

Frequency Synthesizer

ZSN-EDR11130

Typical Performance Data

FREQ. (MHz)	POWER OUTPUT (dBm)			HARMONICS						DC CURRENT (mA)		
				(dBc)								
	-10 °C	+25°C	+75 °C	F2			F3			-10 °C	+25°C	+75 °C
				-10 °C	+25°C	+75 °C	-10 °C	+25°C	+75 °C	-10 °C	+25°C	+75 °C
1180	17.52	17.73	18.09	-39.42	-36.65	-30.31	-33.74	-31.44	-28.06	151.08	160.90	169.66
1200	17.60	17.77	18.07	-39.81	-35.86	-30.32	-29.36	-28.82	-26.90	151.17	161.11	169.55
1220	17.67	17.82	18.04	-40.26	-35.32	-30.32	-28.57	-28.61	-27.01	151.33	161.34	169.65
1240	17.73	17.85	18.00	-40.41	-34.53	-30.09	-28.06	-28.30	-26.77	151.47	161.49	169.73
1260	17.79	17.88	17.97	-39.41	-34.04	-29.97	-27.80	-28.02	-26.85	151.68	161.72	169.84
1280	17.86	17.93	17.95	-38.16	-33.44	-29.77	-27.37	-27.51	-26.70	151.88	161.91	170.24
1300	17.95	18.00	17.97	-36.40	-32.57	-29.35	-26.65	-26.86	-26.32	152.08	162.09	170.37
1320	18.03	18.06	17.98	-35.42	-31.75	-28.98	-26.17	-26.47	-26.17	152.21	162.19	170.42
1340	18.10	18.12	17.99	-34.42	-31.21	-28.72	-25.46	-25.86	-25.77	152.33	162.30	170.49
1360	18.16	18.16	18.02	-33.88	-30.86	-28.54	-24.76	-25.20	-25.41	152.40	162.36	170.50
1380	18.17	18.18	18.02	-33.50	-30.54	-28.38	-24.34	-24.90	-25.32	152.45	162.42	170.50
1400	18.18	18.18	18.00	-32.78	-30.31	-28.35	-24.10	-24.72	-25.36	152.42	162.38	170.41
1420	18.17	18.17	17.98	-31.93	-30.11	-28.38	-24.06	-24.59	-25.44	152.33	162.28	170.29

FREQ. (MHz)	PHASE NOISE (dBc/Hz) @ OFFSETS														
	-10 °C					+25°C					+75 °C				
	100Hz	1kHz	10kHz	100kHz	1MHz	100Hz	1kHz	10kHz	100kHz	1MHz	100Hz	1kHz	10kHz	100kHz	1MHz
1180	-83.34	-94.50	-93.37	-100.23	-136.20	-85.35	-93.91	-92.43	-101.07	-135.73	-83.50	-93.91	-92.90	-97.77	-134.72
1200	-85.60	-92.69	-93.93	-96.63	-135.21	-84.26	-94.22	-93.59	-96.37	-135.29	-84.49	-93.43	-93.59	-94.13	-133.90
1220	-83.39	-93.19	-94.01	-93.94	-134.54	-83.95	-92.56	-93.53	-93.42	-134.39	-82.72	-93.13	-93.62	-91.93	-133.20
1240	-84.60	-93.25	-94.15	-93.29	-134.26	-83.87	-93.05	-93.74	-92.81	-134.16	-82.07	-92.66	-93.38	-91.89	-133.18
1260	-86.34	-92.59	-93.77	-93.68	-134.37	-85.04	-92.78	-93.21	-93.18	-134.12	-81.03	-91.98	-93.49	-92.08	-133.23
1280	-84.11	-92.08	-93.80	-94.02	-134.41	-85.51	-94.60	-93.57	-93.42	-133.34	-81.87	-92.24	-93.48	-92.75	-133.35
1300	-83.44	-93.07	-93.48	-94.21	-133.68	-83.02	-94.51	-93.43	-93.67	-133.44	-79.80	-92.94	-93.80	-93.21	-133.15
1320	-83.18	-93.87	-93.56	-94.36	-133.75	-83.91	-94.41	-93.85	-93.88	-133.46	-79.97	-91.45	-93.28	-93.52	-133.27
1340	-85.37	-92.95	-93.69	-94.32	-133.67	-82.80	-95.00	-93.46	-94.09	-133.09	-79.57	-94.63	-92.47	-94.19	-133.03
1360	-84.25	-93.06	-93.20	-94.54	-133.48	-81.19	-93.56	-93.40	-94.53	-133.68	-80.32	-93.49	-92.62	-94.85	-131.77
1380	-82.33	-92.89	-93.20	-95.13	-133.08	-83.43	-91.99	-93.38	-95.28	-133.65	-81.27	-93.67	-92.76	-95.73	-132.90
1400	-83.43	-92.25	-92.64	-96.05	-132.33	-83.70	-93.78	-93.10	-96.39	-133.48	-81.91	-91.37	-92.68	-97.27	-132.44
1420	-82.96	-93.62	-93.25	-97.38	-132.46	-82.63	-92.76	-92.25	-98.02	-133.05	-81.47	-92.04	-91.75	-100.00	-132.48

