

Frequency Synthesizer

DSN-EDR8717

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							
870	-2.71	-2.45	-2.83	-9.05	-9.66	-11.63	-26.08	-27.28	-28.20	47.43	49.41	50.78	13.94	16.78	20.03
900	-2.86	-2.52	-2.60	-9.97	-10.57	-11.78	-26.47	-27.63	-29.41	47.47	49.48	50.85	13.98	16.78	20.03
928	-2.66	-2.27	-2.21	-10.74	-11.26	-12.12	-27.39	-28.69	-31.06	47.51	49.51	50.89	13.97	16.76	20.02
986	-2.87	-2.44	-2.27	-11.50	-11.89	-12.44	-30.57	-32.41	-35.29	47.60	49.59	50.96	14.01	16.79	20.05
1102	-2.43	-1.96	-1.74	-13.67	-13.91	-14.26	-54.00	-52.64	-52.29	47.84	49.78	51.11	14.08	16.84	20.10
1160	-2.29	-1.76	-1.56	-14.94	-15.17	-15.43	-38.23	-39.84	-41.47	48.00	49.91	51.20	14.07	16.83	20.09
1276	-2.08	-1.55	-1.34	-19.00	-19.14	-19.15	-34.17	-35.73	-37.22	48.34	50.20	51.44	14.14	16.89	20.15
1334	-1.73	-1.26	-1.06	-21.96	-22.12	-22.06	-35.86	-37.27	-38.58	48.52	50.37	51.58	14.17	16.92	20.18
1392	-1.99	-1.55	-1.35	-24.90	-25.19	-25.22	-36.79	-38.12	-38.71	48.72	50.55	51.74	14.16	16.90	20.16
1450	-1.90	-1.46	-1.24	-27.58	-28.36	-28.81	-37.38	-38.25	-39.41	48.89	50.71	51.89	14.19	16.93	20.19
1508	-2.05	-1.63	-1.44	-29.95	-30.93	-31.89	-39.95	-40.56	-41.33	49.03	50.84	52.00	14.23	16.95	20.22
1566	-2.26	-1.81	-1.61	-31.91	-33.11	-34.30	-42.69	-43.66	-44.45	49.11	50.91	52.07	14.26	16.98	20.25
1624	-2.51	-2.10	-1.91	-34.72	-35.61	-36.95	-45.86	-46.13	-45.49	49.11	50.92	52.09	14.25	16.96	20.23
1740	-2.73	-2.34	-2.15	-38.75	-38.84	-39.47	-45.25	-44.72	-42.19	48.85	50.71	51.92	14.31	17.02	20.28
1798	-3.07	-2.68	-2.53	-34.19	-35.56	-36.04	-38.01	-39.71	-37.86	48.61	50.51	51.77	14.34	17.05	20.31
1914	-3.26	-2.97	-2.87	-30.32	-31.33	-32.60	-39.11	-40.13	-40.14	48.07	50.05	51.41	14.35	17.05	20.32
1972	-3.56	-3.27	-3.17	-29.59	-30.95	-32.16	-40.32	-39.07	-41.02	47.84	49.85	51.25	14.38	17.08	20.34
2000	-3.79	-3.48	-3.45	-29.58	-31.32	-32.59	-41.08	-39.97	-41.37	47.7	49.77	51.18	14.36	17.06	20.32
2030	-3.69	-3.50	-3.48	-30.40	-31.63	-32.69	-42.24	-40.97	-42.73	47.62	49.67	51.10	14.40	17.10	20.36

