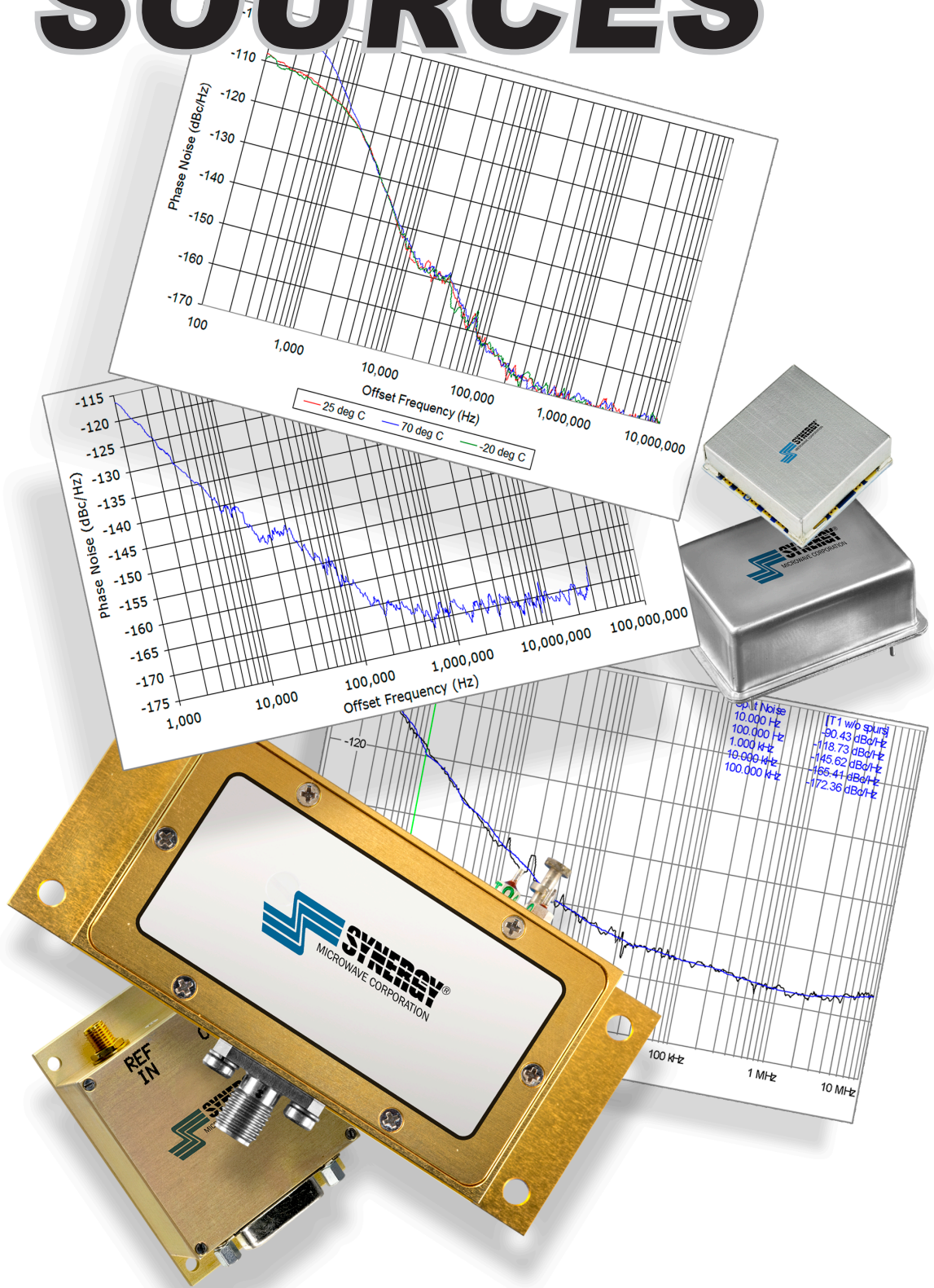


**HIGH PERFORMANCE**

# FREQUENCY SOURCES



REFERENCE TRANSLATORS												
Model	Frequency ( MHz )	Reference Input Frequency ( MHz )	Reference Input Level	DC Bias VDC	Minimum Output Power ( dBm )	Spurious Suppression ( dB ) [ Typ. ]	Harmonic Suppression ( dBc ) [ Typ. ]	Phase Noise ( dBc/Hz ) [ Typ. ]				PKG#
								100 Hz offset	1 kHz offset	10 kHz offset	100 kHz offset	
LNFTD-10-120240-12	120 / 240	10	+7 ± 6 dBm	+12	+7	80	80	-125	-150	-165	-167	435
VFCTS100-10	100	10	1.0 - 3.3 VDC, p-p	+5	+7	80	20	-110	-140	-156	-165	453
VFCTS105-10	105	10	1.0 - 3.3 VDC, p-p	+5	+7	80	32	-110	-140	-156	-165	453
VFCTS120-10	120	10	1.0 - 3.3 VDC, p-p	+5	+7	80	28	-110	-140	-156	-165	453
VFCTS125-10	125	10	1.0 - 3.3 VDC, p-p	+5	+8	80	28	-110	-140	-156	-165	453
VFCTS128-10	128	10	1.0 - 3.3 VDC, p-p	+5	+8	80	20	-100	-130	-155	-160	453
FCTS800-10-5	800	10	1.0 - 3.3 VDC, p-p	+5; +12	0	80	18	-87	-116	-144	-158	273LF
