

Frequency Synthesizer

ZSN-7800A+

Typical Performance Data

FREQ. (MHz)	POWER OUTPUT (dBm)			VCO CURRENT (mA)		
	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C
7600	9.09	9.99	9.39	224.49	225.83	227.04
7620	9.10	10.16	9.57	224.72	226.08	227.23
7660	9.10	10.08	9.48	225.02	226.38	227.47
7700	9.10	9.21	8.68	225.13	226.55	227.53
7740	9.11	9.62	9.23	225.33	226.76	227.69
7780	9.11	8.91	8.67	225.56	226.97	227.81
7800	9.11	8.63	8.42	225.66	227.09	227.87

FREQ. (MHz)	HARMONICS (dBc)														
	F0.5			F1.5			F2			F2.5			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
7600	-47.57	-48.84	-48.98	-41.29	-45.43	-48.63	-58.61	-70.69	-70.39	-39.16	-42.88	-46.33	-39.04	-45.87	-49.16
7620	-48.05	-49.11	-49.09	-42.29	-46.42	-49.31	-59.07	-70.52	-70.52	-38.96	-42.73	-46.26	-38.02	-44.58	-48.33
7660	-48.40	-49.87	-49.89	-41.52	-46.44	-49.77	-58.97	-70.94	-70.87	-39.60	-42.89	-46.03	-37.45	-44.61	-49.35
7700	-47.69	-49.09	-49.43	-41.41	-46.16	-49.21	-59.99	-70.50	-68.18	-37.86	-41.64	-44.64	-35.67	-42.54	-47.98
7740	-48.06	-49.47	-49.57	-40.22	-45.10	-48.24	-60.36	-71.26	-70.65	-37.46	-41.53	-44.93	-36.93	-43.86	-48.28
7780	-47.29	-48.91	-49.57	-40.02	-44.76	-48.02	-59.66	-69.28	-67.50	-35.78	-39.85	-43.95	-36.79	-43.63	-49.13
7800	-46.61	-48.45	-49.13	-39.76	-44.76	-48.20	-57.61	-69.54	-66.02	-36.14	-39.75	-43.52	-36.33	-43.47	-48.58

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
7600	-61.69	-83.77	-87.40	-82.58	-117.20	-64.55	-81.23	-86.97	-83.32	-116.79	-56.71	-79.16	-85.95	-82.12	-116.06
7620	-64.23	-81.61	-87.35	-82.80	-117.34	-65.14	-82.66	-86.89	-83.84	-116.77	-57.91	-80.27	-85.89	-82.46	-115.80
7660	-61.18	-83.11	-88.99	-84.03	-117.25	-64.58	-83.09	-87.73	-84.17	-116.62	-58.11	-78.87	-86.16	-83.29	-114.67
7700	-63.27	-83.06	-89.15	-84.60	-117.62	-65.83	-81.96	-87.23	-84.67	-116.30	-58.63	-78.07	-86.79	-83.64	-114.52
7740	-61.39	-82.64	-89.09	-84.94	-118.06	-62.76	-83.62	-88.29	-85.02	-116.11	-57.14	-77.99	-87.40	-83.70	-115.27
7780	-62.36	-81.11	-90.39	-86.71	-116.79	-63.47	-82.11	-88.38	-85.48	-116.36	-58.32	-78.20	-87.08	-83.39	-116.53
7800	-60.14	-82.80	-91.55	-87.96	-115.65	-61.23	-81.76	-89.22	-86.05	-116.57	-57.21	-78.83	-87.47	-84.02	-116.69

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Typical Performance Data

COMPARISON SPURIOUS ORDER	COMPARISON SPURIOUS @Fcarrier 7600MHz± (n*Fcomparison) (dBc) NOTE 1			COMPARISON SPURIOUS @Fcarrier 7700MHz± (n*Fcomparison) (dBc) NOTE 1			COMPARISON SPURIOUS @Fcarrier 7800MHz± (n*Fcomparison) (dBc) NOTE 1		
	n	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C
-5	-102.93	-104.06	-104.07	-98.78	-114.43	-105.60	-96.64	-97.94	-99.01
-4	-86.81	-92.56	-96.73	-83.42	-86.62	-87.40	-81.02	-80.90	-80.16
-3	-90.73	-90.52	-90.43	-114.49	-102.93	-113.29	-94.93	-90.63	-89.00
-2	-81.11	-81.79	-82.39	-92.51	-93.52	-107.97	-90.45	-83.35	-80.40
-1	-66.46	-67.71	-68.67	-74.32	-79.00	-87.75	-80.10	-70.66	-66.67
0 ^{note 2}	-	-	-	-	-	-	-	-	-
+1	-66.59	-67.75	-68.50	-74.39	-78.74	-87.61	-80.19	-70.84	-66.87
+2	-81.31	-81.72	-82.51	-91.58	-93.96	-109.41	-90.37	-84.06	-80.58
+3	-91.37	-90.79	-90.62	-106.55	-105.75	-113.60	-95.52	-91.29	-89.51
+4	-85.09	-91.43	-103.77	-84.69	-89.84	-90.54	-86.83	-84.29	-82.26
+5	-100.27	-101.81	-105.90	-97.12	-108.88	-104.96	-97.67	-98.78	-100.29

Note 1: Comparison frequency 5 MHz

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

REFERENCE SPURIOUS ORDER	REFERENCE SPURIOUS @Fcarrier 7600MHz± (n*Reference) (dBc) NOTE 3			REFERENCE SPURIOUS @Fcarrier 7700MHz± (n*Reference) (dBc) NOTE 3			REFERENCE SPURIOUS @Fcarrier 7800MHz± (n*Reference) (dBc) NOTE 3		
	n	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C
-5	-95.19	-100.81	-106.25	-100.00	-104.02	-119.60	-98.54	-104.17	-106.51
-4	-93.59	-97.75	-104.76	-97.69	-101.64	-104.47	-96.57	-98.41	-100.04
-3	-96.48	-102.75	-103.27	-92.11	-100.83	-96.16	-91.42	-91.48	-92.78
-2	-93.61	-94.80	-95.41	-88.83	-92.80	-90.04	-87.11	-87.89	-88.07
-1	-86.08	-92.03	-97.73	-82.79	-86.52	-86.22	-80.94	-81.02	-80.22
0 ^{note 4}	-	-	-	-	-	-	-	-	-
+1	-84.63	-91.13	-104.00	-83.77	-89.56	-88.61	-86.64	-84.27	-82.34
+2	-92.75	-94.96	-96.18	-89.25	-93.43	-90.52	-88.44	-88.58	-88.76
+3	-95.19	-101.92	-102.67	-95.16	-102.24	-97.00	-93.55	-91.76	-93.19
+4	-93.19	-97.12	-100.33	-93.14	-98.53	-99.15	-89.82	-93.27	-96.78
+5	-95.80	-101.26	-112.82	-96.41	-104.28	-109.13	-93.62	-100.43	-108.30

Note 3: Reference frequency 20 MHz

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