

Frequency Synthesizer

KSN-EDR9543

Typical Performance Data

FREQ. (MHz)	POWER OUTPUT (dBm)			HARMONICS						VCO CURRENT (mA)			PLL CURRENT (mA)		
				(dBc)											
				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	
2000	3.35	3.64	3.52	-35.77	-40.58	-36.02	-22.78	-24.95	-27.58	46.39	48.23	49.18	5.82	7.52	8.85
2004	3.36	3.64	3.51	-35.75	-40.34	-35.95	-22.33	-24.64	-27.58	46.41	48.23	49.16	5.82	7.54	8.88
2008	3.37	3.65	3.51	-35.70	-40.14	-35.85	-22.02	-24.15	-26.89	46.42	48.22	49.14	5.82	7.56	8.89
2011	3.39	3.65	3.52	-35.63	-39.76	-35.81	-22.08	-24.05	-26.64	46.42	48.21	49.13	5.84	7.57	8.93
2012	3.39	3.66	3.52	-35.53	-39.89	-35.78	-22.19	-24.09	-26.61	46.42	48.21	49.13	5.82	7.56	8.91
2016	3.43	3.68	3.54	-35.49	-39.56	-35.77	-22.66	-24.41	-26.82	46.42	48.21	49.11	5.83	7.56	8.92
2020	3.46	3.71	3.56	-35.34	-39.43	-35.68	-23.08	-24.89	-27.39	46.42	48.20	49.11	5.83	7.57	8.93
2024	3.51	3.74	3.59	-35.23	-39.31	-35.71	-23.48	-25.31	-27.83	46.41	48.19	49.09	5.83	7.57	8.93
2028	3.57	3.79	3.64	-34.93	-38.98	-35.63	-23.21	-25.39	-28.25	46.41	48.18	49.08	5.83	7.57	8.93
2031	3.61	3.83	3.68	-34.37	-38.54	-35.43	-22.92	-25.15	-28.17	46.40	48.17	49.06	5.85	7.59	8.95
2032	3.63	3.84	3.69	-34.29	-38.50	-35.32	-22.88	-25.02	-28.10	46.40	48.16	49.06	5.83	7.57	8.94
2036	3.68	3.90	3.75	-33.76	-37.94	-35.13	-22.34	-24.57	-27.65	46.39	48.15	49.04	5.83	7.58	8.94
2040	3.72	3.94	3.80	-33.31	-37.43	-35.06	-21.78	-24.02	-27.10	46.38	48.14	49.02	5.83	7.58	8.95

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
2000	-59.38	-78.04	-107.36	-130.74	-151.08	-60.88	-75.90	-106.60	-130.04	-150.62	-60.97	-74.70	-106.75	-128.69	-149.13
2004	-60.51	-76.04	-107.45	-130.44	-151.03	-62.11	-79.18	-106.94	-129.89	-150.46	-62.45	-77.82	-106.06	-128.76	-148.99
2008	-60.69	-76.80	-106.96	-130.60	-151.26	-61.54	-78.82	-106.70	-129.83	-150.29	-60.19	-75.96	-106.42	-128.69	-149.33
2011	-61.89	-75.51	-106.89	-130.27	-150.79	-64.43	-76.98	-106.51	-129.54	-150.44	-59.25	-75.81	-106.09	-128.87	-148.76
2012	-59.39	-75.26	-107.15	-130.61	-151.25	-59.96	-78.69	-106.80	-129.92	-150.29	-57.14	-77.17	-106.39	-128.81	-149.05
2016	-62.37	-78.21	-107.16	-130.50	-150.92	-61.14	-80.11	-106.44	-129.80	-150.50	-59.02	-74.89	-106.59	-128.54	-148.84
2020	-59.79	-75.26	-107.08	-130.44	-150.74	-59.41	-77.11	-106.53	-129.50	-150.07	-57.56	-76.49	-105.97	-128.40	-149.04
2024	-60.25	-75.92	-107.21	-130.79	-151.12	-60.93	-79.34	-106.66	-129.61	-149.85	-58.00	-76.17	-106.21	-128.45	-148.70
2028	-60.84	-76.19	-106.56	-130.37	-151.43	-59.54	-77.11	-106.58	-129.54	-150.29	-58.32	-75.78	-106.22	-128.34	-148.91
2031	-59.50	-77.09	-107.06	-130.38	-150.76	-60.20	-76.78	-106.42	-129.33	-149.87	-57.94	-76.39	-105.72	-128.07	-148.64
2032	-57.96	-79.07	-106.84	-130.11	-151.17	-58.94	-76.67	-106.43	-129.57	-149.58	-57.41	-76.21	-105.63	-128.17	-148.69
2036	-60.53	-74.35	-106.73	-130.28	-150.67	-59.59	-77.77	-106.28	-129.15	-149.68	-58.28	-77.21	-105.49	-128.16	-148.69
2040	-56.84	-76.13	-106.63	-130.34	-150.40	-57.59	-80.22	-106.25	-129.24	-150.16	-55.90	-77.95	-105.92	-128.14	-148.35