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
870	-86.20	-89.90	-81.12	-105.44	-137.32	-87.98	-91.39	-80.66	-104.78	-136.01	-85.46	-89.96	-80.39	-103.91	-133.02
900	-86.44	-90.14	-81.40	-106.43	-136.92	-87.49	-89.64	-80.53	-105.49	-136.81	-87.55	-89.92	-80.16	-104.78	-134.18
928	-85.16	-88.83	-81.92	-106.75	-136.56	-83.22	-89.46	-80.59	-106.05	-136.93	-85.73	-89.49	-80.35	-105.29	-134.64
986	-85.59	-88.27	-82.38	-107.34	-138.57	-84.79	-89.65	-81.15	-106.32	-137.22	-84.80	-89.16	-80.45	-105.63	-135.42
1102	-83.82	-86.40	-82.80	-107.88	-139.09	-85.27	-87.65	-81.55	-106.92	-138.17	-86.10	-88.01	-81.22	-105.84	-136.06
1160	-83.30	-88.27	-83.28	-107.89	-137.90	-83.34	-87.00	-81.42	-106.92	-138.28	-82.86	-86.23	-81.06	-105.81	-136.48
1276	-82.43	-86.53	-82.19	-108.09	-139.57	-83.34	-87.23	-81.40	-107.19	-139.25	-83.00	-88.05	-80.77	-106.04	-136.84
1334	-82.94	-88.28	-82.50	-108.38	-139.86	-83.80	-88.57	-81.69	-107.59	-138.60	-83.80	-88.51	-81.31	-106.51	-137.74
1392	-82.19	-84.95	-83.10	-108.98	-139.25	-81.23	-88.48	-82.19	-108.15	-140.33	-82.66	-87.19	-81.60	-106.99	-138.74
1450	-83.85	-86.16	-83.09	-109.47	-139.35	-82.16	-86.84	-82.27	-108.72	-139.48	-83.60	-88.24	-81.33	-107.70	-139.39
1508	-82.67	-86.17	-83.59	-110.20	-140.04	-82.12	-87.41	-82.86	-109.53	-141.11	-82.46	-87.18	-82.07	-108.32	-140.24
1566	-82.16	-85.44	-84.19	-110.87	-141.44	-82.33	-88.57	-83.58	-110.08	-141.56	-80.08	-88.17	-82.85	-109.12	-140.72
1624	-80.09	-85.06	-83.34	-111.34	-141.79	-82.53	-87.61	-82.8	-110.63	-140.88	-83.70	-86.83	-82.75	-109.64	-141.14
1740	-80.35	-86.76	-83.52	-112.19	-142.40	-86.47	-88.32	-82.85	-111.45	-141.85	-83.15	-87.28	-82.64	-110.59	-141.56
1798	-80.02	-85.17	-83.47	-112.65	-141.36	-80.95	-86.69	-82.96	-111.72	-142.48	-80.39	-87.14	-83.33	-110.88	-141.51
1914	-80.46	-85.19	-82.39	-113.07	-141.84	-80.47	-85.41	-82.34	-112.41	-141.81	-80.97	-85.24	-82.30	-111.53	-141.50
1972	-76.97	-85.06	-83.00	-113.40	-141.26	-79.79	-85.09	-83.08	-112.70	-141.80	-79.27	-86.81	-82.73	-111.87	-141.14
2000	-80.14	-84.84	-82.92	-113.73	-142.52	-79.59	-85.33	-82.88	-112.95	-141.69	-78.98	-84.10	-83.17	-112.12	-141.06
2030	-78.43	-84.37	-83.28	-113.84	-141.33	-81.02	-84.66	-83.15	-113.25	-141.35	-82.23	-87.82	-83.17	-112.43	-141.00

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 900 MHz± (n*Fcomparison) (dBc) NOTE 1			COMPARISON SPURIOUS @Fcarrier 1450 MHz± (n*Fcomparison) (dBc) NOTE 1			COMPARISON SPURIOUS @Fcarrier 2000 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	-108.44	-114.89	-116.58	-112.67	-106.42	-113.65	-107.03	-113.17	-113.46
-4	-103.66	-112.49	-116.75	-104.21	-103.09	-110.56	-103.05	-111.93	-112.23
-3	-96.14	-105.90	-113.68	-94.91	-99.88	-105.71	-98.19	-106.99	-109.79
-2	-87.06	-96.39	-108.25	-86.39	-94.91	-100.26	-91.49	-100.21	-106.20
-1	-84.24	-88.99	-96.87	-83.14	-91.61	-91.78	-84.44	-89.44	-94.46
0 ^{note 2}	-	-	-	-	-	-	-	-	-
+1	-83.59	-87.63	-95.96	-81.53	-89.18	-89.67	-83.76	-88.08	-93.00
+2	-86.19	-95.51	-105.46	-85.47	-93.70	-98.65	-89.18	-97.25	-102.21
+3	-94.95	-105.57	-112.94	-93.39	-98.81	-104.04	-95.44	-103.87	-106.90
+4	-101.28	-112.08	-114.90	-101.89	-102.72	-108.63	-100.76	-109.03	-110.12
+5	-105.10	-113.94	-117.03	-109.39	-105.66	-112.82	-104.07	-109.30	-111.92

Note 1: Comparison frequency 250 kHz

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

REFERENCE SPURIOUS ORDER	REFERENCE SPURIOUS @Fcarrier 900 MHz± (n*Freference) (dBc) NOTE 3			REFERENCE SPURIOUS @Fcarrier 1450 MHz± (n*Freference) (dBc) NOTE 3			REFERENCE SPURIOUS @Fcarrier 2000 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	-111.86	-115.32	-113.69	-115.92	-122.15	-119.79	-115.49	-115.56	-116.20
-4	-117.83	-121.27	-121.02	-128.38	-128.47	-123.65	-118.84	-115.24	-114.61
-3	-117.88	-120.03	-119.40	-124.06	-124.52	-127.80	-116.18	-114.92	-117.03
-2	-111.37	-118.74	-118.25	-115.77	-114.44	-116.28	-101.45	-100.38	-103.08
-1	-110.71	-112.09	-114.03	-108.96	-114.94	-119.12	-104.45	-103.67	-101.10
0 ^{note 4}	-	-	-	-	-	-	-	-	-
+1	-108.48	-114.40	-110.54	-119.18	-112.92	-106.63	-102.66	-99.30	-98.11
+2	-119.66	-126.07	-120.86	-126.27	-125.75	-119.22	-98.35	-99.12	-101.15
+3	-125.02	-123.47	-124.63	-126.17	-124.06	-128.07	-117.32	-114.66	-114.54
+4	-118.01	-126.49	-121.23	-124.69	-123.86	-124.57	-117.16	-117.87	-117.23
+5	-116.99	-114.79	-116.19	-122.18	-118.55	-118.60	-115.24	-116.69	-117.50

Note 3: Reference frequency 10 MHz

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

Notes

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