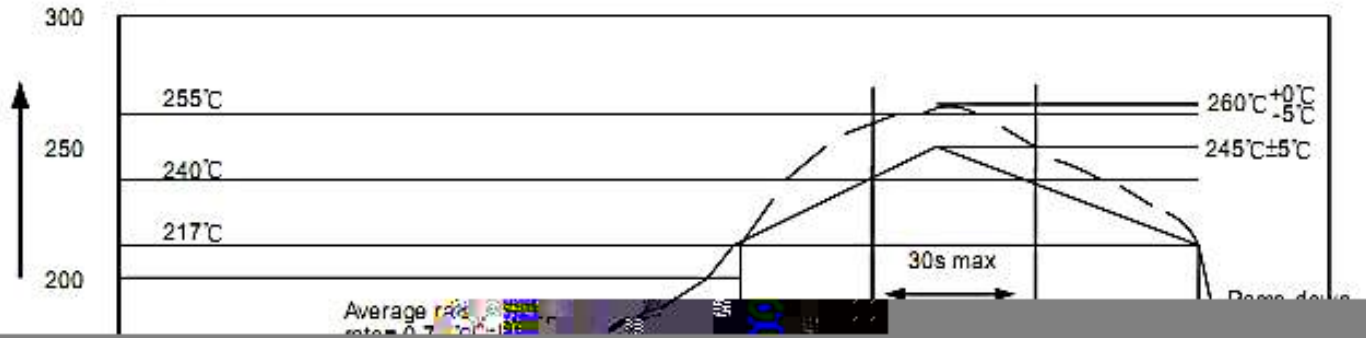


SOP8	◆	◆	IC	5	6	7	8	GND	5*7mm
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RoHs

J-STD-020

Temperature (°C)

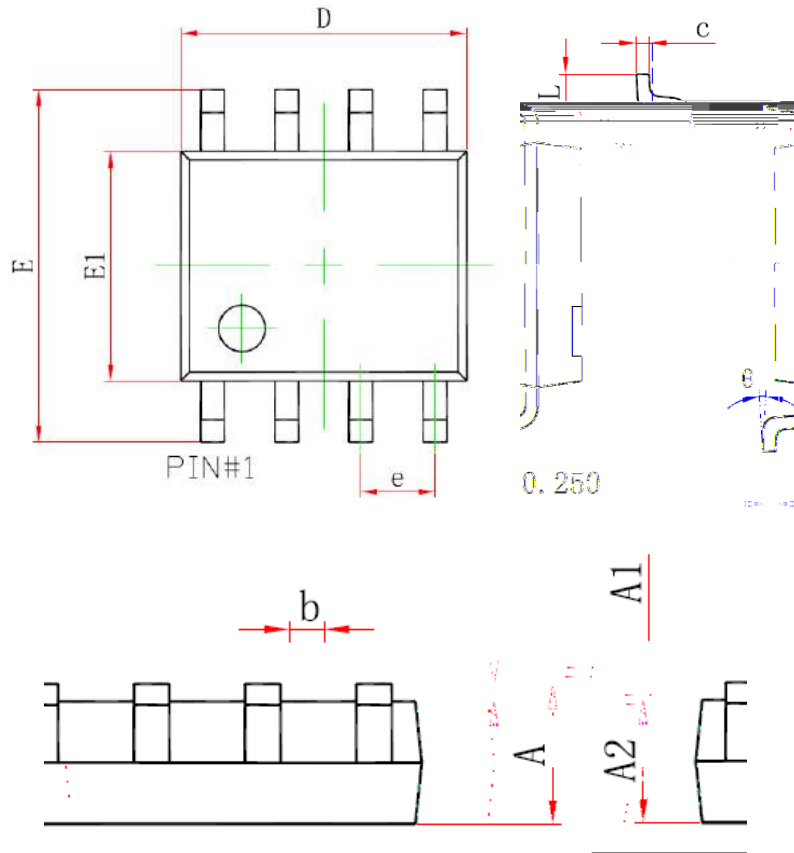


	mm ³ < 350	mm ³ 350-2000	mm ³ ≥ 2000
<1.6mm	260+0° C	260+0° C	260+0° C
1.6mm-2.5mm	260+0° C	250+0° C	245+0° C
≥2.5mm	250+0° C	245+0° C	245+0° C

