

Frequency Synthesizer

DSN-2050A-119+

Typical Performance Data

FREQ. (MHz)	POWER OUTPUT (dBm)			HARMONICS (dBc)						VCO CURRENT (mA)			PLL CURENT (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	-45°C	+25°C	+85°C
1130.0	1.59	1.65	1.40	-17.67	-19.46	-20.57	-25.55	-27.64	-29.35	30.00	32.11	33.10	23.20	25.88	28.52
1147.0	1.55	1.58	1.33	-17.29	-19.11	-20.24	-28.84	-30.57	-32.23	30.08	32.18	33.15	23.21	25.89	28.53
1264.0	1.14	1.19	0.92	-14.10	-15.95	-16.99	-31.56	-33.97	-35.36	30.71	32.73	33.62	23.25	25.95	28.62
1381.0	0.95	1.00	0.72	-12.67	-14.51	-15.52	-36.28	-37.56	-38.35	31.30	33.25	34.08	23.29	26.00	28.69
1498.0	0.70	0.74	0.49	-12.54	-14.39	-15.50	-38.88	-39.78	-40.18	31.75	33.66	34.45	23.32	26.04	28.74
1615.0	0.40	0.45	0.25	-14.60	-16.46	-17.75	-39.48	-38.72	-38.42	32.05	33.97	34.74	23.35	26.09	28.79
1732.0	0.25	0.37	0.18	-19.03	-20.91	-21.78	-36.00	-37.30	-37.63	32.18	34.17	34.96	23.37	26.12	28.83
1849.0	-0.04	0.13	-0.04	-21.96	-24.26	-24.90	-40.29	-40.18	-39.42	32.13	34.22	35.09	23.40	26.15	28.87
1966.0	-0.24	-0.05	-0.17	-24.40	-26.04	-26.93	-37.09	-37.44	-38.04	31.82	34.06	35.02	23.43	26.19	28.91
2083.0	-0.55	-0.34	-0.41	-29.89	-30.97	-31.35	-36.85	-39.52	-38.63	31.38	33.75	34.82	23.45	26.22	28.95
2100.0	-0.52	-0.28	-0.39	-30.02	-31.08	-31.31	-39.63	-40.62	-41.64	31.30	33.68	34.77	23.44	26.22	28.96

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
1130.0	-45.69	-73.61	-100.44	-121.39	-135.03	-47.49	-72.05	-99.02	-119.68	-136.85	-39.82	-71.93	-97.60	-118.01	-137.18
1147.0	-46.29	-73.50	-100.69	-121.54	-141.53	-45.08	-71.77	-98.78	-119.64	-139.76	-43.93	-71.80	-97.67	-118.02	-138.16
1264.0	-45.46	-74.01	-101.09	-122.32	-142.28	-48.94	-74.26	-100.05	-120.67	-140.80	-41.88	-71.87	-98.57	-119.38	-139.49
1381.0	-44.71	-74.48	-102.03	-122.77	-142.80	-45.91	-74.78	-100.68	-121.53	-141.74	-41.22	-74.30	-99.67	-120.39	-140.53
1498.0	-44.46	-75.15	-101.91	-123.24	-143.03	-46.18	-73.91	-100.89	-121.97	-142.18	-38.99	-73.74	-100.12	-120.98	-141.20
1615.0	-44.39	-76.16	-102.03	-123.08	-143.21	-43.95	-74.51	-100.97	-122.09	-142.44	-37.98	-74.11	-100.05	-121.06	-141.56
1732.0	-41.23	-75.81	-101.90	-122.87	-143.10	-42.79	-76.45	-100.78	-121.92	-142.55	-40.95	-72.98	-99.84	-120.90	-141.74
1849.0	-40.25	-73.99	-101.39	-122.70	-143.09	-42.82	-72.97	-100.43	-121.61	-142.36	-39.87	-73.45	-99.33	-120.73	-141.85
1966.0	-40.19	-75.22	-100.94	-122.32	-142.81	-44.05	-72.86	-100.28	-121.41	-142.24	-38.06	-73.06	-99.09	-120.49	-141.68
2083.0	-36.60	-76.31	-100.89	-122.01	-142.41	-39.05	-74.41	-100.22	-121.28	-141.96	-39.92	-74.11	-98.95	-120.44	-141.50
2100.0	-40.84	-76.57	-100.98	-122.02	-142.49	-40.45	-74.83	-100.26	-121.32	-141.97	-36.33	-72.41	-99.08	-120.61	-141.42