KFCTS800-10-5	800	10	1.0 - 3.3 VDC, p-p	+5; +12	+6	80	18	-87	-116	-144	-158	315
FCTS1000-10-5	1000	10	1.0 - 3.3 VDC, p-p	+5; +12	-3	80	25	-80	-115	-141	-158	273LF
KFCTS1000-10-5	1000	10	1.0 - 3.3 VDC, p-p	+5; +12	+5	80	25	-80	-115	-141	-158	337
FSA1000-100	1000	100	1.0 - 3.3 VDC, p-p	+3.3; +5; +12v	+5	80	15	-105	-115	-145	-160	344
KFSA1000-100	1000	100	1.0 - 3.3 VDC, p-p	+12v	+5	80	15	-105	-115	-145	-160	372
FXLNS-1000	1000	100	+13 ± 3 dBm	+5; +12	-2	55	35	-120	-140	-149	-154	344
KFXLNS-1000	1000	100	+13 ± 3 dBm	+12	-5	80	35	-120	-140	-149	-154	347
FCTS1000-100-5	1000	100	1.0 - 3.3 VDC, p-p	+5; +12	-3	80	25	-80	-115	-141	-158	273LF
KFCTS1000-100-5	1000	100	1.0 - 3.3 VDC, p-p	+5; +12	-3	80	25	-80	-115	-141	-158	337
FCTS2000-10-5	2000	10	1.0 - 3.3 VDC, p-p	+5; +12	+5	80	20	-80	-105	-135	-158	273LF
FCTS2000-100-5	2000	100	1.0 - 3.3 VDC, p-p	+5; +12	+5	80	20	-80	-105	-135	-158	197LF
KFCTS2000-100-5	2000	100	1.0 - 3.3 VDC, p-p	+5; +12	+5	80	20	-80	-105	-135	-158	399

