

Frequency Synthesizer

SSN-3800A-119+

Typical Performance Data

FREQ. (MHz)	POWER OUTPUT (dBm)			HARMONICS (dBc)						VCO CURRENT (mA)			PLL CURENT (mA)		
				F2			F3								
	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C
3600.00	3.14	2.54	2.05	-26.94	-32.18	-32.96	-42.79	-52.33	-55.90	38.55	40.70	42.33	15.03	16.16	18.44
3610.00	3.10	2.51	2.07	-27.57	-32.92	-32.84	-44.50	-52.75	-50.97	38.56	40.71	42.33	14.73	15.88	18.12
3632.50	3.03	2.43	2.02	-28.29	-36.83	-34.57	-48.05	-50.61	-54.10	38.59	40.73	42.35	14.96	16.13	18.44
3655.00	3.16	2.56	2.12	-27.11	-35.83	-33.05	-44.13	-49.20	-50.13	38.62	40.75	42.36	15.06	16.25	18.57
3677.50	3.31	2.75	2.40	-28.25	-36.71	-33.51	-43.76	-48.61	-56.01	38.65	40.77	42.39	15.11	16.31	18.64
3700.00	3.07	2.53	2.31	-26.60	-37.54	-33.42	-50.41	-46.56	-50.96	38.67	40.80	42.41	14.84	16.03	18.36
3722.50	2.96	2.42	2.18	-26.29	-33.16	-32.24	-51.97	-45.17	-49.05	38.71	40.83	42.42	14.78	15.97	18.30
3745.00	3.18	2.63	2.34	-28.16	-34.86	-32.99	-44.26	-47.20	-45.68	38.75	40.86	42.44	14.50	15.66	17.99
3767.50	3.25	2.73	2.54	-25.76	-31.82	-30.69	-41.96	-43.82	-47.07	38.76	40.86	42.45	14.71	15.90	18.24
3790.00	2.93	2.65	2.55	-27.09	-32.25	-32.80	-40.02	-41.27	-44.07	39.36	40.90	42.48	14.84	16.04	18.38
3800.00	2.99	2.53	2.48	-26.00	-32.77	-32.27	-41.59	-42.02	-47.33	38.83	40.93	42.50	14.67	15.85	18.19

FREQ. (MHz)	PHASE NOISE (dBc/Hz)														
	@ OFFSETS														
	-45°C					+25°C					+85°C				
	100Hz	1kHz	10kHz	100kHz	1MHz	100Hz	1kHz	10kHz	100kHz	1MHz	100Hz	1kHz	10kHz	100kHz	1MHz
3600.00	-80.33	-89.41	-93.64	-116.11	-137.16	-76.47	-91.34	-92.51	-115.94	-136.49	-79.74	-90.43	-92.46	-114.55	-135.31
3610.00	-79.35	-90.55	-93.20	-116.28	-137.15	-77.23	-91.02	-93.01	-115.66	-136.57	-78.10	-90.22	-92.25	-114.64	-135.43
3632.50	-76.69	-89.97	-93.88	-116.09	-137.15	-78.62	-90.22	-92.12	-115.74	-136.48	-78.66	-93.34	-92.13	-114.65	-135.40
3655.00	-77.81	-89.46	-92.94	-116.14	-137.19	-77.15	-88.42	-92.23	-115.91	-136.54	-77.03	-90.20	-92.17	-114.65	-135.48
3677.50	-76.45	-90.24	-92.96	-116.36	-137.31	-78.14	-90.78	-92.98	-115.97	-136.61	-76.61	-90.19	-92.12	-114.92	-135.75
3700.00	-78.32	-90.60	-92.85	-116.37	-137.39	-79.70	-89.89	-91.78	-115.93	-136.54	-77.82	-91.94	-92.07	-115.09	-135.59
3722.50	-77.16	-90.46	-92.83	-116.23	-137.25	-76.57	-90.79	-91.53	-115.82	-136.64	-77.54	-91.79	-91.94	-115.01	-135.56
3745.00	-76.18	-91.56	-93.64	-116.53	-137.17	-78.59	-89.40	-91.63	-115.98	-136.71	-78.78	-90.05	-91.52	-115.01	-135.61
3767.50	-75.30	-92.01	-93.02	-116.25	-137.12	-76.57	-89.06	-91.87	-115.98	-136.58	-78.33	-90.61	-91.23	-115.12	-135.67
3790.00	-78.38	-89.77	-91.72	-116.36	-136.90	-77.55	-87.60	-91.14	-115.93	-136.51	-78.81	-89.10	-90.78	-115.17	-135.69
3800.00	-77.52	-90.78	-92.27	-116.17	-136.95	-78.43	-88.78	-91.44	-115.74	-136.48	-77.72	-90.39	-91.15	-115.15	-135.77