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 2011 MHz± (n*Fcomparison) (dBc) NOTE 1			COMPARISON SPURIOUS @Fcarrier 2021 MHz± (n*Fcomparison) (dBc) NOTE 1			COMPARISON SPURIOUS @Fcarrier 2031 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	-113.34	-113.05	-114.35	-115.73	-111.69	-115.54	-113.35	-116.98	-114.75
-4	-111.66	-112.27	-109.83	-112.75	-110.36	-110.52	-111.08	-111.73	-106.58
-3	-104.80	-103.31	-103.19	-105.93	-107.29	-108.63	-109.25	-108.63	-107.53
-2	-98.12	-102.35	-99.78	-100.16	-97.70	-100.43	-101.55	-95.38	-99.39
-1	-88.57	-86.36	-88.30	-89.49	-87.47	-90.07	-83.41	-88.96	-89.63
0 ^{note 2}	-	-	-	-	-	-	-	-	-
+1	-86.33	-89.56	-86.64	-90.14	-89.29	-89.18	-88.15	-87.07	-88.50
+2	-99.21	-101.14	-100.97	-96.56	-101.56	-94.52	-102.23	-100.78	-101.69
+3	-107.98	-108.19	-105.91	-107.96	-106.54	-108.58	-107.72	-100.69	-108.72
+4	-109.80	-111.76	-106.78	-109.86	-107.20	-111.57	-107.49	-109.91	-110.02
+5	-114.97	-116.12	-109.79	-116.15	-114.15	-115.00	-113.74	-113.24	-111.62

Note 1: Comparison frequency 125 kHz

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

REFERENCE SPURIOUS ORDER	REFERENCE SPURIOUS @Fcarrier 2011 MHz± (n*Freference) (dBc) NOTE 3			REFERENCE SPURIOUS @Fcarrier 2021 MHz± (n*Freference) (dBc) NOTE 3			REFERENCE SPURIOUS @Fcarrier 2031 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	-124.28	-121.31	-118.70	-121.87	-120.24	-118.58	-121.48	-119.94	-120.11
-4	-127.67	-128.18	-130.18	-123.30	-128.07	-127.11	-129.11	-127.59	-130.23
-3	-126.67	-128.87	-131.07	-129.78	-130.77	-123.59	-129.38	-128.39	-127.89
-2	-119.17	-116.88	-118.96	-120.78	-118.38	-117.90	-118.23	-117.26	-119.15
-1	-120.13	-120.90	-128.99	-116.99	-127.35	-129.74	-113.89	-124.98	-128.99
0 ^{note 4}	-	-	-	-	-	-	-	-	-
+1	-110.75	-111.03	-115.46	-108.99	-111.84	-112.70	-107.20	-113.67	-110.32
+2	-119.33	-125.31	-121.05	-119.50	-120.37	-119.33	-119.25	-121.86	-121.31
+3	-128.04	-127.36	-128.19	-130.36	-125.96	-128.26	-125.16	-131.12	-127.68
+4	-125.68	-129.72	-127.19	-127.35	-127.63	-130.84	-126.36	-130.03	-127.67
+5	-123.56	-122.44	-121.31	-123.74	-122.45	-121.03	-119.55	-122.06	-121.58

Note 3: Reference frequency 20 MHz

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

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