

Frequency Synthesizer

KSN-EDR8009

Typical Performance Data

FREQ. (MHz)	POWER OUTPUT (dBm)			HARMONICS (dBc)						VCO CURRENT (mA)			PLL CURRENT (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			
1500	2.41	2.74	2.92	-31.08	-30.95	-31.43	-44.73	-46.41	-46.81	32.69	34.84	36.98	4.46	4.58	4.68
1510	2.51	2.85	3.01	-31.97	-31.76	-32.26	-42.72	-44.54	-45.28	32.70	34.92	37.04	4.46	4.58	4.68
1511	2.53	2.87	3.02	-32.13	-31.90	-32.43	-42.37	-44.29	-45.04	32.70	34.92	37.01	4.46	4.59	4.69
1520	2.75	3.08	3.21	-34.57	-33.89	-34.23	-39.91	-42.79	-43.12	32.72	34.95	37.03	4.46	4.59	4.68
1530	3.07	3.39	3.49	-36.63	-35.61	-35.73	-37.25	-40.32	-41.56	32.74	34.97	37.04	4.47	4.59	4.69
1540	3.38	3.70	3.77	-35.61	-35.03	-35.30	-37.22	-40.97	-42.24	32.76	34.99	37.07	4.47	4.59	4.69
1550	3.56	3.88	3.95	-33.85	-33.26	-33.83	-38.44	-41.91	-43.99	32.75	35.01	37.09	4.48	4.60	4.69
1560	3.61	3.94	4.00	-31.78	-31.98	-32.54	-40.10	-44.04	-45.55	32.78	35.04	37.11	4.48	4.60	4.70
1570	3.57	3.91	3.96	-31.40	-32.02	-32.51	-42.33	-45.56	-47.34	32.79	35.05	37.12	4.48	4.60	4.70
1580	3.58	3.91	3.93	-33.58	-33.25	-33.50	-38.42	-41.88	-43.96	32.81	35.06	37.13	4.48	4.61	4.70
1586	3.63	3.95	3.96	-37.31	-34.92	-34.63	-34.18	-38.51	-41.24	32.81	35.07	37.13	4.49	4.61	4.71
1590	3.68	3.99	4.00	-39.99	-36.07	-35.44	-32.01	-36.51	-39.57	32.81	35.06	37.13	4.49	4.61	4.71
1600	3.83	4.13	4.10	-35.06	-35.77	-35.76	-30.22	-35.26	-38.70	32.81	35.06	37.13	4.40	4.51	4.61

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
1500	-76.43	-81.33	-77.16	-112.23	-141.10	-78.00	-81.20	-76.84	-111.66	-141.02	-75.00	-81.12	-76.60	-111.07	-139.44
1510	-75.80	-81.43	-77.31	-112.31	-141.76	-78.27	-80.60	-76.88	-111.66	-140.65	-75.44	-80.46	-76.60	-110.98	-139.80
1511	-74.79	-79.43	-77.20	-112.24	-141.83	-77.41	-81.72	-76.71	-111.50	-141.43	-74.62	-82.13	-76.52	-110.97	-139.10
1520	-76.26	-81.80	-77.24	-112.19	-141.12	-77.82	-81.37	-77.18	-111.48	-141.45	-76.21	-79.97	-76.53	-110.78	-139.15
1530	-75.48	-81.00	-77.36	-112.05	-142.21	-78.20	-81.50	-77.10	-111.41	-140.55	-75.18	-80.09	-76.00	-110.62	-139.51
1540	-73.94	-80.50	-77.30	-111.94	-142.32	-77.89	-80.57	-76.83	-111.35	-141.38	-75.31	-79.77	-75.73	-110.51	-140.13
1550	-73.17	-80.09	-76.89	-111.81	-142.05	-79.04	-80.52	-76.88	-111.19	-141.68	-76.06	-80.19	-75.89	-110.26	-140.16
1560	-74.32	-80.06	-77.17	-111.75	-142.89	-79.07	-80.85	-76.68	-111.05	-141.47	-75.84	-79.76	-75.61	-110.31	-140.50
1570	-73.06	-78.90	-76.44	-111.46	-141.77	-75.82	-80.51	-76.41	-110.95	-141.93	-75.14	-79.78	-75.48	-110.21	-140.44
1580	-73.05	-79.92	-76.66	-111.44	-142.40	-76.98	-80.36	-76.48	-110.90	-142.20	-75.77	-81.26	-75.76	-110.15	-140.38
1586	-73.74	-79.21	-76.63	-111.39	-142.65	-75.88	-79.43	-76.37	-110.83	-141.62	-74.62	-78.73	-75.75	-110.33	-140.64
1590	-74.50	-79.74	-76.47	-111.38	-142.19	-77.09	-79.59	-76.26	-110.83	-141.51	-75.82	-80.65	-75.88	-110.15	-140.59
1600	-74.36	-80.19	-76.56	-111.49	-141.64	-75.48	-78.50	-76.35	-110.91	-142.00	-75.62	-78.86	-75.60	-110.28	-140.10

Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
 B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
 C. The parts covered by this specification document are subject to Mini-Circuits' standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCStore/terms.jsp



Frequency Synthesizer

KSN-EDR8009

Typical Performance Data

COMPARISON SPURIOUS ORDER	COMPARISON SPURIOUS @Fcarrier 1511 MHz± (n*Fcomparison) (dBc) NOTE 1			COMPARISON SPURIOUS @Fcarrier 1548 MHz± (n*Fcomparison) (dBc) NOTE 1			COMPARISON SPURIOUS @Fcarrier 1586 MHz± (n*Fcomparison) (dBc) NOTE 1		
	-45 °C	+25°C	+85 °C	-45 °C	+25°C	+85 °C	-45 °C	+25°C	+85 °C
-5	-104.00	-101.46	-100.48	-104.41	-101.78	-103.22	-99.89	-103.05	-101.85
-4	-99.08	-98.56	-97.44	-100.28	-99.92	-100.07	-98.71	-100.97	-99.74
-3	-93.10	-94.02	-93.41	-95.67	-95.90	-95.23	-96.24	-97.56	-96.41
-2	-85.85	-87.45	-86.47	-87.94	-89.02	-88.40	-90.42	-91.70	-90.10
-1	-71.90	-75.21	-74.25	-73.45	-76.72	-75.36	-76.56	-79.73	-77.61
0 ^{note 2}	-	-	-	-	-	-	-	-	-
+1	-70.91	-73.89	-73.21	-72.15	-74.81	-74.28	-74.49	-76.92	-76.29
+2	-84.45	-86.10	-85.22	-85.77	-86.96	-86.50	-87.83	-89.13	-88.45
+3	-91.04	-92.75	-91.61	-92.55	-93.60	-92.80	-94.02	-95.37	-94.07
+4	-95.81	-97.06	-95.99	-96.83	-97.29	-97.13	-97.29	-99.01	-97.63
+5	-99.05	-100.58	-99.08	-99.91	-100.28	-100.17	-99.43	-101.43	-100.06

Note 1: Comparison frequency 200 kHz

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

REFERENCE SPURIOUS ORDER	REFERENCE SPURIOUS @Fcarrier 1511 MHz± (n*Freference) (dBc) NOTE 3			REFERENCE SPURIOUS @Fcarrier 1548 MHz± (n*Freference) (dBc) NOTE 3			REFERENCE SPURIOUS @Fcarrier 1586 MHz± (n*Freference) (dBc) NOTE 3		
	-45 °C	+25°C	+85 °C	-45 °C	+25°C	+85 °C	-45 °C	+25°C	+85 °C
-5	-84.89	-87.93	-90.52	-84.73	-88.61	-91.32	-82.78	-86.92	-89.80
-4	-90.72	-93.83	-95.97	-92.16	-95.49	-96.22	-91.43	-91.75	-92.36
-3	-92.37	-94.77	-96.75	-94.17	-96.92	-98.13	-93.52	-96.36	-96.89
-2	-92.81	-95.48	-96.02	-94.23	-96.40	-97.27	-93.53	-97.48	-96.49
-1	-98.84	-101.12	-100.79	-101.24	-103.46	-103.99	-111.58	-105.75	-109.01
0 ^{note 4}	-	-	-	-	-	-	-	-	-
+1	-105.99	-106.30	-106.61	-109.59	-111.82	-109.53	-106.23	-119.70	-113.30
+2	-98.57	-101.54	-102.99	-99.31	-102.87	-104.89	-97.86	-98.47	-105.23
+3	-99.63	-102.92	-105.23	-98.71	-102.40	-105.36	-95.68	-99.43	-101.77
+4	-88.03	-90.32	-91.54	-83.89	-86.10	-87.54	-91.85	-95.47	-97.45
+5	-86.37	-89.24	-91.50	-85.16	-88.46	-91.18	-83.78	-86.75	-89.99

Note 3: Reference frequency 26 MHz

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

Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
 B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
 C. The parts covered by this specification document are subject to Mini-Circuits' standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCStore/terms.jsp