OVEN CONTROLLED CRYSTAL OSCILLATORS												
Model	Frequency ( MHz )	Frequency Tuning Range ( PPM )	Tuning Voltage Range ( VDC )	DC Bias VDC @ I ( Max. )	Minimum Output Power ( dBm )	Tuning Range ( ppm ) [ Typ. ]	Frequency Stability ( ppm ) [ Typ. ]	Phase Noise ( dBc/Hz ) [ Typ. ]				PKG#
								100 Hz offset	1 kHz offset	10 kHz offset	100 kHz offset	
OXO10-1-348	10	+/-0.5 to +/- 1.5	0 - 5	+12 @ 200 mA	+5	-20	5x10-9	-150	-160	-165	-170	348
OXO10-1-349	10	+/-0.4	0 - 5	+12 @ 200 mA	+3	-30	7x10-9	-150	-155	-165	-165	349
OXO10-1-402	10	+/-0.4	0.5 - 9.5	+12 @ 180 mA	+8	-30	20x10-9	-155	-165	-175	-175	402
OXO10-1-412	10	+/-0.4	0 - 5	+12 @ 200 mA	+3	-30	7x10-9	-150	-155	-165	-165	412
OXO100-1-349	100	+/-1.5	0 - 10	+12 @ 150 mA	+7	-30	5x10-8	-130	-153	-165	-170	349
OXO100-1-395L	100	+/-3	0 - 10	+12 @ 120 mA	+10	-30	5x10-8	-125	-157	-173	-177	395
OXO100-1-395M	100	+/-3	0 - 10	+12 @ 120 mA	+10	-30	5x10-8	-130	-159	-173	-175	395
OXO100-1-395H	100	+/-3	0 - 10	+12 @ 120 mA	+10	-30	5x10-8	-135	-159	-170	-172	395
OXO100-1-402	100	+/-4	0 - 10	+12 @ 120 mA	+5	-30	5x10-8	-130	-150	-165	-168	402
OXO100-1-412	100	+/-1.5	0 - 10	+12 @ 150 mA	+7	-30	5x10-8	-130	-153	-165	-170	412
OXO120-1-349	120	+/-2	0 - 10	+12 @ 150 mA	+7	-25	2x10-7	-125	-150	-160	-168	349

HIGH PERFORMANCE CRYSTAL OSCILLATORS												
Model	Frequency ( MHz )	Frequency Tuning Range ( PPM )	Aging ( PPM/year )	DC Bias VDC @ I ( Max. )	Minimum Output Power ( dBm )	Jitter ( fsec ) [ Max. ]	Frequency Stability ( ppm ) [ Typ. ] ( over temperature )	Phase Noise ( dBc/Hz ) [ Typ. ]				PKG# *
								100 Hz offset	1 kHz offset	10 kHz offset	100 kHz offset	
HPXO100	100	+/-5	+/-0.3	+12 VDC @ 120 mA	+10	10	<+/-0.2	-140	-162	-174	-183	379
KHPXO100	100	+/-5	+/-0.3	+12 VDC @ 120 mA	+10	10	<+/-0.2	-140	-162	-174	-183	412
HPXO125	125	+/-5	+/-0.3	+12 VDC @ 120 mA	+10	10	<+/-0.2	-140	-162	-174	-185	379
HPXO128	128	+/-5	+/-0.5	+12 VDC @ 120 mA	+10	10	<+/-0.2	-138	-160	-172	-180	379

ULTRA-LOW NOISE PHASE LOCKED FREQUENCY REFERENCE OSCILLATOR												
Model	Frequency ( GHz )	Reference Input Frequency ( MHz )	Reference Input Voltage ( VDC p-p )	DC Bias VDC [Typ.]	Minimum Output Power ( dBm )	Harmonic Suppression ( dB ) [Typ.]	Spurious Suppression ( dB ) [Typ.]	Phase Noise ( dBc/Hz ) [ Typ. ]				PKG#
								100 Hz offset	1 kHz offset	10 kHz offset	100 kHz offset	
KSFLO550-8-100	0.550	100	+9 to +15	+8	+17	30	70	-104	-111	-118	-140	411-1
KDFLO-1550-12-10	1.55	10	-3 to +3	+12	+13	20	70	-85	-105	-125	-130	444
KDFLOD1000-8-100	10	100	0 to +13	+8	+13	20	70	-95	-105	-110	-128	441
KFSULN1024-100	10.24	INTERNAL 100 MHz	---	120 VAC	+10 (Typ)	30	75	-95	-121	-136	-136	RACK
KSFLOD12800-12-1280	12.8	1280	+11 ± 2 dBm	+12	+10	27	75	-95	-114	-122	-123	405-1
KSFLOD25600-12-1280	25.6	1280	+3 ± 3 dBm	+8	+13	30	70	-89	-108	-118	-118	410
KSFLO27R5-12-100	27.5	100	0 ± 3 dBm	12	+8	25	60	-80	-85	-88	-98	440

