

# Frequency Synthesizer

# SSN-3600A-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
3400	4.63	4.55	4.29	-37.87	-29.31	-31.25	-39.59	-37.05	-39.20	39.70	41.76	43.24	15.09	15.76	18.00
3404	4.62	4.53	4.27	-40.54	-30.46	-30.68	-40.32	-37.40	-40.71	39.69	41.77	43.24	14.84	15.53	17.73
3428	4.70	4.62	4.34	-39.97	-30.03	-33.24	-40.10	-35.88	-37.52	39.65	41.79	43.24	14.97	15.68	17.87
3452	4.66	4.55	4.28	-38.74	-31.85	-37.56	-37.65	-35.50	-36.88	39.67	41.77	43.24	15.10	15.82	18.01
3476	4.60	4.48	4.20	-38.54	-34.40	-37.09	-35.79	-33.40	-37.63	39.70	41.77	43.24	15.12	15.86	18.04
3500	4.57	4.46	4.16	-35.55	-35.09	-37.40	-34.68	-32.86	-37.51	39.67	41.78	43.31	15.18	15.93	18.11
3524	4.57	4.41	4.10	-33.94	-37.99	-38.85	-36.21	-33.76	-37.34	39.68	41.78	43.32	15.26	16.01	18.19
3548	4.64	4.48	4.16	-29.98	-46.13	-45.32	-35.77	-32.44	-37.59	39.68	41.76	43.21	15.27	16.04	18.21
3572	4.52	4.37	4.09	-29.77	-48.31	-47.28	-35.78	-32.54	-39.56	39.67	41.77	43.23	15.18	15.94	18.11
3596	4.50	4.33	4.02	-26.98	-47.78	-42.30	-38.67	-33.04	-39.29	39.68	41.76	43.22	15.10	15.85	18.02
3600	4.50	4.34	4.03	-27.32	-47.00	-43.49	-39.59	-33.13	-41.60	39.68	41.76	43.22	15.28	16.05	18.21

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
3400	-80.54	-92.01	-94.48	-115.92	-137.15	-82.26	-93.24	-93.91	-115.93	-136.89	-79.69	-94.18	-94.62	-115.68	-136.51
3404	-78.40	-90.77	-94.37	-115.88	-137.13	-80.31	-91.87	-94.65	-116.03	-136.93	-76.75	-93.81	-94.36	-115.67	-136.46
3428	-76.34	-91.04	-94.06	-116.25	-137.41	-80.46	-91.94	-94.25	-116.24	-137.08	-80.89	-93.73	-94.09	-115.70	-136.61
3452	-77.97	-91.54	-93.36	-116.28	-137.46	-80.83	-92.76	-93.63	-116.31	-137.05	-80.59	-93.18	-94.21	-115.67	-136.54
3476	-77.09	-90.52	-92.60	-116.39	-137.60	-81.05	-92.92	-94.17	-116.35	-137.13	-79.51	-93.32	-93.52	-115.70	-136.61
3500	-79.53	-90.65	-93.41	-116.60	-137.66	-81.09	-93.52	-93.59	-116.38	-137.19	-78.78	-92.32	-93.49	-115.89	-136.59
3524	-77.96	-91.45	-93.59	-116.70	-137.63	-80.32	-93.53	-93.73	-116.46	-137.15	-78.37	-92.23	-93.35	-115.74	-136.45
3548	-77.62	-90.64	-93.29	-116.81	-137.85	-81.43	-93.32	-93.50	-116.57	-137.31	-79.21	-92.93	-93.59	-116.09	-136.86
3572	-78.57	-89.13	-92.54	-116.72	-137.90	-81.67	-92.29	-93.31	-116.54	-137.25	-79.50	-92.84	-93.31	-115.98	-136.76
3596	-76.57	-90.96	-92.62	-116.78	-137.79	-78.86	-93.19	-92.96	-116.56	-137.20	-80.07	-92.07	-92.80	-116.18	-136.71
3600	-76.15	-90.17	-92.77	-116.73	-137.56	-80.37	-92.30	-93.06	-116.54	-137.19	-79.61	-93.17	-92.73	-116.11	-136.69



## Typical Performance Data

COMPARISON SPURIOUS ORDER	COMPARISON SPURIOUS @Fcarrier 3400MHz± (n*Fcomparison) (dBc) NOTE 1			COMPARISON SPURIOUS @Fcarrier 3500MHz± (n*Fcomparison) (dBc) NOTE 1			COMPARISON SPURIOUS @Fcarrier 3600MHz± (n*Fcomparison) (dBc) NOTE 1		
	n	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C
-5	-106.01	-107.05	-108.60	-108.93	-105.63	-112.68	-112.21	-103.99	-109.13
-4	-94.66	-95.09	-93.24	-96.76	-96.78	-95.26	-98.27	-96.84	-97.31
-3	-103.97	-102.12	-107.41	-105.35	-105.02	-105.49	-107.54	-110.41	-108.17
-2	-85.64	-84.90	-83.54	-88.32	-86.38	-85.66	-88.42	-87.14	-88.33
-1	-102.85	-97.64	-103.37	-100.26	-98.70	-100.50	-103.10	-104.15	-102.83
0 <sup>note 2</sup>	-	-	-	-	-	-	-	-	-
+1	-101.69	-95.77	-98.54	-99.05	-96.10	-98.36	-97.94	-97.62	-99.92
+2	-87.02	-87.23	-85.10	-89.57	-88.89	-85.12	-92.57	-89.63	-89.87
+3	-107.28	-107.67	-107.69	-104.33	-107.36	-104.84	-109.08	-118.36	-108.02
+4	-94.89	-94.68	-94.24	-95.72	-94.63	-93.51	-95.56	-94.08	-93.79
+5	-110.15	-112.69	-105.36	-115.76	-104.54	-107.57	-107.80	-104.51	-103.31

