PLL300[1] Series Phase Locked Loop Synthesizer Selection Guide[4]

Part Number	Frequency Range[2] Min. (MHz)	Max. (MHz)	Step Size[3] (kHz)	Output Power Min. (dBm)	Typ. (dBm)	Max. (dBm)	Supply Voltage Nom. +/- Tol. (Volts)	Supply Current Typ. (mA)	Max. (mA)	Approx. Loop BW (Hz)	In Band Phase Noise Offset Freq. (Hz)	Typ. (dBc/Hz)	Max. (dBc/Hz)	Out of Band Phase Noise Offset Freq. (kHz)	Typ. (dBc/Hz)	Max. (dBc/Hz)	Settling Time to within 1 kHz Typ. (mSec)	Max. (mSec)	Phase Detector Spurious[7] Typ. (dBc)	Max. (dBc)	Harmonic Suppression 2nd Typ. (dBc)	2nd Max. (dBc)	3rd Typ. (dBc)	3rd Max. (dBc)	Programming Application Note[8]
PLL300-45	**43**	**47**	**30**	**0.0**	**3.0**	**6.0**	**5.0 +/- 0.25**	**15.2**	**22.0**	**1000**	**500**	**-95**	**-90**	**30**	**-128**	**-120**	**9.6**	**20.0**	**-90**	**-70**	**-11**	**-8**	**-18**	**-10**	**106**
PLL300-45F	45		NA	0.0	3.0	6.0	5.0 +/- 0.25	13.4	20.0	10000	500	-123	-110	1000	-158	-152	NA	NA	-82	-70	-11	-8	-18	-10	NA
PLL300-70	**68**	**72**	**30**	**0.0**	**3.0**	**6.0**	**5.0 +/- 0.25**	**15.0**	**22.0**	**1000**	**500**	**-90**	**-85**	**30**	**-128**	**-120**	**9.2**	**20.0**	**-87**	**-70**	**-10**	**-8**	**-18**	**-10**	**106**
PLL300-72F	72		NA	0.0	3.0	6.0	5.0 +/- 0.25	14.2	22.0	10000	500	-117	-110	1000	-158	-152	NA	NA	-82	-70	-10	-8	-18	-10	NA
PLL300-131	**125**	**137**	**30**	**0.0**	**3.0**	**6.0**	**5.0 +/- 0.25**	**18.0**	**22.0**	**1000**	**500**	**-88**	**-83**	**30**	**-128**	**-120**	**9.7**	**20.0**	**-85**	**-70**	**-11**	**-8**	**-19**	**-10**	**106**
PLL300-132F	132		NA	0.0	3.0	6.0	5.0 +/- 0.25	14.0	22.0	5000	500	-112	-100	1000	-158	-152	NA	NA	-82	-70	-11	-8	-19	-10	NA
PLL300-250	**245**	**255**	**30**	**-2.0**	**1.0**	**4.0**	**5.0 +/- 0.25**	**17.2**	**25.0**	**500**	**500**	**-82**	**-76**	**30**	**-127**	**-120**	**13.4**	**20.0**	**-84**	**-70**	**-10**	**-8**	**-22**	**-10**	**104**
PLL300-450	442	458	30	-2.0	2.1	4.0	5.0 +/- 0.25	18.1	25.0	700	500	-77	-72	30	-127	-121	14.8	20.0	-83	-70	-11	-8	-22	-10	104
PLL300-450A	**400**	**500**	**30**	**-3.0**	**-0.2**	**3.0**	**5.0 +/- 0.25**	**18.0**	**25.0**	**700**	**500**	**-74**	**-68**	**10**	**-110**	**-104**	**17.0**	**25.0**	**-79**	**-70**	**-11**	**-8**	**-17**	**-10**	**104**
PLL300-500	490	510	30	-2.0	1.6	4.0	5.0 +/- 0.25	17.6	25.0	700	500	-77	-71	30	-127	-121	15.9	20.0	-80	-70	-11	-8	-23	-10	104
PLL300-500A	**450**	**550**	**30**	**-3.0**	**-0.5**	**3.0**	**5.0 +/- 0.25**	**17.7**	**25.0**	**700**	**500**	**-74**	**-68**	**10**	**-110**	**-104**	**18.0**	**25.0**	**-77**	**-70**	**-11**	**-8**	**-18**	**-10**	**104**
PLL300-730	717	743	30	-1.0	2.4	5.0	5.0 +/- 0.25	16.6	30.0	700	500	-72	-64	10	-113	-106	10.6	15.0	-83	-70	-13	-9	-19	-10	104
PLL300-755	**742**	**768**	**30**	**-1.0**	**2.5**	**5.0**	**5.0 +/- 0.25**	**17.7**	**30.0**	**700**	**500**	**-72**	**-64**	**10**	**-112**	**-106**	**12.8**	**15.0**	**-84**	**-70**	**-13**	**-9**	**-22**	**-10**	**104**
PLL300-755M[5]	742	768	30	-1.0	2.3	5.0	5.0 +/- 0.25	18.5	30.0	100	100	-53	-45	10	-112	-106	67.0	100.0	-85	-70	-13	-9	-24	-10	104
