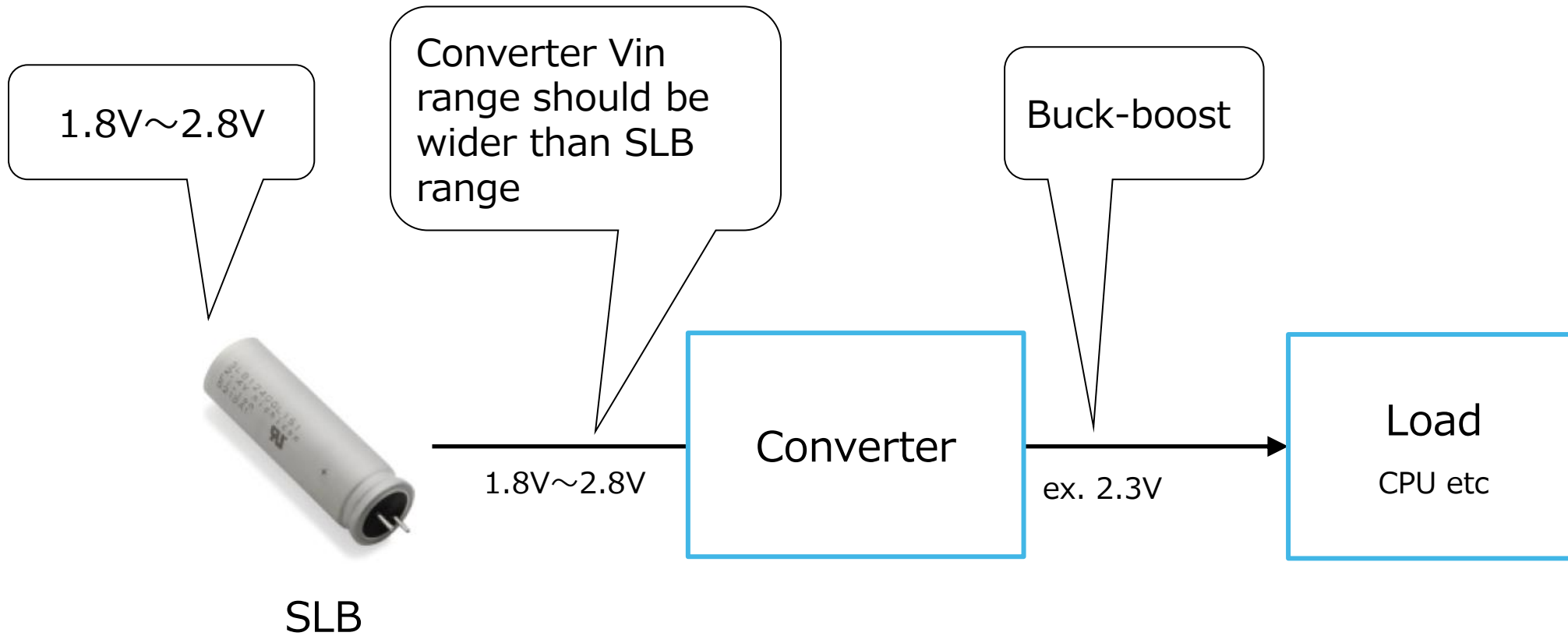


MAX77827

Buck-boost converter

<https://www.maximintegrated.com/en/products/power/switching-regulators/MAX77827.html>

