

NON-CATALOG

Surface Mount

Voltage Controlled Oscillator

ROS-824-119+

Wide Band 540 to 824 MHz

Features

- high power output, +9 dBm typ.
- linear tuning characteristics
- low phase noise
- low pushing
- aqueous washable

Applications

- terrestrial digital TV equipment
- wireless communications
- instrumentation



CASE STYLE: CK605

+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 dBr (MHz)	PUSHING (MHz/V)	DC OPERATING POWER				
	Min.	Max.		Typ.	1	10	100	1000	Min.	Max.	Typ.	Typ.		Typ.	Typ.			Max.	Typ.	Typ.	Vcc (volts)	Current (mA)
	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

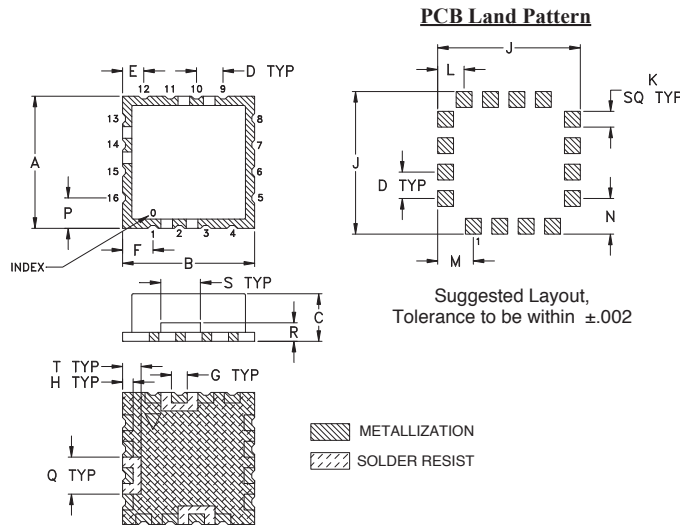
RF OUT	10
VCC	14
V-TUNE	2
GROUND	1,3,4,5,6,7,8,9,11,12,13,15,16

Maximum Ratings

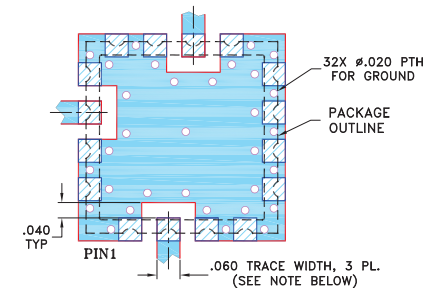
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	12V
Absolute Max. Tuning Voltage (Vtune)	18V
All specifications	50 ohm system

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 FR4 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 BOTTOM 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

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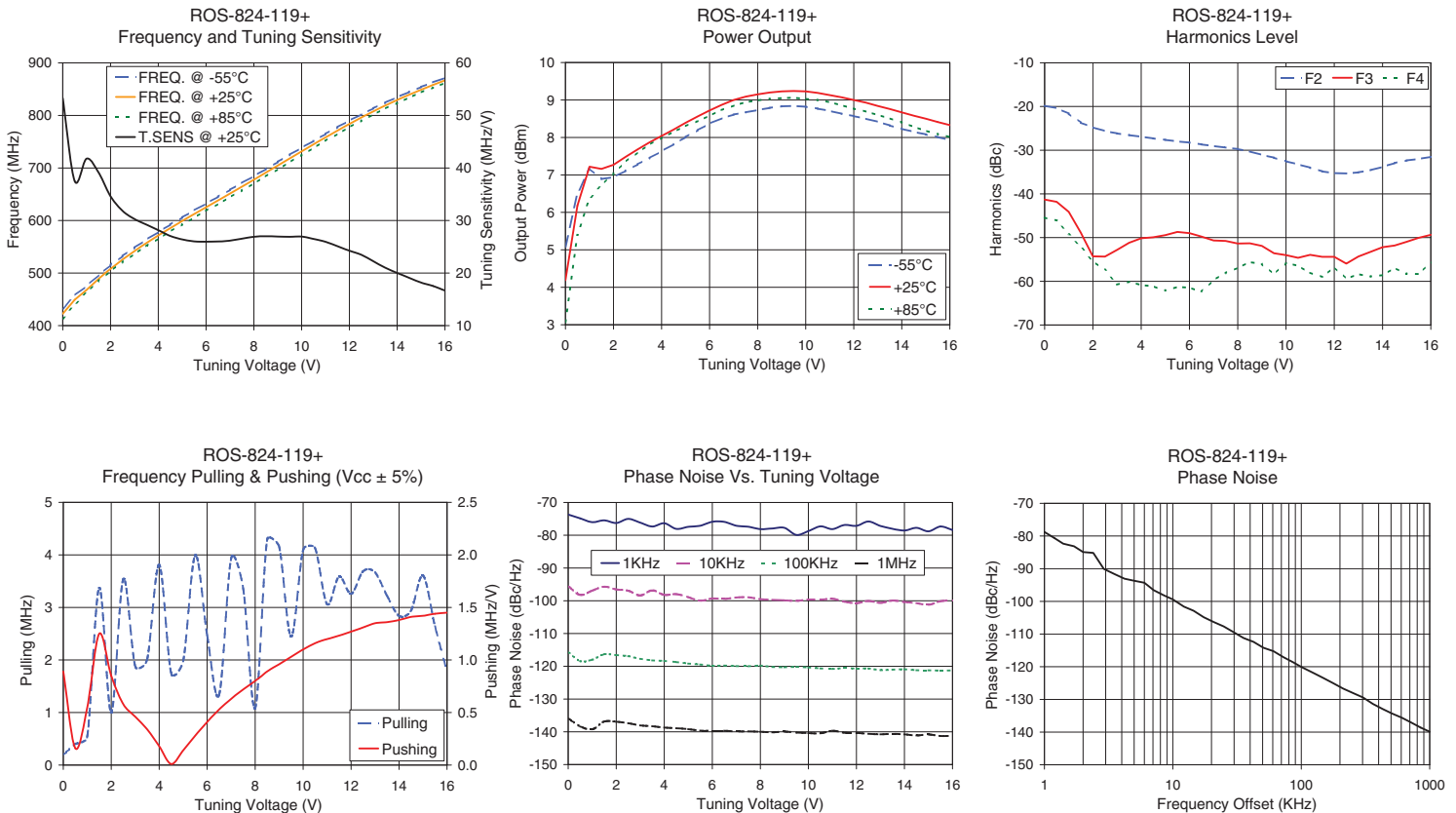
NON-CATALOG

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		
0.50	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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