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Typical Performance Data

COMPARISON SPURIOUS ORDER	COMPARISON SPURIOUS @Fcarrier 1130MHz± (n*Fcomparison) (dBc) NOTE 1			COMPARISON SPURIOUS @Fcarrier 1615MHz± (n*Fcomparison) (dBc) NOTE 1			COMPARISON SPURIOUS @Fcarrier 2100MHz± (n*Fcomparison) (dBc) NOTE 1			
	n	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C
	-5	-84.96	-85.61	-85.85	-85.35	-82.49	-86.27	-83.09	-87.03	-83.94
-4	-84.07	-85.49	-83.03	-84.90	-86.31	-86.75	-81.66	-87.38	-81.79	
-3	-85.30	-83.64	-76.28	-81.87	-85.10	-86.60	-83.29	-82.87	-82.46	
-2	-83.34	-84.92	-68.21	-86.66	-87.46	-83.54	-83.24	-81.15	-83.25	
-1	-83.51	-81.70	-61.66	-78.97	-81.11	-67.26	-68.83	-80.53	-67.46	
0 ^{note 2}	-	-	-	-	-	-	-	-	-	
+1	-75.09	-83.82	-61.46	-80.72	-82.04	-67.22	-70.55	-81.00	-66.53	
+2	-88.72	-84.73	-78.44	-77.16	-84.15	-85.46	-79.83	-86.30	-83.41	
+3	-86.97	-86.91	-85.68	-87.50	-86.50	-83.65	-87.42	-87.06	-87.47	
+4	-87.66	-82.48	-85.22	-86.21	-85.99	-85.22	-86.36	-86.87	-82.89	
+5	-86.86	-83.03	-87.31	-87.34	-82.52	-86.99	-86.88	-84.25	-85.51	

Note 1: Comparison frequency 12.5 kHz

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

REFERENCE SPURIOUS ORDER	REFERENCE SPURIOUS @Fcarrier 1130MHz± (n*Reference) (dBc) NOTE 3			REFERENCE SPURIOUS @Fcarrier 1615MHz± (n*Reference) (dBc) NOTE 3			REFERENCE SPURIOUS @Fcarrier 2100MHz± (n*Reference) (dBc) NOTE 3			
	n	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C
	-5	-124.03	-125.92	-126.07	-110.36	-111.89	-112.20	-98.71	-102.14	-103.38
-4	-127.78	-126.40	-128.39	-128.34	-128.49	-126.80	-118.27	-120.22	-121.04	
-3	-118.37	-118.55	-119.04	-107.82	-109.31	-110.25	-96.45	-99.22	-100.02	
-2	-131.00	-129.52	-129.63	-129.13	-129.50	-128.10	-116.65	-121.85	-122.11	
-1	-108.26	-108.62	-109.49	-98.23	-99.45	-100.29	-86.79	-90.78	-91.74	
0 ^{note 4}	-	-	-	-	-	-	-	-	-	
+1	-107.11	-107.46	-108.88	-97.04	-99.27	-100.42	-84.64	-87.90	-88.77	
+2	-128.19	-130.18	-130.34	-128.03	-126.17	-127.57	-115.62	-117.62	-118.25	
+3	-116.91	-116.25	-118.77	-107.22	-109.06	-110.67	-94.52	-97.52	-99.60	
+4	-130.09	-129.39	-129.60	-127.30	-126.59	-127.36	-116.25	-118.50	-120.08	
+5	-123.02	-123.23	-124.23	-111.04	-112.92	-113.25	-98.63	-102.00	-104.02	

Note 3: Reference frequency 13 MHz

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