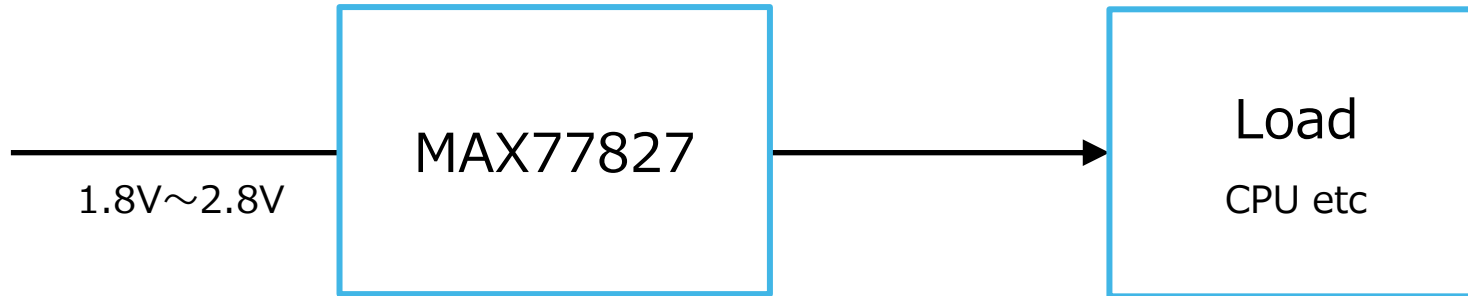
Converter requirement for SLB



MAX77827 Characteristics



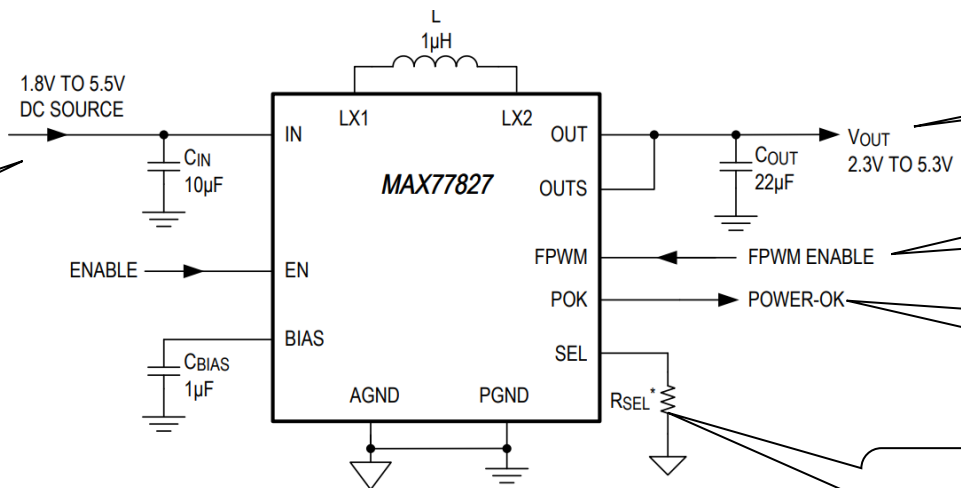
SLB



1.8V~5.5V

With UVLO Function

⇒ P4



2.3V~5.3V

⇒ P6

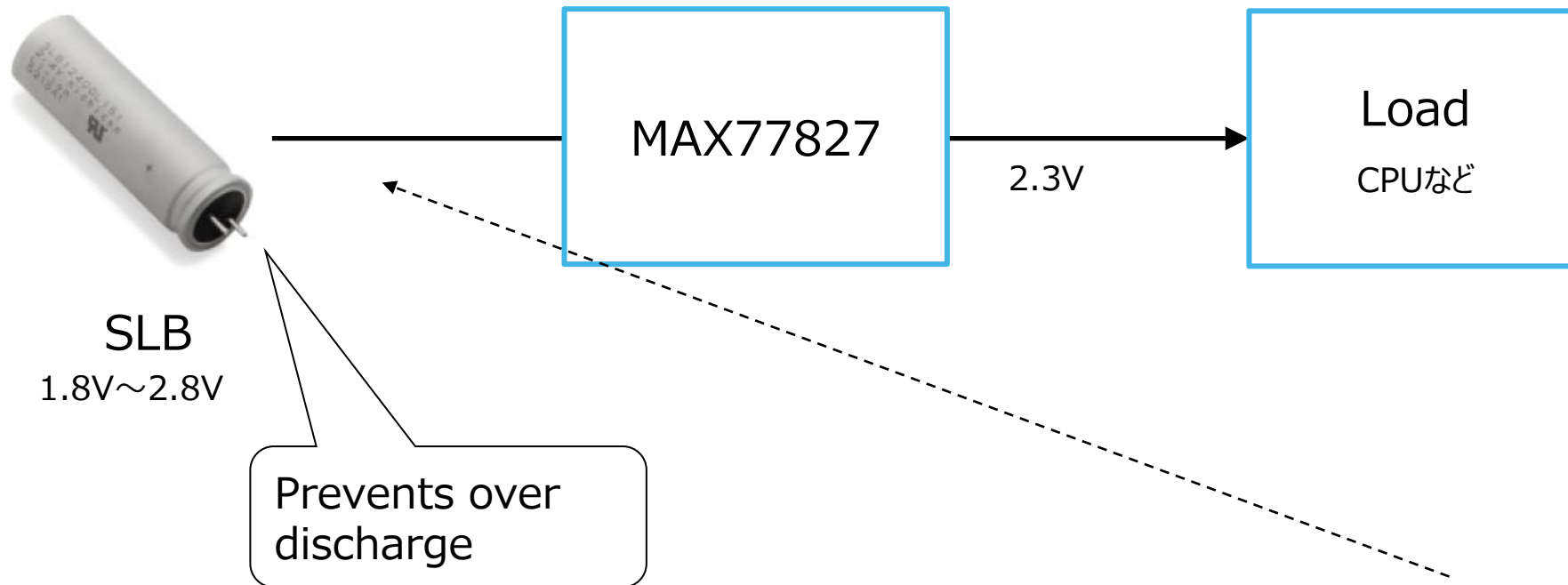
High = FPWM mode

Low when Vout < 90%(TYP)

Set Vout with 1 resistor

⇒ P5

UVLO Function



⇒ See page 7

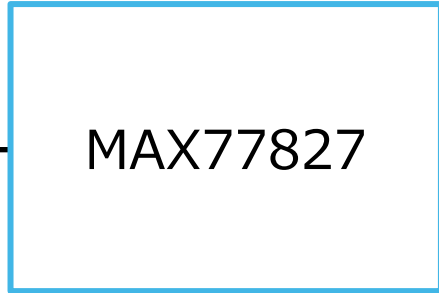
