

3A

LS8P2050

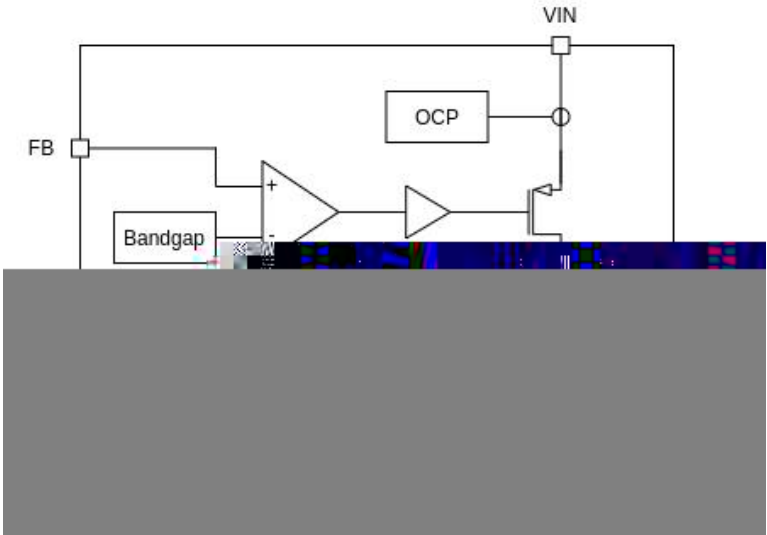
LS8P2050	3A	●	V_{in}	2.2V	5.5V
		●	V_{out}	0.6V	5.0V
2.2V-5.5V	ADJ	●		3A	
	0.6V-5.0V				
		●		2A	
			150mV	3A	200mV
Power Good		●			1%
		●		83 μ Vrms@300Hz	300kHz
		●		70dB@1kHz	
		●	ESD	HBM	2000V
		●			



C5 C6 10 μ F
 C1 C2 R1 R2 C3

/V	R2/k Ω	R1/k Ω	C3/nF	C1/ μ F	/V
1.0	1 $\pm$ 1%	1 $\pm$ 1%	1.5	22	1.00
1.2		1.4 $\pm$ 1%	1.5	22	1.20
1.5		2 $\pm$ 1%	1.5	22	1.50
1.8		2.61 $\pm$ 1%	1.5	22	1.80
2.5		4.02 $\pm$ 1%	1	22	2.51
3.3		5.6 $\pm$ 1%	1	22	3.30
5.0		9.1 $\pm$ 1%	1	22	5.05

LDO VIN
 VOUT LDO LDO



LS8P2050			-40 ~+125

LS8P2050

20 LD 3.5 × 3.5 QFN

10 VOUT
9 VOUT
8 GND
7 VIN
6 VIN



V_{IN} -0.3V~+8.0V
 V_{OUT} -0.3V~+5.0V
 I_{OUT} 3.6A
 PG CE ADJ SS -0.3V~+5.5V
 θ_{JA} 48 /W
 θ_{JC}^* 4 /W
 T_j +150
 -65 ~+150
 * θ_{JC} Epad

V_{IN} +2.2V~+5.5V
 V_{OUT} +0.6V~+5.0V
 I_{OUT} 0A~3.0A

$V_{IN}=V_{OUT}+0.4V$

$V_{OUT}=1.8V$ $C_{IN}=C_{OUT}=10\mu F$ $-40 \leq T_A \leq 125$ $I_{LOAD}=0A$

V_{IN}	/	2.2	/	5.5	V
V_{OUT}	/	0.6	/	5.2	V
	$V_{OUT}=1.8V$ $V_{IN}=2.2V$ $I_{LOAD}=0A$	/	0.5	/	
	$V_{OUT}=1.8V$ $2.2V < V_{IN} < 3.6V$ $0A < I_{LOAD} < 3A$	-1.0	/	1.0	
/	$V_{OUT}=2.5V$ $V_{IN}=2.9V$ $I_{LOAD}=0A$	/	0.5	/	%
	$V_{OUT}=2.5V$ $2.9V < V_{IN} < 5.5V$ $0A < I_{LOAD} < 3A$	-1.0	/	1.0	