REV. X1

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Typical Performance Data

COMPARISON SPURIOUS ORDER	COMPARISON SPURIOUS @Fcarrier 3600MHz± (n*Fcomparison) (dBc) NOTE 1			COMPARISON SPURIOUS @Fcarrier 3700MHz± (n*Fcomparison) (dBc) NOTE 1			COMPARISON SPURIOUS @Fcarrier 3800MHz± (n*Fcomparison) (dBc) NOTE 1		
	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C
-5	-106.21	-109.56	-100.47	-107.84	-106.94	-106.61	-110.97	-113.14	-101.23
-4	-93.38	-94.20	-104.44	-94.95	-95.87	-102.72	-98.08	-99.59	-110.35
-3	-107.57	-108.31	-97.66	-104.88	-106.81	-95.46	-103.25	-104.00	-96.11
-2	-88.11	-88.10	-102.34	-89.95	-88.97	-103.82	-89.68	-90.96	-115.25
-1	-99.17	-97.64	-88.09	-96.92	-97.33	-87.07	-99.58	-99.40	-88.60
0 ^{note 2}	-	-	-	-	-	-	-	-	-
+1	-97.48	-98.04	-95.03	-96.81	-96.93	-100.90	-98.81	-99.81	-97.66
+2	-89.85	-90.21	-94.91	-91.60	-91.11	-100.33	-93.14	-93.69	-95.23
+3	-107.33	-110.89	-91.62	-104.51	-108.61	-92.52	-109.58	-112.03	-104.10
+4	-93.60	-95.12	-112.19	-93.56	-94.41	-111.34	-94.87	-96.14	-109.59
+5	-112.24	-107.34	-94.21	-117.67	-109.17	-93.75	-116.22	-107.21	-95.97

Note 1: Comparison frequency 26 MHz

Note 2: All spurs are referenced to carrier signal (n=0).

REFERENCE SPURIOUS ORDER	REFERENCE SPURIOUS @Fcarrier 3600MHz± (n*Freference) (dBc) NOTE 3			REFERENCE SPURIOUS @Fcarrier 3700MHz± (n*Freference) (dBc) NOTE 3			REFERENCE SPURIOUS @Fcarrier 3800MHz± (n*Freference) (dBc) NOTE 3		
	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C
-5	-87.51	-90.89	-91.30	-89.93	-93.03	-94.63	-92.46	-95.71	-96.02
-4	-90.11	-90.58	-91.20	-91.94	-92.49	-93.63	-95.30	-96.70	-95.69
-3	-101.54	-101.92	-100.47	-104.01	-106.65	-106.61	-104.02	-107.02	-101.23
-2	-93.38	-94.20	-97.66	-94.95	-95.87	-95.46	-98.08	-99.59	-96.11
-1	-88.11	-88.10	-88.09	-89.95	-88.97	-87.07	-89.68	-90.96	-88.60
0 ^{note 4}	-	-	-	-	-	-	-	-	-
+1	-89.85	-90.21	-91.62	-91.60	-91.11	-92.52	-93.14	-93.69	-104.10
+2	-93.60	-95.12	-94.21	-93.56	-94.41	-93.75	-94.87	-96.14	-95.97
+3	-106.02	-108.13	-99.69	-105.27	-108.81	-103.19	-107.65	-114.31	-108.82
+4	-92.54	-94.24	-94.70	-94.33	-95.03	-98.45	-95.29	-97.25	-96.67
+5	-90.04	-94.06	-97.89	-92.77	-96.05	-99.64	-94.73	-98.54	-99.55

