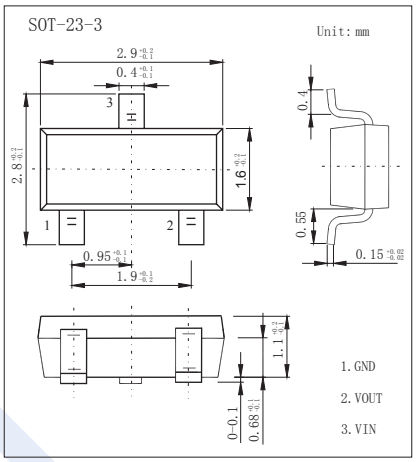
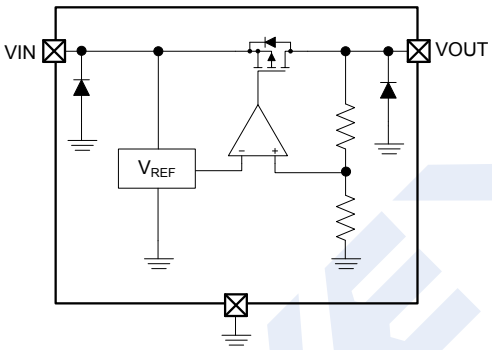
Low Power Consumption, CMOS LDO

WL2805N Series -HF



■ Features

- Quiescent current : 3μA Typ.
- Input voltage : 2.3V ~ 5.5V
- Output voltage : 1.2V ~ 3.3V
- Output current : 250mA @ VOUT>2V
- Output current : 100mA @ VOUT≤2V
- Dropout voltage : 100mV @ 100mA
- Recommend capacitor : 1uF
- Pb−Free Package May be Available. The G−Suffix Denotes a Pb−Free Lead Finish



■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Input Voltage Range	VIN	-0.3 to 6	V
Input Voltage	VIN	2.3 to 5.5	
VEN Range	VEN	-0.3 to VIN	
Output Voltage Range	VOUT	-0.3 to VIN	
Power Dissipation	PGM	300	mW
Thermal Resistance Junction to Ambient	RthJA	417	℃/W
Lead Temperature	TL	260	℃
Operating Temperature Range	TOPR	-40 to 85	
Junction Temperature	TJ	150	
Storage Temperature Range	Tstg	-55 to 150	

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■ Electrical Characteristics (V_{IN} = V_{OUT} +1V, C_{IN}=C_{OUT}=1uF, Ta=25°C, unless otherwise noted)

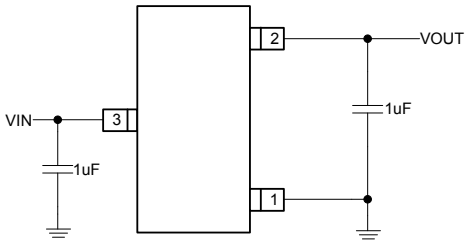
Parameter		Symbol	Test Conditions	Min	Typ.	Max	Unit
Output Voltage	WL2805N12-HF	V_{OUT}	V_{IN} = V_{OUT} +1V , I_{OUT}=1mA	1.17	1.2	1.23	V
	WL2805N13-HF			1.27	1.3	1.33	
	WL2805N15-HF			1.47	1.5	1.53	
	WL2805N18-HF			1.764	1.8	1.836	
	WL2805N25-HF			2.45	2.5	2.55	
	WL2805N28-HF			2.744	2.8	2.856	
	WL2805N30-HF			2.94	3	3.06	
	WL2805N33-HF			3.234	3.3	3.366	
Dropout Voltage		V_{DROP}	I_{OUT} =30mA, V_{OUT}=3V		30	100	mV
			I_{OUT} =100mA, V_{OUT}=3V		100	200	
Load Regulation		$\triangle V_{LOAD}$	I_{OUT} = 1~ 100mA		25		
Line Regulation		$\triangle V_{LINE}$	V_{IN}=V_{OUT}+1V~6V, I_{OUT}=40mA			0.1	%/V
Output Current		I_{OUT}	V_{OUT} > 2V			250	mA
			V_{OUT} ⩽ 2V			100	
Output short current limiter		I_{LIM}	V_{OUT}=GND		150		
Quiescent Current		I_Q	V_{IN} = V_{OUT} +1V, I_{OUT}=0A		3	5	uA
Power Supply Ripple Rejection		PSRR	Vp-p=1V, F=100Hz, I_{OUT}=10mA		-50		dB
			Vp-p=1V, F=1KHz, I_{OUT}=10mA		-30		