SYS Undervoltage-Lockout Threshold	V_{UVLO_R}	SYS rising, options B and C	2.4	2.5	2.6	V
		SYS rising, options A and D	1.70	1.75	1.80	
	V_{UVLO_F}	SYS falling, options B and C	1.9	2.05	2.2	
		SYS falling, options A and D	1.62	1.68	1.74	

※ Stop Switching when SLB voltage is under V_{UVLO_F}
(Restart when the voltage is above V_{UVLO_R})

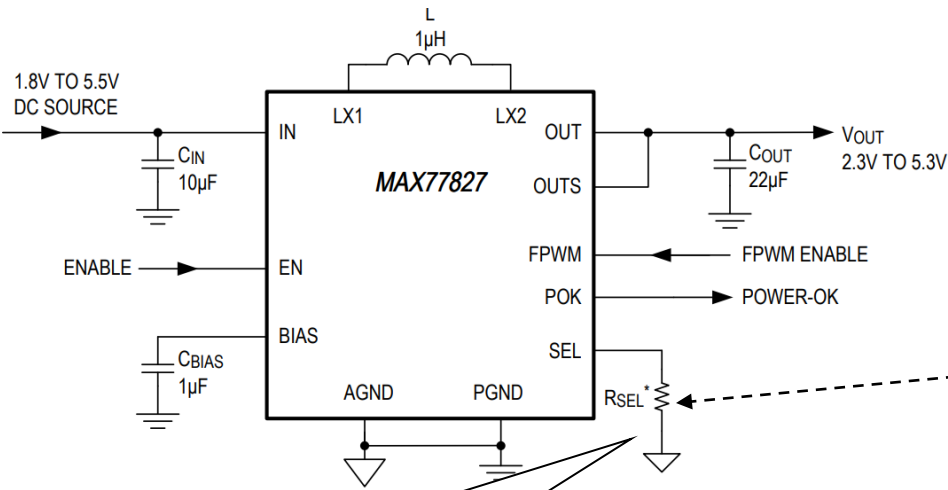
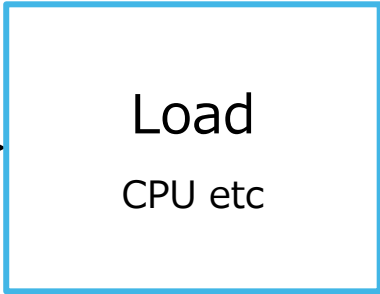
Set Vout with R_{SEL}



