

Voltage Controlled Oscillator

ROS-824-119+

Wide Band 540 to 824 MHz

Features

- High power output, +9dBm
- Linear tuning characteristics
- Low phase noise
- Low pushing
- Aqueous washable

Applications

- Terrestrial digital TV equipment
- Wireless communications
- Instrumentation



CASE STYLE: CK605
PRICE: \$ 24.95 ea. QTY (5-49)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify 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 @12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER	
	Min.	Max.		Typ.	1	10	100	1000	VOLTAGE RANGE (V)	SENSI-TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.			Typ.	Typ.
ROS-824-119+	540	824	+9	-77	-99	-120	-140	2	16	21 - 30	160	1.5	-90	-30	-20	3	1	10	25

Pin Connections

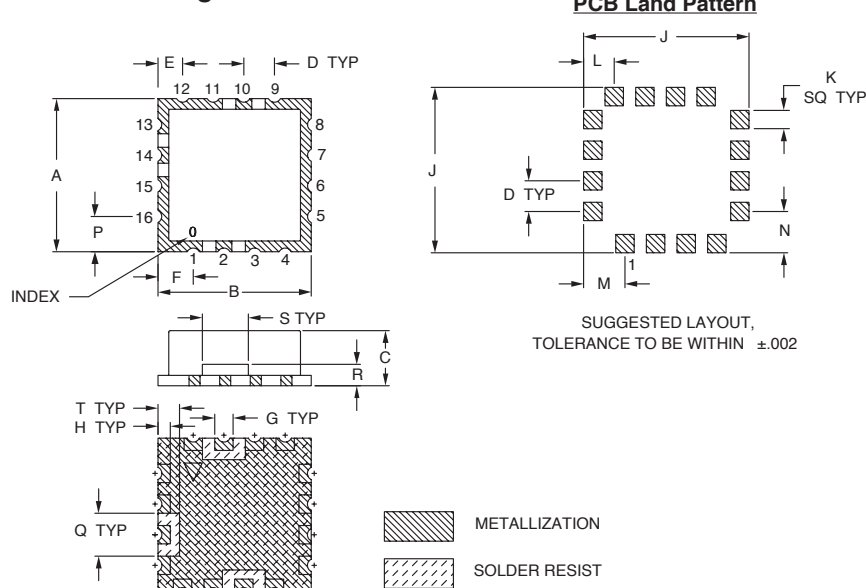
RF OUT	10
VCC	14
V-TUNE	2
GROUND	1,3,4,5,6,7,8,9,11,12,13,15,16

Maximum Ratings

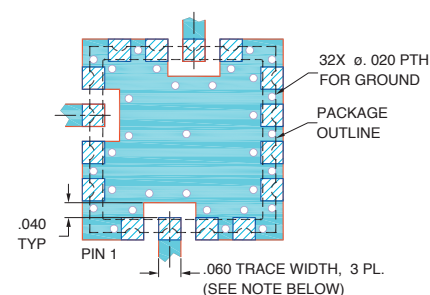
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	12V
Absolute Max. Tuning Voltage (Vtune)	18V
All specifications	50 ohm system

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

Outline Drawing



Demo Board MCL P/N: TB-10 Suggested PCB Layout (PL-012)



- NOTES:**
1. TRACE WIDTH IS SHOWN FOR RF4 WITH DIELECTRIC THICKNESS .030" ± .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.
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Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	wt.
.500	.500	.180	.100	.080	.115	.060	.040	.540	.060	.100	.135	.135	.115	.140	.070	.150	.070	grams
12.70	12.70	4.57	2.54	2.03	2.92	1.52	1.02	13.72	1.52	2.54	3.43	3.43	2.92	3.56	1.78	3.81	1.78	1.0