■ Marking

NO	WL2805N12-HF	WL2805N13-HF	WL2805N15-HF	WL2805N18-HF
Marking	F12 F*	F13 F*	F15 F*	F18 F*

NO	WL2805N25-HF	WL2805N28-HF	WL2805N30-HF	WL2805N33-HF
Marking	F25 F*	F28 F*	F30 F*	F33 F*

■ Typical Applications



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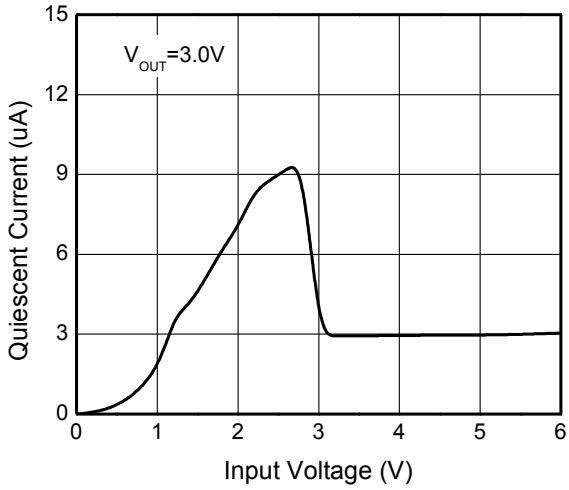
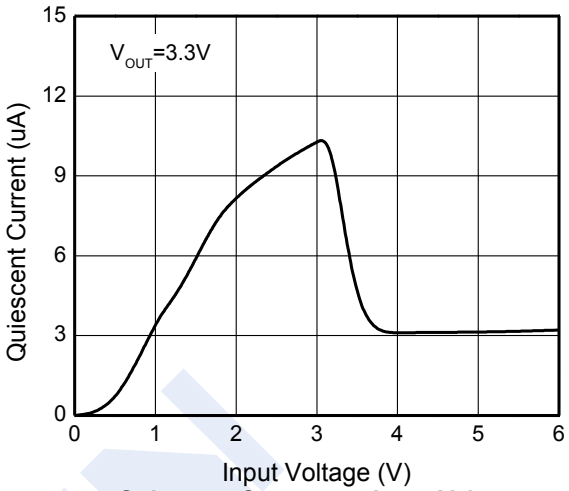
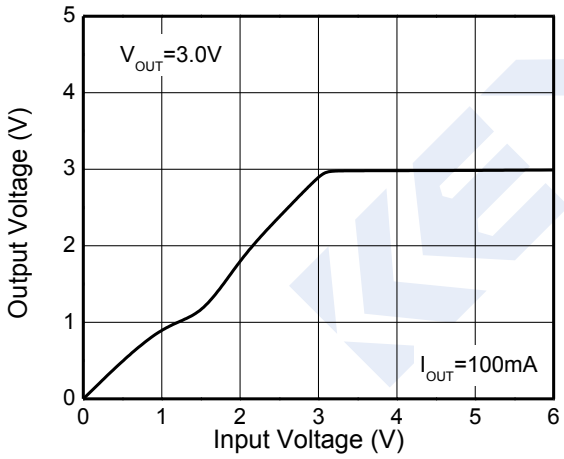
■ Typical Characterisitics