SLB



2.3V~5.3V

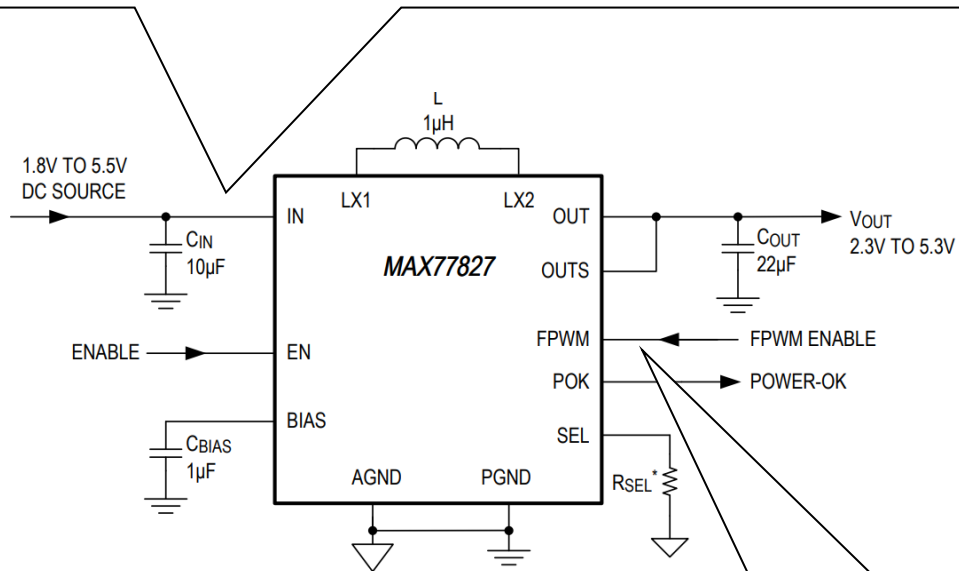


R_{SEL} (k Ω)	V_{out} (V)
909	2.3
768	2.4
634	2.5
536	2.6
452	2.7
383	2.8
324	2.8
267	2.85
191	2.9
133	3
113	3
95.3	3.1
80.6	3.15
66.5	3.15

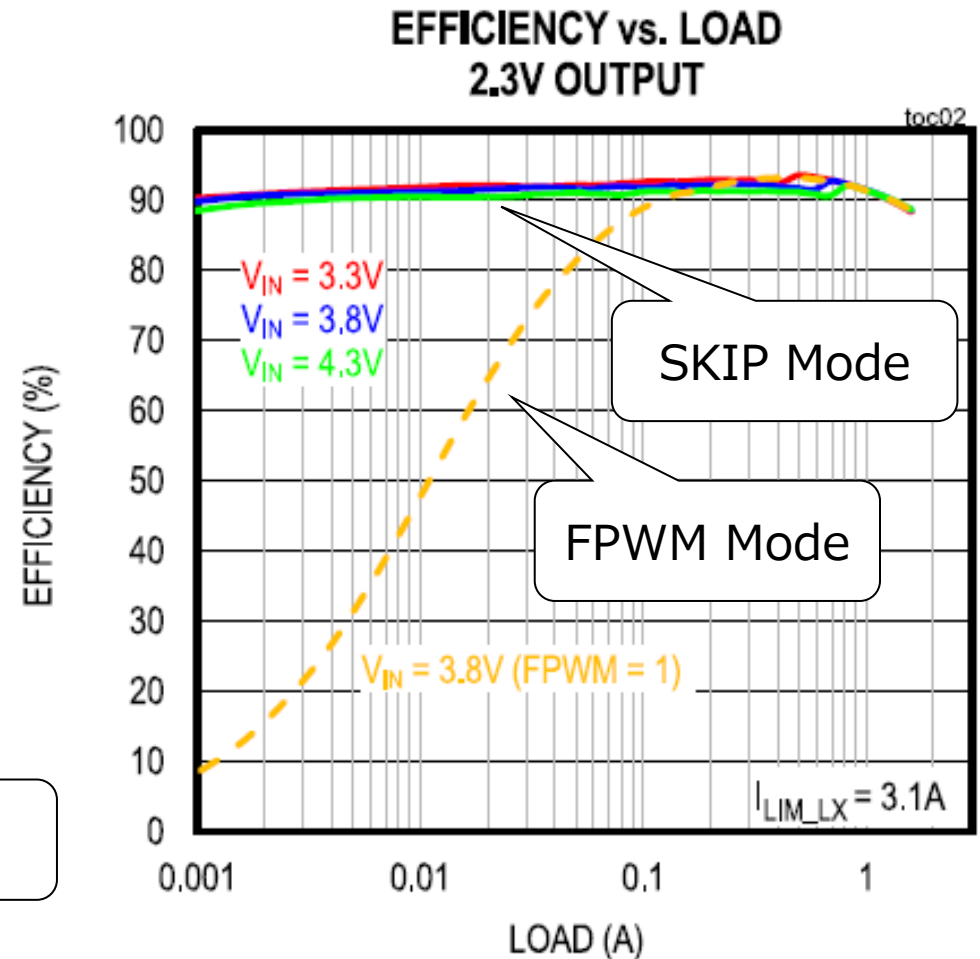
R_{SEL} (k Ω)	V_{out} (V)
56.2	3.2
Open	3.3
Short to GND	3.3
47.5	3.4
40.2	3.45
34	3.5
28	3.6
23.7	3.7
20	3.75
16.9	3.8
14	3.9
11.8	4
10	4.1
8.45	4.2
7.15	4.4
5.9	4.5
4.99	5
226	5.2
162	5.3