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SOP8

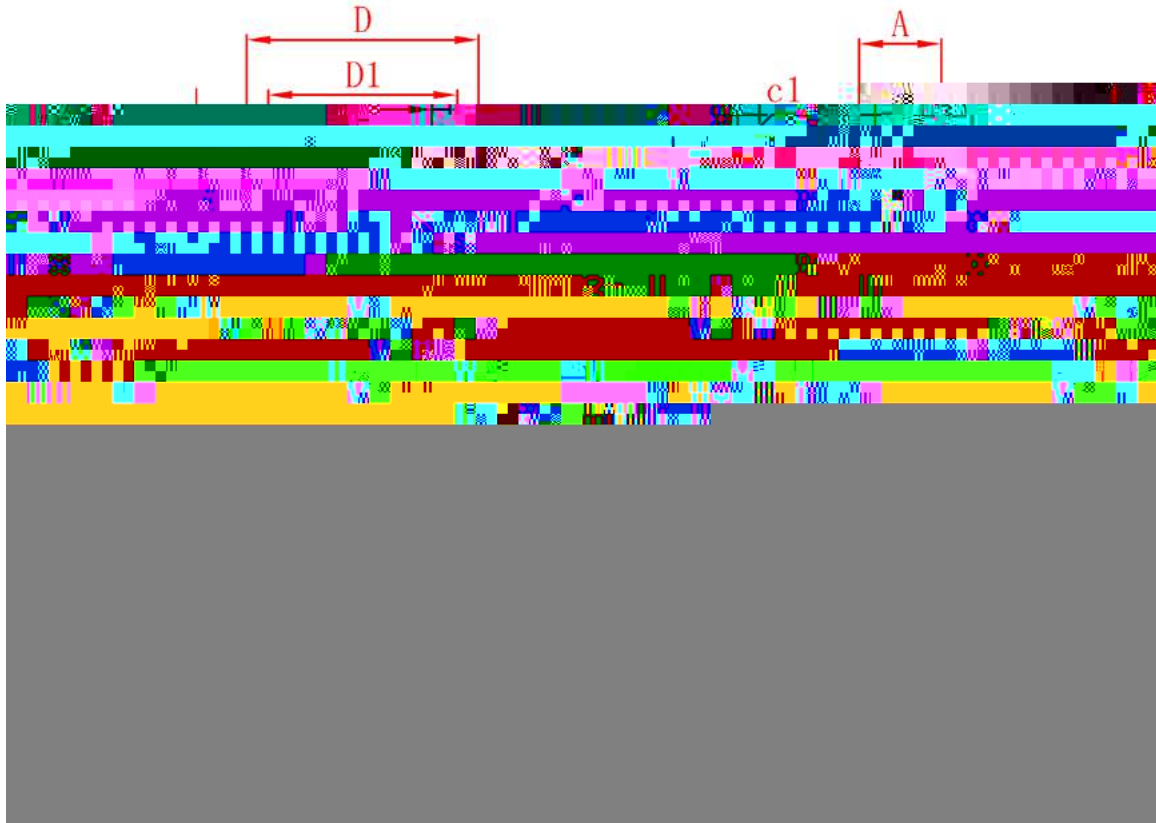


Symbol	Min(mm)	Max(mm)
A	1.25	1.95
A1	-	0.25
A2	1.25	1.75
b	0.25	0.7
c	0.1	0.35
D	4.6	5.3
e	1.27(BSC)	
E	5.7	6.4
E1	3.7	4.2
L	0.2	1.5
θ	0°	10°

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TO251



Symbol	Min(mm)	Max(mm)
A	2.2	2.42
A1	0.89	1.35
B	0.5	1.65
b	0.5	0.7
b1	0.7	0.96
c	0.43	0.58
c1	0.43	0.58
D	6.35	6.7
D1	5.2	5.4
E	5.4	6.25
e	2.28(TYP)	
e1	4.5	4.7
L	7.5	9.65

2022.08.19	ZIQOSZZV1.0	
2023.02.13	ZIQOSZZV1.1	

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