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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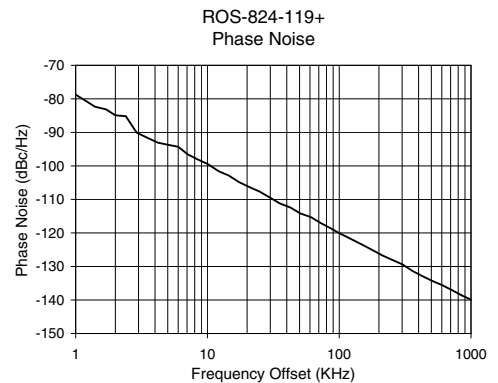
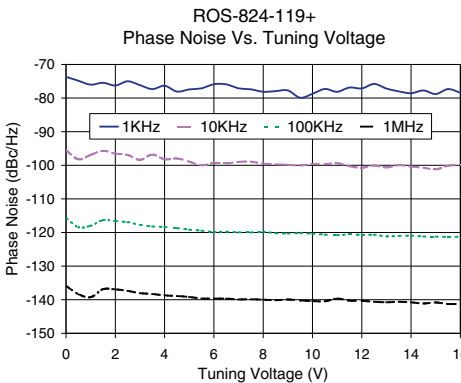
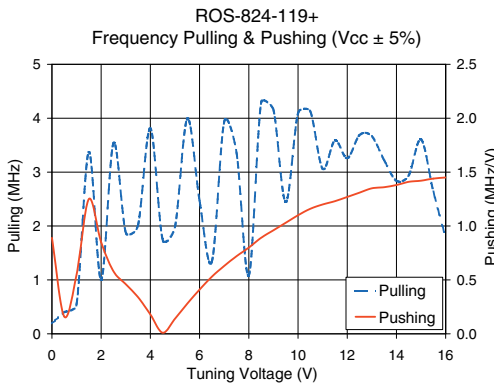
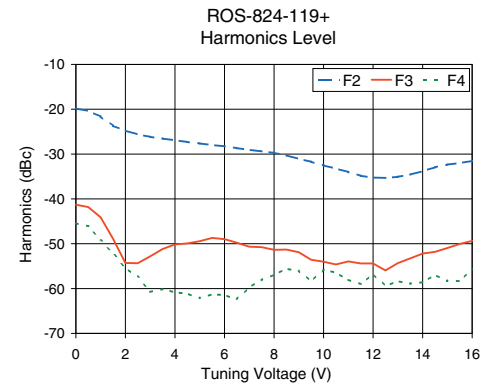
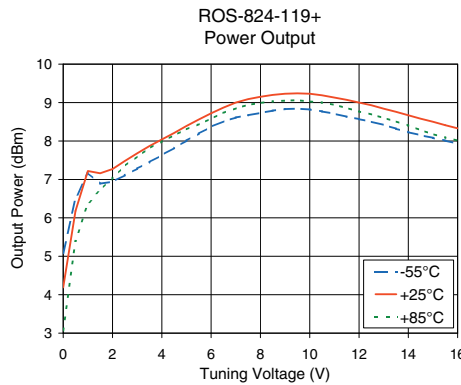
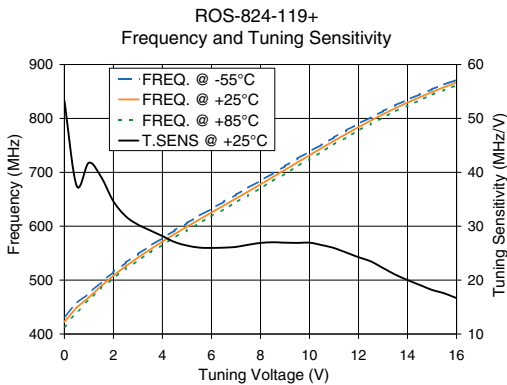
REV. OR
M108350
EDR-7628F1
ROS-824-119+
RAV
090825
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Performance Data & Curves*

