

Voltage Controlled Oscillator

SOS-1884-119+

5V Tuning for PLL IC's 1834 to 1884 MHz

Features

- low power output, -10dBm typ.
- linear tuning characteristics
- low phase noise
- low pushing & pulling
- small size 0.3" x 0.3"
- aqueous washable



CASE STYLE: FZ802
PRICE: \$ 20.60 ea. QTY (5-49)

Applications

- wireless communications
- tetra base station

+RoHS Compliant
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Electrical Specifications

MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies, kHz				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @ 12 dB _r (MHz)	PUSHING (MHz/V)	DC OPERATING POWER	
	Min.	Max.		Typ.	1	10	100	1000	VOLTAGE RANGE (V)	SENSITIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.			Typ.	Typ.
SOS-1884-119+	1834	1884	-10	-80	-104	-125	-145	0.5	5	21-24	17	85	-90	-18	-	0.15	1.5	4.5	16

Pin Connections

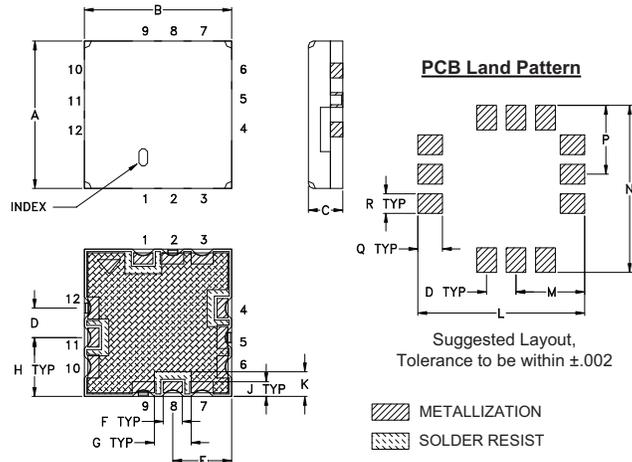
RF OUT	8
VCC	11
V-TUNE	1
GROUND	2,3,4,5,6,7,9,10,12

Maximum Ratings

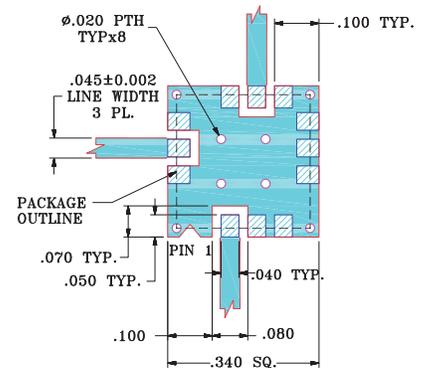
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (V _{cc})	7V
Absolute Max. Tuning Voltage (V _{tune})	7V
All specifications	50 ohm system

Permanent damage may occur if any of these limits are exceeded.

Outline Drawing



Demo Board MCL P/N: TB-271 Suggested PCB Layout (PL-143)



NOTE:

1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .025"±.002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	wt.
.300	.300	.070	.060	.120	.039	.075	.120	.030	.050	.340	.140	.340	.140	.050	.040	grams
7.62	7.62	1.78	1.52	3.05	0.99	1.91	3.05	0.76	1.27	8.64	3.56	8.64	3.56	1.27	1.02	.25



For detailed performance specs & shopping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com