	I_{SC}	$V_{OUT}=0V \quad 2.2V < V_{IN} < 5.5V$	/	3.6	/	A
	$UVLO_{start}$	$V_{IN}=2.2V$	1.1	1.7	1.9	V
	$UVLO_{HYS}$	$V_{IN}=2.2V$	0.02	0.1	0.2	V
	T_{SHDN}	$V_{OUT}+0.4V < V_{IN} < 6V$	/	160	/	
	ΔT_{SHDN}	$V_{OUT}+0.4V < V_{IN} < 6V$	/	30	/	
	/	/	-40	25	125	
	PSRR	$f=10kHz \quad I_{LOAD}=3A \quad V_{IN}=2.2V$	/	70	/	dB
		$f=500kHz \quad I_{LOAD}=3A \quad V_{IN}=2.2V$	/	30	/	
		$I_{LOAD}=10mA \quad BW=300Hz < f < 300kHz$	/	83	/	μV_{RMS}
	V_{EN}	$2.2V < V_{IN} < 5.5V$	0.5	0.7	1.0	V
	$V_{EN(HYS)}$	$2.2V < V_{IN} < 6V$	100	200	500	mV
	I_{EN}	$V_{IN}=5.5V \quad V_{EN}=3V$	/	/	5	μA
PG						
PG	PG_{RISE}	$V_{IN}=2.2V \quad V_{FB}=420mV \quad 480mV$	84	92	96	$\%V_{OUT}$
PG	PG_{HYS}	$V_{IN}=2.2V \quad V_{FB}=420mV \quad 480mV$	1.5	4	5	%
PG	V_{PG_low}	$V_{IN}=2.2V$	610	667	910	mV
PG	I_{PG_lkg}	$V_{IN}=2.2V$	/	0.05	5	μA
	I_{SS}	/	-8.5	-5	-3.5	μA

$V_{IN}=2.2V$ $V_{OUT}=1.8V$

10 μF

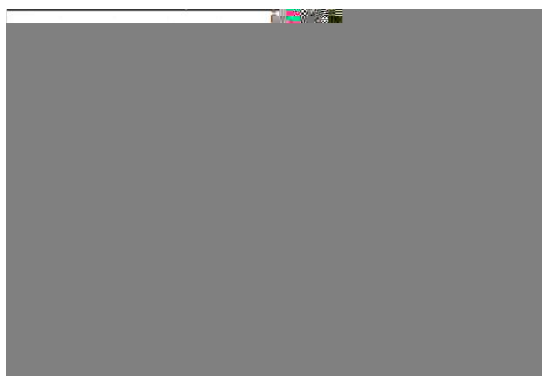
25

10nF

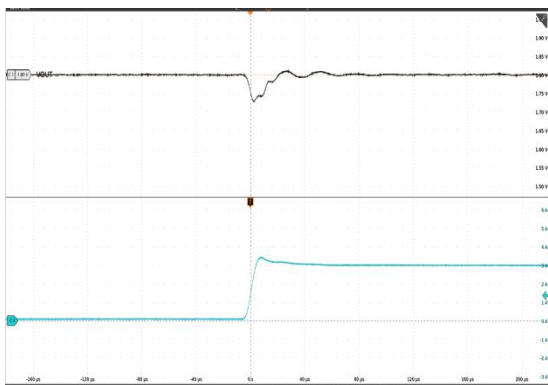
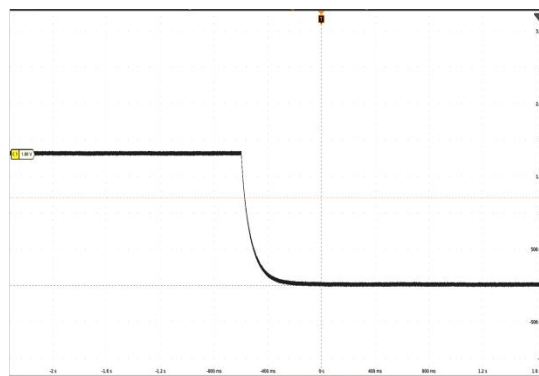
输出电压随温度的变化



