

Frequency Synthesizer

KSN-EDR7987

Typical Performance Data

FREQ. (MHz)	POWER OUTPUT (dBm)			HARMONICS						VCO CURRENT (mA)			PLL CURRENT (mA)		
				(dBc)											
	-45 °C	+25°C	+85 °C	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							
1660	5.53	5.58	5.46	-45.66	-51.70	-50.30	-39.52	-41.00	-41.89	31.98	33.17	33.73	7.46	9.67	11.16
1670	5.56	5.60	5.47	-45.24	-52.12	-50.64	-37.59	-39.76	-40.64	31.99	33.21	33.74	7.46	9.72	11.19
1680	5.55	5.60	5.47	-45.43	-51.03	-49.14	-37.52	-38.11	-38.78	32.01	33.22	33.75	7.46	9.74	11.20
1681	5.55	5.60	5.47	-45.50	-51.01	-49.01	-37.52	-38.09	-38.76	32.01	33.22	33.75	7.47	9.76	11.21
1690	5.57	5.60	5.47	-46.63	-51.23	-48.01	-37.33	-37.96	-38.80	32.01	33.22	33.75	7.47	9.77	11.22
1700	5.60	5.62	5.49	-48.41	-51.76	-47.72	-36.40	-37.06	-38.01	32.00	33.21	33.74	7.47	9.78	11.23
1710	5.64	5.65	5.52	-51.14	-53.23	-48.19	-36.08	-36.37	-37.57	31.97	33.18	33.72	7.48	9.79	11.23
1720	5.65	5.64	5.52	-53.02	-55.53	-50.02	-36.01	-36.38	-37.71	31.94	33.15	33.71	7.48	9.80	11.23
1730	5.64	5.64	5.51	-51.93	-54.45	-50.28	-35.21	-35.56	-36.99	31.93	33.14	33.71	7.48	9.81	11.24
1740	5.65	5.65	5.52	-49.99	-52.58	-49.02	-34.24	-34.73	-36.16	31.92	33.13	33.72	7.48	9.81	11.24
1742	5.65	5.64	5.52	-49.95	-52.49	-48.86	-34.01	-34.57	-35.98	31.91	33.14	33.72	7.49	9.82	11.25
1750	5.64	5.63	5.51	-49.63	-51.64	-47.82	-33.68	-33.92	-35.19	31.91	33.13	33.73	7.49	9.82	11.25
1760	5.66	5.66	5.54	-49.35	-50.78	-46.73	-33.28	-34.17	-35.28	31.89	33.12	33.72	7.49	9.82	11.25

FREQ. (MHz)	PHASE NOISE (dBc/Hz)											
	@ OFFSETS											
	-45 °C				+25 °C				+85 °C			
	1kHz	10kHz	100kHz	1MHz	1kHz	10kHz	100kHz	1MHz	1kHz	10kHz	100kHz	1MHz
1660	-72.72	-101.31	-127.32	-147.70	-71.04	-101.81	-127.17	-147.43	-71.84	-101.35	-126.69	-147.01
1670	-72.31	-101.53	-127.43	-147.19	-71.38	-102.20	-127.26	-147.53	-71.71	-101.74	-126.62	-147.06
1680	-72.66	-101.93	-127.34	-146.85	-71.80	-102.42	-127.18	-147.58	-71.88	-101.89	-127.00	-147.27
1681	-71.89	-101.56	-127.54	-147.83	-71.76	-102.34	-127.00	-146.29	-70.76	-101.88	-126.81	-147.01
1690	-72.55	-102.23	-127.63	-148.14	-71.01	-102.70	-126.80	-147.61	-72.19	-101.94	-127.08	-147.39
1700	-70.87	-102.00	-127.54	-147.24	-71.14	-102.68	-126.34	-147.59	-71.59	-101.97	-127.08	-147.51
1710	-71.65	-102.20	-127.53	-148.06	-72.27	-102.57	-126.09	-147.81	-72.15	-102.20	-126.76	-147.70
1720	-70.61	-101.99	-127.56	-147.08	-71.71	-102.86	-127.47	-148.15	-72.30	-102.16	-126.95	-147.82
1730	-71.45	-102.04	-127.50	-148.15	-71.61	-102.42	-127.72	-148.37	-71.20	-102.31	-127.07	-148.00
1740	-71.40	-102.09	-127.86	-148.33	-72.02	-102.93	-127.94	-148.70	-71.67	-102.42	-127.62	-148.43
1742	-71.56	-102.07	-128.05	-148.52	-70.48	-102.82	-127.65	-148.62	-71.15	-102.33	-128.03	-148.57
1750	-70.92	-102.30	-128.05	-148.08	-71.53	-102.73	-128.19	-149.02	-72.32	-102.26	-128.30	-148.62
1760	-72.43	-102.28	-127.97	-148.73	-71.64	-103.11	-129.09	-149.46	-73.73	-102.36	-128.43	-148.74