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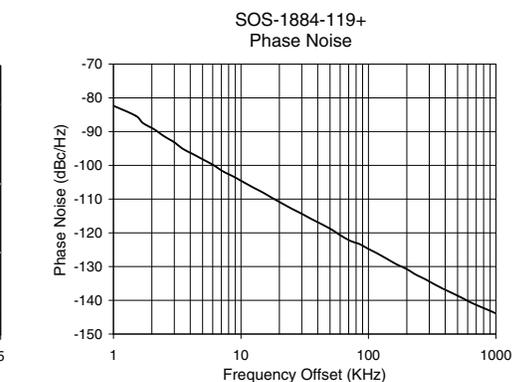
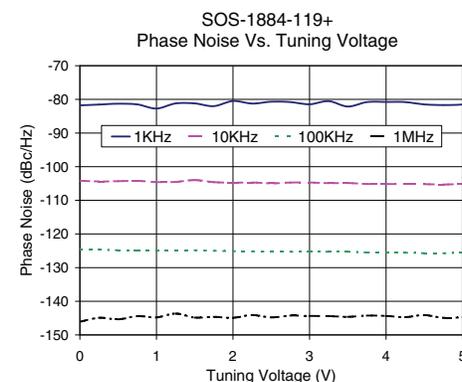
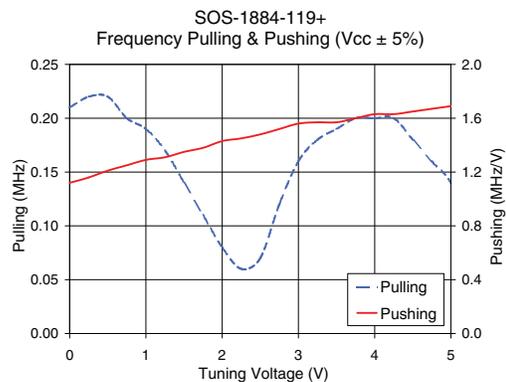
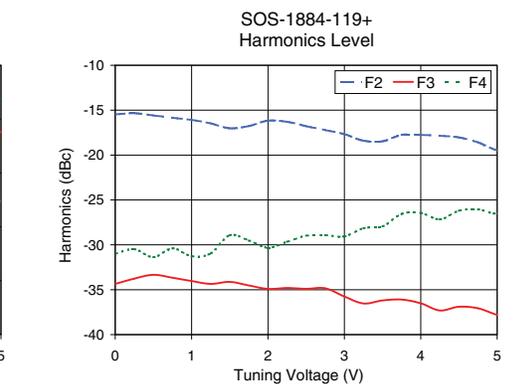
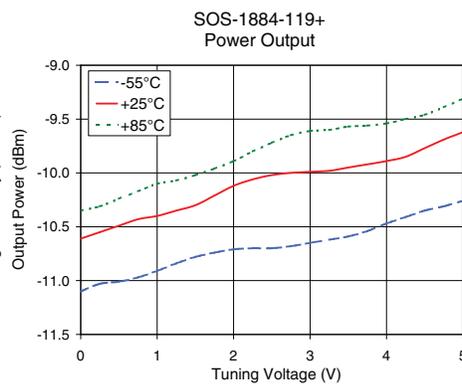
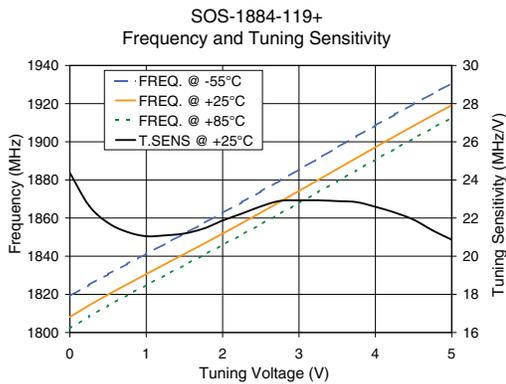
REV. OR
M121573
EDR-9465F1
SOS-1884-119+
RAV
121009
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Performance Data & Curves*