HIGH PERFORMANCE SAW VCOs												
Model	Frequency ( MHz )	Tuning Voltage ( VDC )	DC Bias VDC @ I ( Max. )	Minimum Output Power ( dBm )	Tuning Sensitivity (kHz/V) [Typ.]	Harmonic Suppression (dB) [Typ.]	Frequency Pulling kHz/V ( Typ. @ 1.75:1 VSWR )	Phase Noise ( dBc/Hz ) [ Typ. ]				PKG#
								1 kHz offset	10 kHz offset	100 kHz offset	1 MHz offset	
HFSO640-5	640	0.5 - 12	+5 VDC @ 35 mA	+6	15	22	10	-122	-151	-162	-170	278LF
HFSO745R84-5	745.84	0.5 - 12	+5 VDC @ 35 mA	+3	20	12	10	-115	-147	-161	-170	278LF
HFSO776R82-5	776.82	0.5 - 12	+5 VDC @ 35 mA	+6	15	12	10	-114	-145	-161	-170	278LF
HFSO800-5	800	0.5 - 12	+5 VDC @ 20 mA	+3	18	20	10	-119	-146	-164	-170	278LF
HFSO800-5L	800	0.5 - 12	+5 VDC @ 20 mA	+3	18	20	10	-110	-142	-162	-170	278LF
HFSO800-5H	800	0.5 - 12	+5 VDC @ 20 mA	+3	18	20	10	-122	-150	-164	-170	278LF
HFSO1000-5	1000	0.5 - 12	+5 VDC @ 35 mA	+2	20	25	10	-111	-141	-160	-170	278LF
HFSO1000-5L	1000	0.5 - 12	+5 VDC @ 35 mA	+2	20	25	10	-108	-137	-157	-170	278LF
HFSO1000-5H	1000	0.5 - 12	+5 VDC @ 35 mA	+2	20	25	10	-115	-144	-162	-168	278LF
MISO1000-3	1000	0.5 - 14	+3 VDC @ 35 mA	+3	15	15	13	-108	-138	-157	-165	383
HFSO1200-5	1200	0.5 - 12	+5 VDC @ 100 mA	+9	50	20	10	-110	-142	-164	-168	320-1LF
HFSO1600-5	1600	0.5 - 12	+5 VDC @ 100 mA	+14	38	18	15	-108	-137	-161	-167	320-1LF
HFSO2000-5L	2000	0.5 - 12	+5 VDC @ 100 mA	+6	35	20	15	-103	-133	-159	-166	320-1LF
HFSO2000-5	2000	0.5 - 12	+5 VDC @ 100 mA	+6	35	20	15	-107	-137	-159	-166	320-1LF
HFSO2000-5TC	2000	0.5 - 12	+5 VDC @ 180 mA	+6	35	20	15	-107	-137	-159	-166	320-3LF