ROS-824-119+

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 682 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	53.29	432.4	422.6	413.5	5.08	4.19	3.07	18.94	-19.8	-41.3	-45.4	0.89	0.19	-73.7	-95.5	-115.7	-135.9	1.0	-78.76
0.50	37.51	457.5	449.3	440.3	6.50	6.18	5.40	18.85	-20.4	-41.8	-46.1	0.16	0.40	-74.8	-98.2	-118.4	-138.3	2.0	-84.92
1.00	41.79	475.5	468.0	463.1	7.17	7.22	6.37	18.73	-21.6	-44.1	-49.2	0.55	0.55	-76.0	-96.9	-118.0	-139.3	3.5	-91.63
2.00	34.61	515.4	508.5	503.9	6.94	7.27	7.04	18.66	-24.8	-54.3	-55.4	0.85	1.00	-76.3	-96.5	-116.6	-136.9	6.0	-94.29
3.00	30.30	548.2	541.7	536.4	7.28	7.68	7.60	18.68	-26.2	-52.8	-60.8	0.46	1.88	-76.2	-98.4	-117.7	-138.0	8.5	-98.15
4.00	28.17	578.2	571.5	565.5	7.63	8.04	7.99	18.70	-26.9	-50.2	-60.9	0.18	3.81	-76.3	-98.2	-118.4	-138.7	10.0	-99.41
5.00	26.41	605.9	599.1	592.5	8.01	8.39	8.30	18.74	-27.6	-49.4	-62.1	0.14	1.98	-77.4	-98.9	-119.2	-139.2	20.8	-106.31
6.00	25.98	632.3	625.3	618.6	8.37	8.72	8.58	18.76	-28.3	-49.0	-61.5	0.41	2.47	-75.9	-99.3	-119.9	-139.7	35.5	-111.22
7.00	26.17	658.2	651.3	644.3	8.61	9.00	8.85	18.77	-29.0	-50.7	-59.7	0.63	3.93	-77.1	-99.0	-119.9	-139.9	60.7	-115.24
8.00	26.90	684.7	677.7	670.6	8.73	9.15	8.99	18.76	-29.7	-51.4	-56.9	0.80	1.09	-78.1	-99.5	-119.8	-140.0	86.7	-118.67
9.00	26.95	711.6	704.7	697.5	8.83	9.23	9.05	18.74	-31.1	-51.9	-56.0	0.96	4.16	-77.7	-99.9	-120.3	-139.9	100.0	-120.07
10.00	26.94	738.5	731.6	724.7	8.82	9.23	9.03	18.71	-32.5	-54.0	-55.8	1.10	4.09	-78.7	-99.6	-120.4	-140.4	148.1	-123.43
11.00	25.96	764.8	758.3	751.6	8.71	9.13	8.94	18.66	-34.0	-54.0	-58.0	1.20	3.06	-78.1	-99.4	-120.8	-139.7	177.0	-125.02
12.00	24.26	790.2	783.9	777.6	8.57	9.00	8.77	18.60	-35.2	-54.4	-56.7	1.27	3.26	-77.1	-100.7	-120.7	-140.4	211.6	-126.68
13.00	22.25	813.5	807.7	801.7	8.42	8.84	8.60	18.54	-35.1	-54.3	-58.4	1.35	3.67	-77.2	-100.6	-121.2	-140.8	302.4	-129.40
14.00	20.02	834.8	829.4	823.6	8.23	8.67	8.40	18.49	-33.8	-52.2	-58.6	1.38	2.84	-78.6	-100.4	-120.9	-140.8	361.5	-131.38
14.50	19.10	844.8	839.4	833.9	8.15	8.58	8.28	18.46	-32.9	-51.8	-57.0	1.41	2.94	-77.7	-100.7	-121.2	-141.1	507.5	-134.29
15.00	18.19	854.2	848.9	843.7	8.08	8.50	8.18	18.42	-32.4	-51.0	-58.3	1.42	3.61	-78.8	-101.2	-121.2	-140.8	606.7	-135.61
15.50	17.54	863.1	858.0	852.9	8.01	8.41	8.09	18.39	-32.0	-50.1	-58.3	1.44	2.64	-77.3	-100.2	-121.3	-141.3	851.6	-138.63
16.00	16.66	871.5	866.8	861.7	7.93	8.33	8.01	18.37	-31.5	-49.4	-55.7	1.45	1.78	-78.4	-99.9	-121.3	-141.2	1000.0	-139.90

*at 25°C unless mentioned otherwise



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