SOS-1884-119+

V TUNE	TUNE SENS (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)			Icc (mA)	HARMONICS (dBc)			FREQ. PUSH (MHz/V)	FREQ. PULL (MHz)	PHASE NOISE (dBc/Hz) at offsets				FREQ OFFSET (KHz)	PHASE NOISE at 1862 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	24.37	1819.1	1808.1	1802.1	-11.10	-10.61	-10.35	11.06	-15.5	-34.4	-31.0	1.12	0.21	-81.8	-104.2	-124.6	-146.1	1.0	-82.10
0.50	21.75	1830.6	1819.9	1814.2	-11.01	-10.49	-10.24	11.11	-15.6	-33.3	-31.4	1.21	0.22	-81.3	-104.3	-124.8	-145.4	2.1	-89.41
0.75	21.28	1836.0	1825.3	1819.6	-10.97	-10.43	-10.17	11.14	-15.9	-33.7	-30.4	1.25	0.20	-81.5	-104.2	-124.8	-144.4	3.5	-95.11
1.00	21.05	1841.3	1830.7	1824.9	-10.91	-10.40	-10.10	11.16	-16.1	-34.0	-31.3	1.29	0.19	-82.7	-104.6	-124.9	-144.8	6.1	-99.97
1.25	21.09	1846.6	1835.9	1830.1	-10.84	-10.35	-10.07	11.18	-16.5	-34.4	-31.0	1.31	0.17	-81.2	-104.5	-124.8	-143.7	8.7	-103.31
1.50	21.19	1851.9	1841.2	1835.4	-10.78	-10.30	-10.02	11.20	-17.0	-34.1	-28.9	1.35	0.14	-81.2	-104.0	-124.9	-144.8	10.0	-104.56
1.75	21.45	1857.3	1846.5	1840.6	-10.74	-10.21	-9.96	11.23	-16.8	-34.5	-29.5	1.38	0.11	-82.0	-104.6	-125.0	-144.6	21.1	-111.33
2.00	21.87	1862.7	1851.9	1845.9	-10.71	-10.12	-9.89	11.26	-16.2	-34.9	-30.3	1.43	0.08	-80.5	-104.7	-125.1	-144.9	36.1	-116.00
2.25	22.23	1868.3	1857.3	1851.3	-10.70	-10.06	-9.80	11.28	-16.3	-34.8	-29.7	1.45	0.06	-81.3	-104.7	-125.2	-144.1	60.5	-120.78
2.50	22.61	1874.0	1862.9	1856.7	-10.70	-10.02	-9.72	11.30	-16.8	-34.9	-29.0	1.48	0.07	-80.7	-105.0	-125.3	-144.8	84.9	-123.33
2.75	22.90	1879.7	1868.5	1862.3	-10.68	-10.00	-9.65	11.34	-17.2	-34.8	-28.9	1.52	0.12	-80.8	-104.7	-125.3	-144.3	100.0	-124.77
3.00	22.93	1885.4	1874.3	1867.9	-10.65	-9.99	-9.61	11.36	-17.7	-35.8	-29.1	1.56	0.16	-81.5	-104.7	-125.2	-144.4	142.4	-127.91
3.25	22.93	1891.2	1880.0	1873.6	-10.62	-9.98	-9.60	11.40	-18.4	-36.5	-28.2	1.57	0.18	-80.5	-104.9	-125.3	-144.4	167.2	-129.41
3.50	22.89	1897.0	1885.7	1879.3	-10.59	-9.95	-9.57	11.43	-18.5	-36.2	-28.0	1.57	0.19	-82.1	-104.9	-125.3	-144.6	199.9	-130.77
3.75	22.84	1902.8	1891.4	1885.0	-10.54	-9.92	-9.56	11.47	-17.8	-36.1	-26.6	1.60	0.20	-80.8	-105.2	-125.5	-144.3	280.6	-133.80
4.00	22.59	1908.6	1897.2	1890.7	-10.47	-9.89	-9.54	11.50	-17.8	-36.5	-26.5	1.63	0.20	-80.8	-105.2	-125.6	-144.4	329.4	-135.26
4.25	22.29	1914.2	1902.8	1896.2	-10.41	-9.85	-9.50	11.53	-17.9	-37.3	-27.2	1.63	0.20	-80.8	-105.2	-125.6	-144.7	462.4	-138.00
4.50	21.92	1919.8	1908.4	1901.8	-10.35	-9.77	-9.46	11.57	-18.0	-36.9	-26.2	1.65	0.18	-81.5	-105.2	-125.7	-144.1	552.7	-139.47
4.75	21.35	1925.3	1913.9	1907.2	-10.31	-9.69	-9.39	11.61	-18.6	-37.1	-26.1	1.67	0.16	-81.7	-105.3	-125.7	-144.9	910.8	-143.21
5.00	20.87	1930.6	1919.2	1912.6	-10.26	-9.62	-9.31	11.64	-19.5	-37.8	-26.5	1.69	0.14	-81.5	-105.2	-125.6	-144.8	1000.0	-143.90

*at 25°C unless mentioned otherwise



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