Note 3: Reference frequency 52 MHz

Note 4: All spurs are referenced to carrier signal (n=0).

Typical Performance Data

STEP SIZE SPURIOUS ORDER n	0.5 STEP SIZE & STEP SIZE SPURIOUS @ Fcarrier 3600 MHz± (n*Fstep size) (dBc) NOTE 5			0.5 STEP SIZE & STEP SIZE SPURIOUS @ Fcarrier 3700 MHz± (n*Fstep size) (dBc) NOTE 5			0.5 STEP SIZE & STEP SIZE SPURIOUS @ Fcarrier 3800 MHz± (n*Fstep size) (dBc) NOTE 5		
	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C
-5.0	-113.21	-112.03	-113.79	-114.00	-116.13	-108.13	-109.96	-113.60	-113.46
-4.5	-108.86	-112.74	-108.76	-103.65	-115.20	-108.00	-107.57	-112.99	-113.17
-4.0	-111.22	-111.33	-106.93	-109.38	-107.88	-102.40	-111.24	-107.21	-106.95
-3.5	-110.95	-105.64	-104.44	-107.74	-109.31	-101.70	-104.97	-111.20	-111.95
-3.0	-107.50	-109.07	-106.44	-103.62	-107.47	-102.45	-102.87	-107.81	-110.39
-2.5	-107.37	-108.29	-104.20	-109.27	-106.10	-104.41	-109.15	-109.71	-105.51
-2.0	-99.99	-101.10	-100.13	-101.94	-100.71	-97.81	-102.11	-104.00	-97.48
-1.5	-87.61	-95.15	-99.35	-98.72	-97.47	-98.69	-90.31	-97.23	-98.43
-1.0	-88.00	-81.44	-84.48	-90.00	-82.33	-78.04	-90.87	-88.61	-93.17
-0.5	-80.85	-78.87	-81.22	-75.98	-76.19	-76.24	-82.95	-87.17	-86.98
0 ^{note 6}	-	-	-	-	-	-	-	-	-
+0.5	-80.26	-80.68	-79.75	-75.38	-77.81	-76.59	-85.50	-86.07	-90.55
+1.0	-90.52	-82.80	-85.53	-89.41	-81.37	-79.45	-92.98	-87.99	-93.14
+1.5	-88.87	-95.60	-99.31	-101.00	-99.32	-100.61	-90.35	-96.23	-100.38
+2.0	-98.05	-105.90	-103.37	-103.31	-100.16	-99.46	-101.83	-102.45	-99.21
+2.5	-110.19	-110.86	-105.07	-110.53	-106.80	-105.41	-106.32	-107.59	-108.26
+3.0	-110.52	-110.62	-112.31	-104.82	-105.79	-104.04	-104.04	-107.96	-110.85
+3.5	-110.82	-104.83	-103.81	-105.58	-110.16	-100.04	-104.04	-111.39	-110.18
+4.0	-114.81	-112.21	-105.14	-106.11	-109.57	-101.27	-111.74	-112.04	-113.71
+4.5	-109.11	-111.67	-108.52	-104.64	-114.29	-106.67	-106.99	-113.27	-106.60
+5.0	-115.20	-114.45	-114.38	-116.54	-113.76	-107.69	-111.70	-114.18	-112.48

Note 5: Step size 125 kHz

Note 6: All spurs are referenced to carrier signal (n=0).