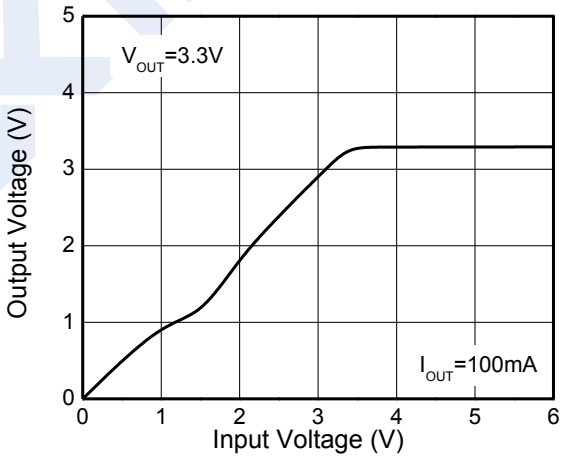
Quiescent Current vs. Input Voltage



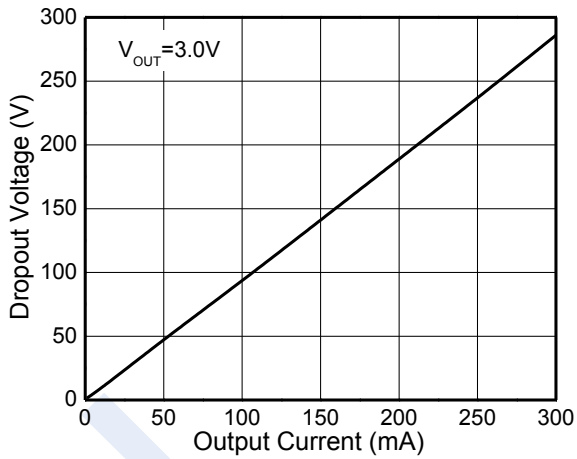
Quiescent Current vs. Input Voltage



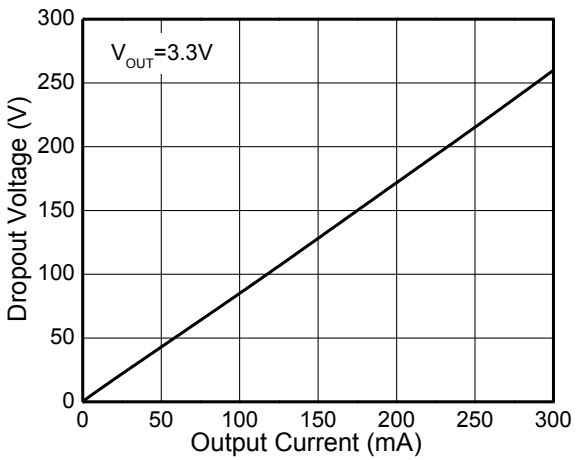
Output Voltage vs. Input Voltage



Output Voltage vs. Input Voltage



Dropout Voltage vs. Output Current



Dropout Voltage vs. Output Current

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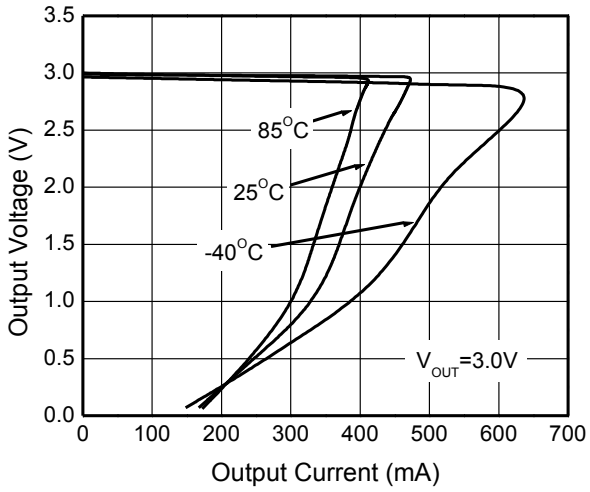
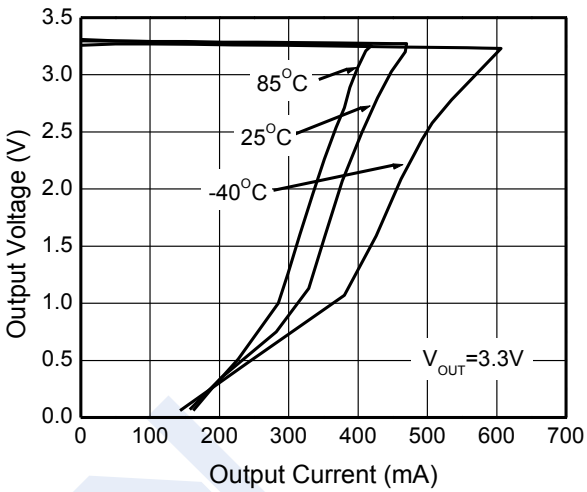
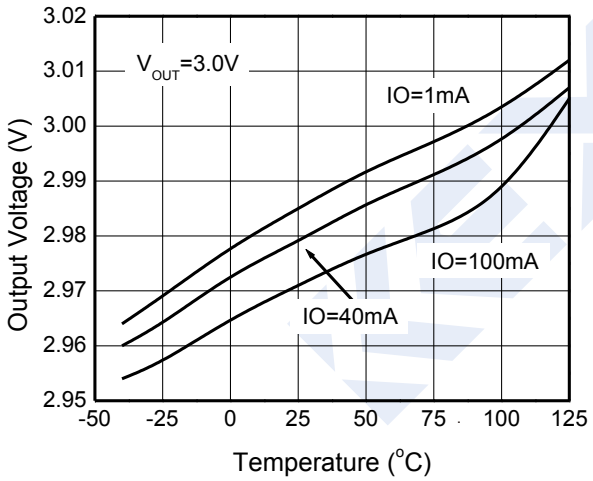