PLL300-782	**769**	**795**	**30**	**-1.0**	**2.2**	**5.0**	**5.0 +/- 0.25**	**17.4**	**30.0**	**750**	**500**	**-70**	**-64**	**10**	**-112**	**-106**	**12.3**	**15.0**	**-82**	**-70**	**-15**	**-10**	**-28**	**-10**	**104**
PLL300-810	797	823	30	-1.0	2.8	5.0	5.0 +/- 0.25	17.5	30.0	750	500	-70	-64	10	-112	-106	12.0	15.0	-85	-70	-15	-10	-30	-10	104
PLL300-836	**823**	**849**	**30**	**-1.0**	**2.1**	**5.0**	**5.0 +/- 0.25**	**17.3**	**30.0**	**750**	**500**	**-70**	**-64**	**10**	**-112**	**-106**	**12.3**	**15.0**	**-84**	**-70**	**-15**	**-10**	**-19**	**-10**	**104**
PLL300-836M[5]	823	849	30	-1.0	2.1	5.0	5.0 +/- 0.25	17.3	30.0	100	100	-53	-45	10	-112	-106	66.0	100.0	-84	-70	-14	-10	-19	-10	104
PLL300-864	**851**	**877**	**30**	**-1.0**	**1.8**	**5.0**	**5.0 +/- 0.25**	**17.2**	**30.0**	**800**	**500**	**-70**	**-64**	**10**	**-111**	**-106**	**12.0**	**15.0**	**-82**	**-70**	**-15**	**-10**	**-32**	**-10**	**104**
PLL300-864M[5]	851	877	30	-1.0	1.8	5.0	5.0 +/- 0.25	17.2	30.0	100	100	-53	-40	10	-111	-106	67.0	100.0	-82	-70	-14	-10	-28	-10	104
PLL300-884	**869**	**900**	**30**	**-1.0**	**2.4**	**5.0**	**5.0 +/- 0.25**	**17.3**	**30.0**	**800**	**500**	**-70**	**-64**	**10**	**-111**	**-106**	**12.3**	**15.0**	**-82**	**-70**	**-15**	**-10**	**-30**	**-10**	**104**
PLL300-902	889	915	100	0.0	3.2	6.0	5.0 +/- 0.25	17.2	30.0	1000	500	-73	-68	100	-130	-124	6.5	12.0	-85	-70	-16	-10	-32	-10	104
PLL300-902M[5]	**889**	**915**	**30**	**0.0**	**3.2**	**6.0**	**5.0 +/- 0.25**	**17.4**	**30.0**	**100**	**100**	**-52**	**-45**	**10**	**-111**	**-105**	**67.0**	**100.0**	**-82**	**-70**	**-13**	**-10**	**-21**	**-10**	**104**
PLL300-902A	889	915	30	0.0	3.2	6.0	5.0 +/- 0.25	17.2	30.0	800	500	-70	-64	10	-111	-106	12.2	15.0	-82	-70	-16	-10	-32	-10	104
PLL300-915	**902**	**928**	**200**	**0.0**	**3.9**	**6.0**	**5.0 +/- 0.25**	**17.4**	**30.0**	**1000**	**500**	**-76**	**-68**	**100**	**-130**	**-124**	**6.5**	**12.0**	**-85**	**-70**	**-13**	**-10**	**-27**	**-10**	**104**
PLL300-915A	902	928	30	0.0	3.9	6.0	5.0 +/- 0.25	17.4	30.0	800	500	-70	-64	10	-111	-105	12.3	15.0	-79	-70	-13	-10	-27	-10	104
PLL300-926	**913**	**939**	**30**	**0.0**	**4.0**	**6.0**	**5.0 +/- 0.25**	**17.5**	**30.0**	**800**	**500**	**-69**	**-63**	**10**	**-111**	**-105**	**12.5**	**15.0**	**-81**	**-70**	**-14**	**-10**	**-28**	**-10**	**104**
PLL300-926M[5]	913	939	30	0.0	4.0	6.0	5.0 +/- 0.25	17.5	30.0	100	100	-52	-45	10	-111	-105	66.0	100.0	-81	-70	-13	-10	-18	-10	104
PLL300-938	**925**	**951**	**30**	**0.0**	**3.7**	**6.0**	**5.0 +/- 0.25**	**17.6**	**30.0**	**600**	**500**	**-69**	**-63**	**10**	**-111**	**-105**	**12.8**	**16.0**	**-79**	**-70**	**-15**	**-10**	**-29**	**-10**	**104**
PLL300-947	934	960	30	0.0	3.8	6.0	5.0 +/- 0.25	17.6	30.0	600	500	-69	-63	10	-111	-105	12.8	16.0	-79	-70	-15	-10	-30	-10	104
PLL300-964	**951**	**977**	**30**	**0.0**	**3.5**	**6.0**	**5.0 +/- 0.25**	**17.3**	**30.0**	**600**	**500**	**-69**	**-63**	**10**	**-111**	**-105**	**12.5**	**16.0**	**-77**	**-70**	**-15**	**-10**	**-29**	**-10**	**104**
PLL300-992	979	1005	30	0.0	3.2	6.0	5.0 +/- 0.25	17.7	30.0	600	500	-69	-63	10	-111	-105	12.4	16.0	-78	-70	-16	-10	-32	-10	104