Set Vout with 1 resistor

6uA Quiescent current during SKIP mode



High = FPWM mode

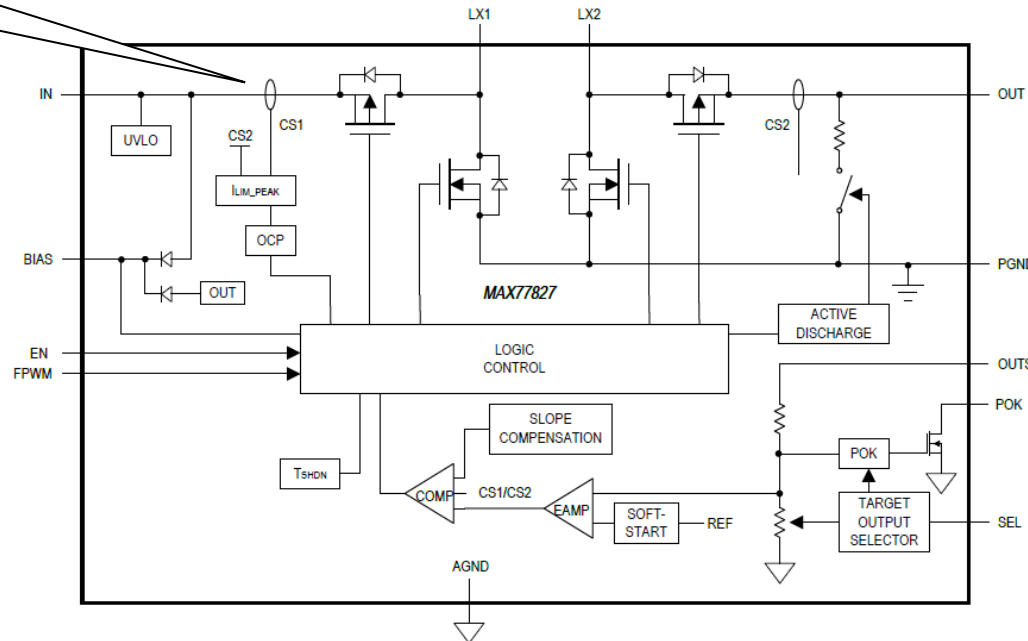
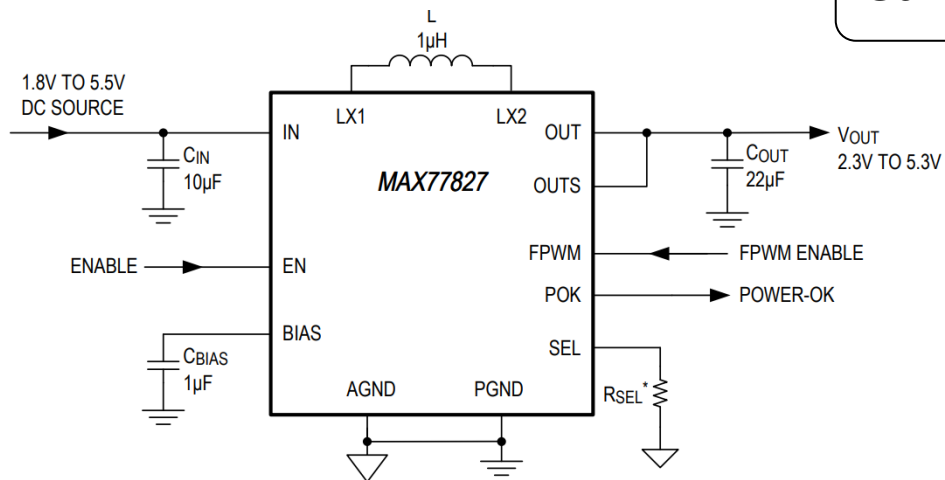