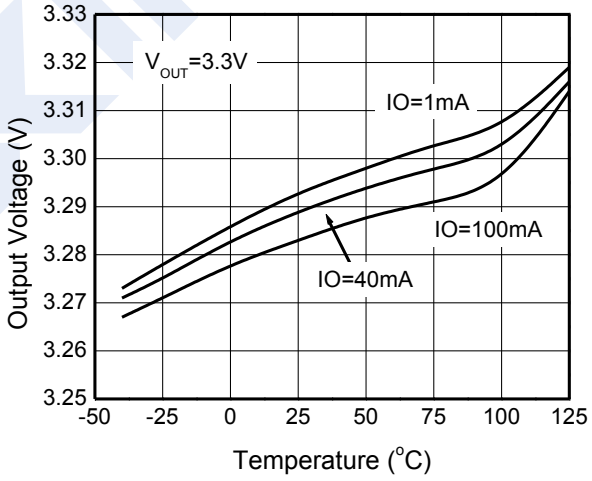
Output Short Protection



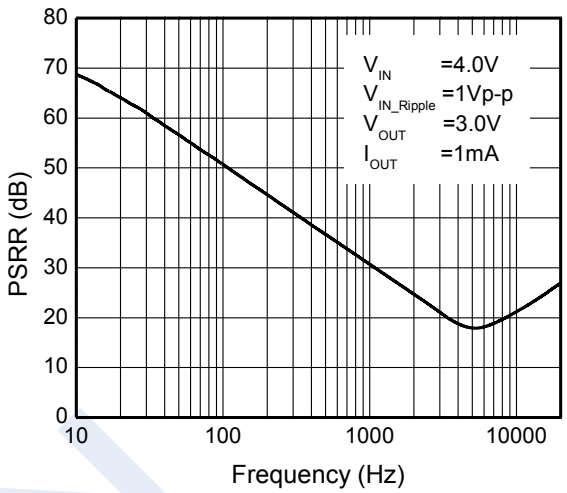
Output Short Protection



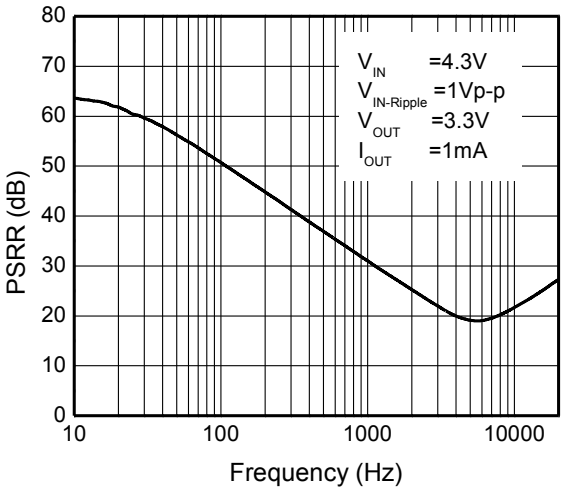
Output Voltage vs. Temperature



Output Voltage vs. Temperature



PSRR vs. Frequency



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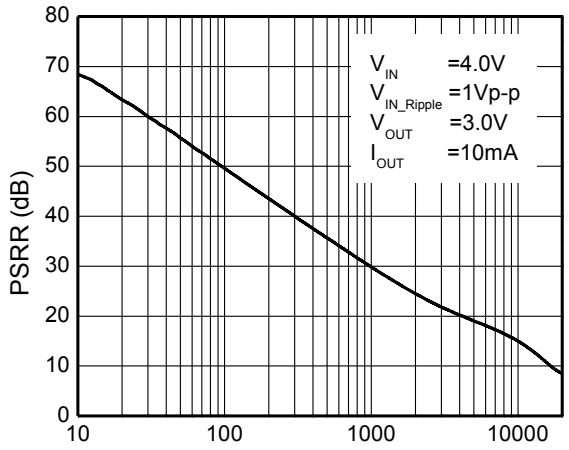