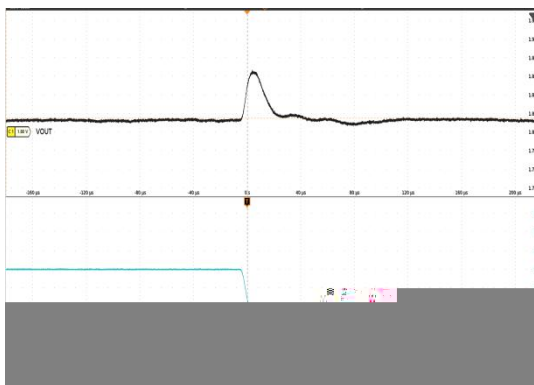
VREF电压随温度的变化



V_{OUT} EN

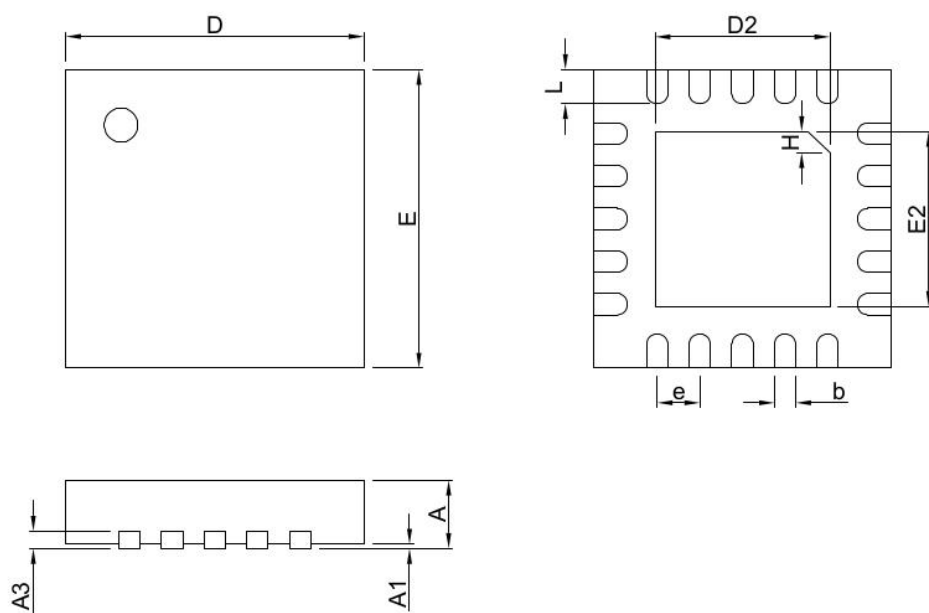


$V_{OUT}=1.8V$ 3A



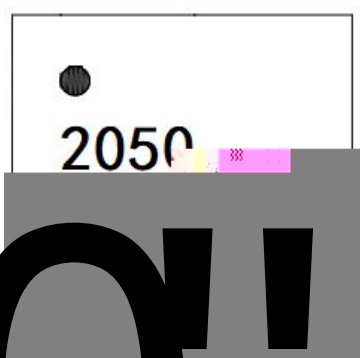


PSRR



mm

	MIN	NOM	MAX
A	0.70	0.75	0.80
A1	0.00	0.02	0.05
A3	0.203REF		
b	0.20	0.25	0.30
D	3.40	3.50	3.60
E	3.40	3.50	3.60
D2	2.00	2.05	2.10
E2	2.00	2.05	2.10
e	0.50BSC		
L	0.35	0.40	0.45
H	0.35REF		



a
b “ 2050 ” n ”

a

b

c

d ESD

e

f 45% 75%

+10 +30

V1.0	
V1.1	1. 2. 3. 4.

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