※ SKIP mode is default. If the load becomes heavy, SKIP mode to FPWM mode

※ The benefit of FPWM mode is a constant Ripple Voltage.

Two types of Current Limit

Current limit



⇒ See page 4

LX1/2 Current Limit	I _{LIM_LX}	T _J = -40°C to +125°C, for A and C options	2.5	3.1	3.7	A
		T _J = -40°C to +125°C, for B and D options	1.3	1.8	2.3	

※ A,C : 3.1A(TYP) , Higher output power

※ B,D : 1.8A(TYP) , it can use the low saturation current inductor

A,B,C,D Difference

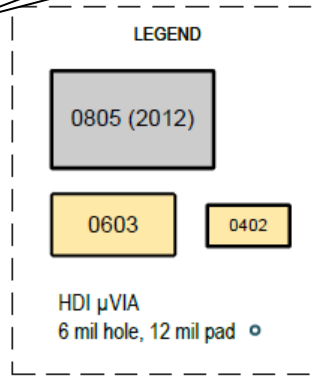
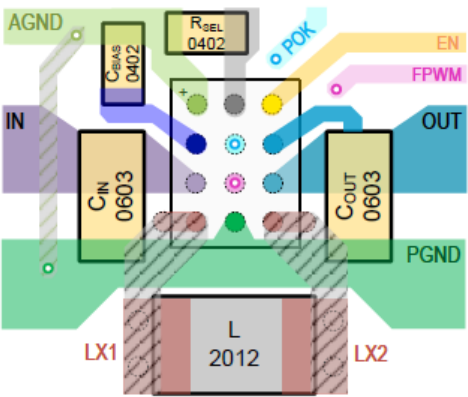
Ordering Information

P7

P4

PART NUMBER	TYP I _{LIM} (A)	UVLO RISING MAX (V)	PIN-PACKAGE
MAX77827AEWC+T	3.1	1.8	12 WLP
MAX77827BEWC+T	1.8	2.6	12 WLP
MAX77827CEWC+T	3.1	2.6	12 WLP
MAX77827DEWC+T	1.8	1.8	12 WLP
MAX77827AEFD+T	3.1	1.8	14 FC2QFN
MAX77827BEFD+T	1.8	2.6	14 FC2QFN
MAX77827CEFD+T	3.1	2.6	14 FC2QFN
MAX77827DEFD+T	1.8	1.8	14 FC2QFN

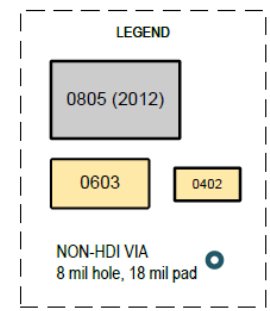
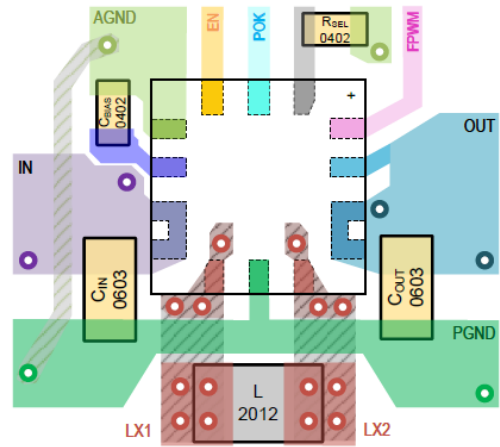
12 WLP



COMPONENT SIZES LISTED IN IMPERIAL (METRIC)

NOTE: PLACE C_{IN} AND C_{OUT} CLOSE TO THE IC TO MINIMIZE PARASITIC INDUCTANCE WITHIN THE LOOP

14 FC2QFN



COMPONENT SIZES LISTED IN IMPERIAL (METRIC)