am

Application Note

AS3993

PLL Loop Filter

Content Guide

1   General Description

AS3993 PLL Loop Filter for fcmp 100 & 125 kHz

2   Hardware Description

Version	fvco	fout	Kvco	fcmp	Nfb	Icp	C1	C2	R2	C3	R3	R. 0x12	fc4oln	fbw4oln	pm4oln	fcmp/fc4oln	ATTEN2F	t_lock
	[MHz]	[MHz]	[MHz/V]	[kHz]		[uA]	[pF]	[nF]	[kOhm]	[pF]	[kOhm]	[hex]	[kHz]	[kHz]	[deg]		[dB]	[us]
100k_v1	1765	882.5	36	100	17650	**1879**	180	3	15	40	70	8E	8.90	15.34	49.9	11.24	33.43	565
125k_v1	1765	882.5	36	125	14120	**1561**	180	3	15	40	70	8D	9.18	15.91	49.9	13.61	37.99	444
100k_v2	1765	882.5	36	100	17650	**1879**	150	3.9	15	160	30	36	8.28	14.52	46.3	12.08	37.37	645
125k_v2	1765	882.5	36	125	14120	**1561**	150	3.9	15	160	30	35	8.53	14.99	46.1	14.65	41.79	516

Notes:

fvco: ……………VCO frequency, (842.5+922.5)/2=882.5

Kvco: …………..VCO tuning gain

fcmp: …………..comparison frequency of the PLL

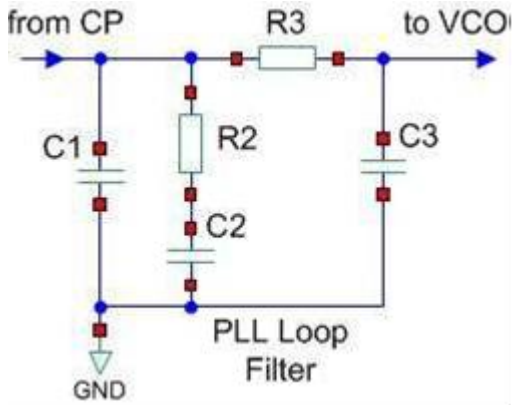Nfb: ……………division ratio of the feedback divider

Icp: ……………charge pump current

fc4oln: ………… crossover frequency when the PLL open-loop gain equals to 1

fbw4oln: ……….PLL BW (-3dB)

pm4oln: ……….PLL phase margin

3   Board Schematics, Layout and BOM

4   Contact Information

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6 Revision Information

Changes from 1-00 (2013-Jul-02) to current revision 1-01 (2014-Jul-14)	Page
Update to corporate format	1-5

Note: Page numbers for the previous version may differ from page numbers in the current revision.