DIELECTRIC RESONATOR OSCILLATOR												
Model	Frequency ( GHz )	Tuning Voltage ( VDC )	DC Bias VDC @ I ( Max. )	Minimum Output Power ( dBm )	Tuning Sensitivity (MHz/V) [Typ.]	Harmonic Suppression (dB) [Typ.]	Jitter (fs) @1 kHz to 30 MHz [Typ.]	Phase Noise ( dBc/Hz ) [ Typ. ]				PKG#
								1 kHz offset	10 kHz offset	100 kHz offset	1 MHz offset	
SDRO740-8	7.4	1 - 10	+8 VDC @ 30 mA	+5	1	15	48	-85	-111	-138	-160	479-2
SDRO792-5XT	7.92	1 - 10	+5 VDC @ 12 mA	0	1.5	45	53	-83	-110	-134	-153	396
DRO80	8	1 - 15	+7 - 10 VDC @ 70 mA	+8	0.25	30	30	-85	-114	-140	-160	391
SDRO800-8	8	1 - 10	+8 VDC @ 25 mA	+1	1.5	34	69	-78	-111	-138	-160	396
SDRO800-8XT	8	1 - 10	+8 @ 25 mA	+1	1.5	45	61	-80	-111	-138	-160	396
GSDRO832-8XT	8.32	1 - 10	+8 @ 30 mA	+5	0.35	32	13	-95	-125	-149	-167	479-2
SDRO840-8	8.4	1 - 10	+8 @ 25 mA	+4	1.5	20	29	-87	-114	-134	-160	396
SDRO900-8	9	1 - 10	+8 VDC @ 25 mA	+1	1.0	21	64	-78	-112	-132	-152	396
SDRO900-8XT	9	1 - 10	+8 @ 25 mA	+1	1.0	21	34	-85	-112	-132	-152	396
SDRO920-8	9.2	1 - 10	+8 VDC @ 25 mA	0	1	15	24	-79	-108	-134	-156	396
SDRO925-8	9.25	1 - 10	+8 @ 25 mA	+1	1.0	25	50	-80	-112	-132	-152	396
SDRO945-8	9.45	1 - 10	+8 VDC @ 30 mA	0	1	16	22	-80	-106	-135	-157	396
SDRO980-8	9.8	1 - 10	+8 VDC @ 30 mA	0	1	15	37	-78	-107	-132	-155	396
DRO100	10	1 - 15	+7 - 10 VDC @ 70 mA	+8	0.4	40	35	-81	-111	-137	-158	391
GSDRO1000-8XT	10	1 - 15	+8 @ 25 mA	+3	0.35	28	9	-95	-124	-149	-166	396-5
SDRO1000-8	10	1 - 15	+8 VDC @ 25 mA	-2	0.4	40	60	-79	-107	-127	-147	396
SDRO1000-8XT	10	1 - 10	+8 VDC @ 25 mA	-4	1.5	25	65	-78	-104	-130	-150	396
DRO1024	10.24	1 - 15	+7 - 10 VDC @ 70 mA	+7	0.4	40	53	-79	-109	-136	-158	391
SDRO1024-8	10.24	1 - 15	+8 VDC @ 25 mA	-2	0.4	28	60	-78	-105	-125	-145	396
SDRO1121-7	11.217	1 - 12	+7 VDC @ 25 mA	0	0.4	28	64	-77	-107	-127	-147	396
SDRO1130-7	11.303	1 - 12	+7 VDC @ 25 mA	0	0.35	28	63	-77	-107	-127	-147	396
SDRO1134-7	11.34	1 - 12	+7 VDC @ 25 mA	0	0.35	30	35	-84	-107	-126	-150	396
SDRO1140-8XT	11.4	1 - 10	+8 VDC @ 25 mA	-6	1.8	27	85	-75	-102	-128	-150	396
GSDRO1200-8XT	12	1 - 15	+8 VDC @ 25 mA	-2	0.4	26	16	-85	-123	-146	-164	396
SDRO1250-8	12.5	1 - 15	+8 VDC @ 25 mA	-2	0.4	34	45	-80	-105	-125	-146	396
SDRO1500-8XT	15	1 - 12	+8 VDC @ 26 mA	-6	1	55	130	-68	-99	-122	-142	396

Note: XT - Extended operating temperature range (-40° to +85°); GSDRO - Series has lowest phase noise





# OUTLINE DRAWINGS