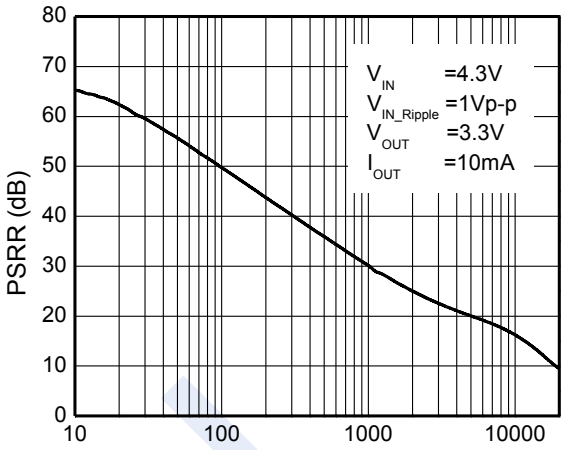
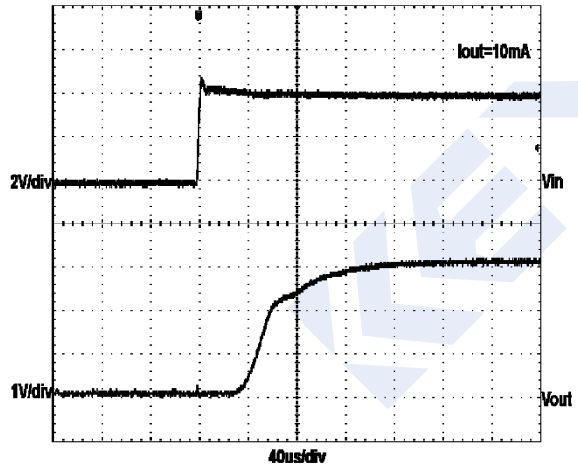
■ Typical Characterisitics



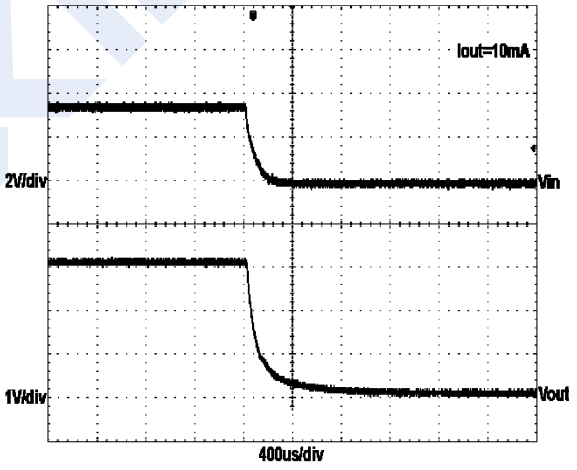
PSRR vs. Frequency



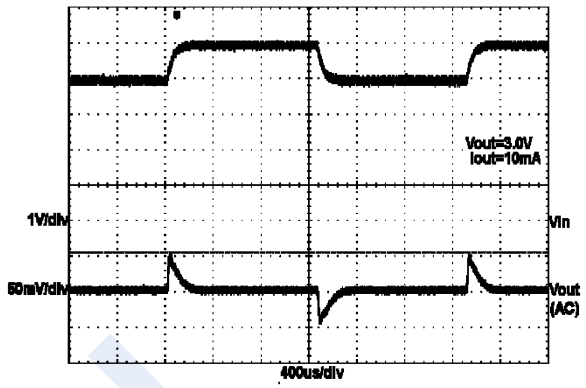
PSRR vs. Frequency



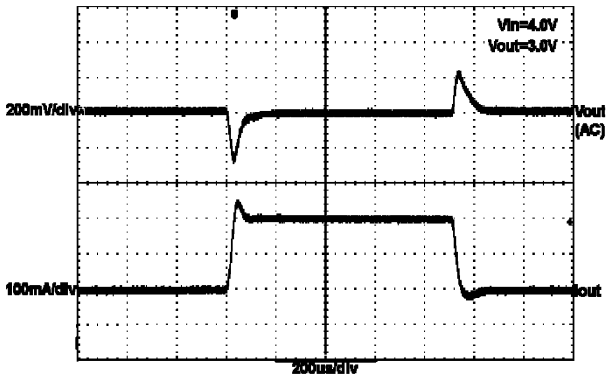
Power Up



Power Down



Line Regulation



Load Regulation