PLL300-992M[5]	**979**	**1005**	**30**	**0.0**	**3.2**	**6.0**	**5.0 +/- 0.25**	**17.7**	**30.0**	**100**	**100**	**-52**	**-45**	**10**	**-111**	**-105**	**67.0**	**100.0**	**-78**	**-70**	**-14**	**-10**	**-19**	**-10**	**104**
PLL300-1014	1001	1027	30	0.0	3.0	6.0	5.0 +/- 0.25	17.8	30.0	600	500	-69	-63	10	-111	-105	12.3	16.0	-79	-70	-16	-10	-28	-10	104
PLL300-1400	**1380**	**1420**	**200**	**-1.0**	**1.8**	**5.0**	**5.0 +/- 0.25**	**26.0**	**35.0**	**2500**	**500**	**-78**	**-70**	**100**	**-122**	**-116**	**6.1**	**12.0**	**-83**	**-70**	**-21**	**-10**	**-31**	**-10**	**104**
PLL300-1465	1445	1485	200	-1.0	1.9	5.0	5.0 +/- 0.25	26.2	35.0	2500	500	-78	-70	100	-122	-116	6.0	12.0	-82	-70	-21	-10	-32	-10	104
PLL300-1485	**1465**	**1505**	**200**	**-1.0**	**1.8**	**5.0**	**5.0 +/- 0.25**	**26.1**	**35.0**	**2500**	**500**	**-78**	**-70**	**100**	**-122**	**-116**	**6.0**	**12.0**	**-83**	**-70**	**-21**	**-10**	**-31**	**-10**	**104**
PLL300-1550	1500	1600	200	-2.0	1.2	4.0	5.0 +/- 0.25	26.0	35.0	2200	500	-76	-70	100	-120	-114	4.2	10.0	-78	-70	-18	-10	-31	-10	104
PLL300-1650	**1600**	**1700**	**200**	**-2.0**	**1.0**	**4.0**	**5.0 +/- 0.25**	**25.6**	**35.0**	**2200**	**500**	**-76**	**-70**	**100**	**-119**	**-113**	**4.2**	**10.0**	**-77**	**-70**	**-19**	**-10**	**-31**	**-10**	**104**
PLL300-1750	1700	1800	200	-3.0	0.4	3.0	5.0 +/- 0.25	25.3	35.0	2200	500	-76	-70	100	-119	-113	4.1	10.0	-77	-70	-19	-10	-32	-10	104
PLL300-1850	**1800**	**1900**	**200**	**-3.0**	**0.6**	**3.0**	**5.0 +/- 0.25**	**27.5**	**35.0**	**2200**	**500**	**-75**	**-69**	**100**	**-118**	**-112**	**4.0**	**10.0**	**-81**	**-70**	**-21**	**-10**	**-31**	**-10**	**104**
PLL300-1950	1900	2000	200	-3.0	0.5	3.0	5.0 +/- 0.25	28.0	35.0	2000	500	-75	-69	100	-118	-112	3.8	10.0	-78	-70	-20	-10	-34	-10	104
PLL300-1960	**1930**	**1990**	**50**	**-2.0**	**1.0**	**4.0**	**5.0 +/- 0.25**	**21.0**	**27.0**	**1000**	**500**	**-70**	**-64**	**100**	**-118**	**-112**	**4.5**	**10.0**	**-80**	**-70**	**-21**	**-10**	**-30**	**-10**	**108**

Notes:

1. The PLL300 Series are provided in a 0.750" x 0.750" x 0.156" surface mount package.
2. The Frequency Range is the guaranteed frequency of operation. At 25 degrees Celcius and nominal voltage, the unit will typically lock and perform over a wider frequency range.
3. The step size indicated is the frequency which the loop filter was optimized to operate at. The unit will operate at other step sizes close to this value but the sideband performance and phase noise may be degraded.
4. The minimums and maximums shown are for ALL conditions including temperature, supply variation, and load. All specifications are subject to change without notice.
5. The M suffix indicates a separate modulation port capability which exhibits the following characteristics:
   Deviation: 8 - 12 kHz / V (300 - 3000 Hz)
   Distortion: < 2% (300 - 3000 Hz BW)
6. The settling time for these units is to within 100 kHz
7. These occur at offset frequencies equal to the phase detector comparison frequency.
8. The Application Note gives detailed instructions and timing for the required serial command words.