Note 1: Comparison frequency 26 MHz

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

REFERENCE SPURIOUS ORDER	REFERENCE SPURIOUS @Fcarrier 3400MHz± (n*Reference) (dBc) NOTE 3			REFERENCE SPURIOUS @Fcarrier 3500MHz± (n*Reference) (dBc) NOTE 3			REFERENCE SPURIOUS @Fcarrier 3600MHz± (n*Reference) (dBc) NOTE 3		
	n	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C
-5	-85.46	-88.22	-90.30	-89.16	-91.87	-95.63	-91.29	-94.61	-97.51
-4	-91.26	-90.78	-90.58	-93.94	-93.27	-92.65	-95.46	-96.18	-94.77
-3	-100.31	-100.10	-96.51	-101.62	-106.05	-97.93	-102.93	-107.82	-100.60
-2	-94.64	-95.09	-92.95	-96.70	-96.69	-95.12	-98.17	-96.77	-97.14
-1	-85.43	-84.91	-83.66	-88.26	-86.30	-85.78	-88.40	-87.11	-88.44
0 <sup>note 4</sup>	-	-	-	-	-	-	-	-	-
+1	-87.08	-87.36	-85.16	-89.61	-88.90	-85.19	-92.59	-89.59	-90.08
+2	-94.57	-94.53	-94.49	-95.71	-94.76	-93.64	-95.48	-94.15	-94.11
+3	-104.96	-103.68	-102.49	-105.50	-109.92	-102.74	-104.69	-111.13	-103.89
+4	-92.27	-92.83	-93.79	-95.14	-97.06	-95.82	-96.63	-98.12	-98.74
+5	-87.88	-91.24	-93.90	-91.90	-95.04	-97.63	-93.36	-95.79	-98.97

Note 3: Reference frequency 52 MHz

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

## Typical Performance Data

STEP SIZE SPURIOUS ORDER	0.5 STEP SIZE & STEP SIZE SPURIOUS @ Fcarrier 3400 MHz (n*Fstep size) (dBc) NOTE 5			0.5 STEP SIZE & STEP SIZE SPURIOUS @ Fcarrier 3500 MHz (n*Fstep size) (dBc) NOTE 5			0.5 STEP SIZE & STEP SIZE SPURIOUS @ Fcarrier 3600 MHz (n*Fstep size) (dBc) NOTE 5		
	n	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C
-5.0	-109.06	-107.76	-111.71	-113.06	-111.89	-112.16	-112.21	-111.14	-108.24
-4.5	-111.94	-107.81	-109.94	-108.57	-111.02	-106.18	-107.98	-110.64	-100.31
-4.0	-109.47	-106.29	-106.94	-107.64	-106.39	-107.02	-107.54	-107.99	-104.60
-3.5	-106.84	-104.88	-105.17	-106.99	-105.76	-107.78	-107.63	-105.89	-105.29
-3.0	-102.79	-106.56	-104.86	-107.89	-106.33	-104.96	-106.15	-102.79	-105.81
-2.5	-97.58	-100.97	-102.63	-101.58	-102.89	-102.86	-101.46	-103.44	-100.60
-2.0	-87.50	-88.36	-93.26	-95.60	-95.89	-99.11	-100.63	-100.10	-99.03
-1.5	-88.80	-94.46	-92.97	-92.59	-91.71	-95.57	-91.66	-90.64	-94.93
-1.0	-82.52	-79.33	-78.53	-84.73	-85.02	-86.24	-87.68	-88.25	-86.67
-0.5	-64.84	-70.04	-78.46	-73.06	-75.99	-80.47	-74.83	-79.73	-84.52
0 <sup>NOTE 6</sup>	-	-	-	-	-	-	-	-	-
+0.5	-66.26	-69.51	-78.46	-71.67	-75.06	-80.21	-72.88	-87.01	-82.73
+1.0	-83.37	-78.66	-77.99	-86.60	-82.35	-85.98	-87.59	-88.00	-82.75
+1.5	-89.25	-93.67	-90.19	-91.89	-95.64	-90.78	-95.76	-94.02	-98.68
+2.0	-87.68	-89.64	-96.63	-100.40	-98.78	-94.10	-103.10	-102.14	-103.00
+2.5	-96.57	-96.78	-103.24	-99.80	-103.42	-100.01	-103.91	-104.82	-100.37
+3.0	-104.65	-105.19	-104.37	-107.84	-105.07	-105.46	-108.87	-108.65	-104.79
+3.5	-104.55	-104.85	-103.13	-107.43	-109.08	-107.34	-109.22	-109.91	-105.47
+4.0	-106.81	-107.15	-109.25	-110.97	-105.89	-110.82	-109.65	-109.27	-107.19
+4.5	-109.70	-104.78	-111.35	-108.63	-109.79	-107.34	-105.46	-111.31	-102.44
+5.0	-108.66	-106.69	-113.23	-107.42	-112.64	-113.07	-114.55	-114.96	-109.89

Note 5: Step size 125 kHz

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