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 1200 MHz± (n*Fcomparison) (dBc) NOTE 1			COMPARISON SPURIOUS @Fcarrier 1300 MHz± (n*Fcomparison) (dBc) NOTE 1			COMPARISON SPURIOUS @Fcarrier 1400 MHz± (n*Fcomparison) (dBc) NOTE 1		
	-10 °C	+25°C	+75 °C	-10 °C	+25°C	+75 °C	-10 °C	+25°C	+75 °C
-5	-89.10	-89.23	-87.50	-93.88	-92.43	-88.92	-88.50	-88.57	-88.83
-4	-85.36	-85.51	-83.65	-90.37	-88.41	-86.01	-85.86	-86.43	-87.26
-3	-80.30	-80.61	-78.90	-85.66	-83.64	-81.90	-82.28	-83.04	-84.88
-2	-73.61	-74.35	-72.81	-79.96	-77.61	-76.40	-77.97	-79.05	-80.80
-1	-65.08	-65.61	-63.49	-70.78	-68.26	-67.70	-71.20	-72.18	-74.23
0 ^{note 2}	-	-	-	-	-	-	-	-	-
+1	-65.00	-65.40	-63.34	-70.38	-67.96	-67.41	-70.79	-71.96	-74.56
+2	-73.45	-74.17	-72.66	-79.73	-77.32	-76.11	-77.80	-78.70	-81.28
+3	-79.96	-80.41	-78.55	-85.36	-83.16	-81.53	-81.88	-82.55	-85.20
+4	-84.53	-85.07	-83.09	-89.53	-87.97	-85.40	-85.50	-85.81	-87.38
+5	-88.23	-88.51	-86.62	-93.03	-91.90	-88.53	-87.90	-88.08	-89.07

Note 1: Comparison frequency 500 kHz

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

REFERENCE SPURIOUS ORDER	REFERENCE SPURIOUS @Fcarrier 1200 MHz± (n*Freference) (dBc) NOTE 3			REFERENCE SPURIOUS @Fcarrier 1300 MHz± (n*Freference) (dBc) NOTE 3			REFERENCE SPURIOUS @Fcarrier 1400 MHz± (n*Freference) (dBc) NOTE 3		
	-10 °C	+25°C	+75 °C	-10 °C	+25°C	+75 °C	-10 °C	+25°C	+75 °C
-5	-112.92	-112.70	-113.96	-117.41	-109.19	-117.97	-124.64	-119.36	-109.21
-4	-110.43	-112.65	-116.63	-112.84	-111.28	-124.89	-114.78	-112.10	-108.71
-3	-104.61	-109.56	-108.02	-124.85	-107.58	-115.27	-108.01	-113.16	-106.32
-2	-124.94	-123.32	-108.64	-112.47	-108.32	-117.65	-111.55	-113.49	-102.76
-1	-90.82	-92.59	-92.84	-103.81	-98.66	-98.07	-89.45	-89.99	-89.58
0 ^{note 4}	-	-	-	-	-	-	-	-	-
+1	-95.87	-98.39	-96.59	-101.25	-98.45	-97.33	-89.57	-90.66	-90.58
+2	-112.43	-124.32	-111.58	-124.30	-108.22	-107.78	-108.68	-108.82	-103.74
+3	-112.19	-114.00	-111.72	-124.80	-107.93	-109.61	-104.64	-107.31	-106.81
+4	-123.94	-123.99	-125.24	-124.45	-124.60	-114.64	-111.91	-110.68	-111.99
+5	-113.63	-121.31	-114.94	-118.20	-111.64	-113.80	-112.21	-118.19	-109.64

Note 3: Reference frequency 10 MHz

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

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