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



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Typical Performance Data

COMPARISON SPURIOUS ORDER	COMPARISON SPURIOUS @Fcarrier 1681 MHz± (n*Fcomparison) (dBc) NOTE 1			COMPARISON SPURIOUS @Fcarrier 1711.5 MHz± (n*Fcomparison) (dBc) NOTE 1			COMPARISON SPURIOUS @Fcarrier 1742 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	-102.02	-105.76	-109.10	-99.43	-107.64	-104.74	-104.95	-109.81	-104.55
-4	-96.51	-101.27	-106.74	-94.44	-103.88	-101.82	-101.25	-108.11	-100.03
-3	-96.46	-100.10	-104.62	-94.58	-101.63	-96.47	-102.84	-105.13	-96.51
-2	-98.72	-101.98	-99.47	-97.54	-103.65	-96.06	-100.97	-105.17	-99.14
-1	-85.33	-87.21	-90.53	-84.75	-89.69	-87.97	-90.57	-95.66	-87.95
0 ^{note 2}	-	-	-	-	-	-	-	-	-
+1	-85.47	-89.25	-90.52	-85.14	-92.06	-86.94	-90.80	-97.34	-87.47
+2	-98.98	-104.21	-98.91	-97.73	-103.21	-95.77	-102.05	-105.27	-97.88
+3	-98.64	-101.91	-101.06	-98.33	-103.22	-94.91	-103.56	-103.55	-94.75
+4	-98.67	-103.44	-104.63	-96.59	-106.27	-98.62	-104.66	-107.81	-97.61
+5	-105.49	-108.96	-108.41	-101.38	-107.65	-103.03	-107.37	-108.56	-102.89

Note 1: Comparison frequency 50 kHz

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

REFERENCE SPURIOUS ORDER	REFERENCE SPURIOUS @Fcarrier 1681 MHz± (n*Freference) (dBc) NOTE 3			REFERENCE SPURIOUS @Fcarrier 1711.5 MHz± (n*Freference) (dBc) NOTE 3			REFERENCE SPURIOUS @Fcarrier 1742 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	-115.22	-114.78	-113.48	-118.61	-120.06	-121.46	-126.29	-126.29	-125.78
-4	-115.69	-119.43	-119.91	-120.63	-124.20	-123.11	-120.05	-124.23	-122.07
-3	-120.89	-123.31	-126.59	-119.61	-126.16	-127.90	-121.07	-127.16	-129.02
-2	-115.34	-121.95	-119.41	-118.96	-122.97	-121.45	-120.84	-123.67	-121.28
-1	-103.53	-107.97	-107.13	-105.25	-108.46	-110.27	-104.12	-109.49	-114.43
0 ^{note 4}	-	-	-	-	-	-	-	-	-
+1	-124.69	-121.21	-115.32	-122.98	-117.83	-122.65	-120.51	-116.96	-120.43
+2	-117.56	-121.56	-120.49	-119.83	-123.82	-122.84	-120.61	-125.14	-123.01
+3	-120.68	-127.14	-130.56	-123.54	-128.15	-132.39	-126.72	-130.22	-133.28
+4	-118.61	-120.27	-121.47	-125.80	-125.38	-125.38	-130.40	-130.29	-129.08
+5	-115.15	-114.45	-113.53	-118.88	-121.18	-122.88	-126.14	-129.15	-129.40

Note 3: Reference frequency 24 MHz

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

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