

Voltage Controlled Oscillator

ROS-310-519+

Linear Tuning 240 to 305 MHz

Features

- Low Phase Noise
- Low Pulling
- Low Pushing
- Aqueous washable

Applications

- Wireless communications
- Cable TV



CASE STYLE: CK605

PRICE: \$15.95 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				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER	
				dBc/Hz SSB at offset frequencies,kHz				VOLTAGE RANGE (V)	SENSI- TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)	Vcc (volts)						Current (mA)	
	Typ.				Min.	Max.	Typ.							Typ.	Typ.				Max.
ROS-310-519+	240	305	+6	-89	-112	-133	-153	0.5	17	5 - 7	80	40	-90	-24	-14	0.5	0.7	5	30

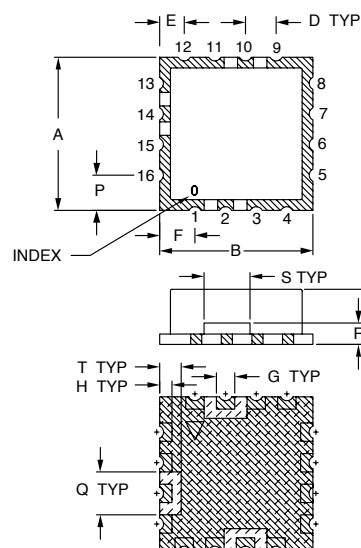
Pin Connections

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

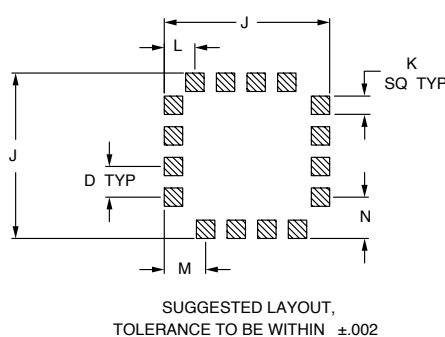
Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	7V
Absolute Max. Tuning Voltage (Vtune)	19V
All specifications	50 ohm system

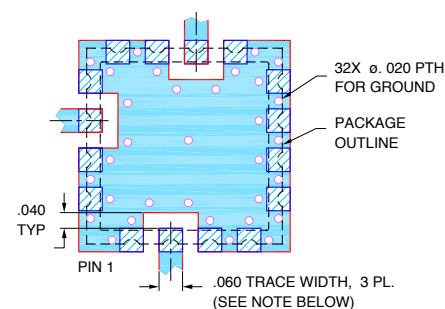
Outline Drawing



PCB Land Pattern



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.
- 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	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



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

RF/IF MICROWAVE COMPONENTS



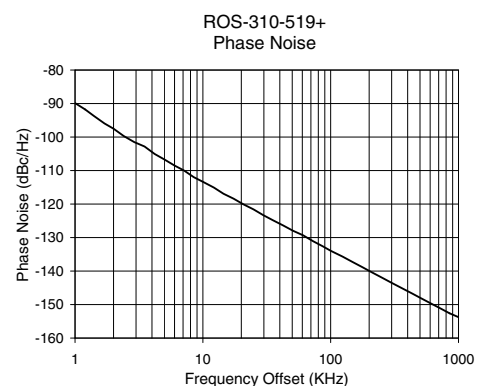
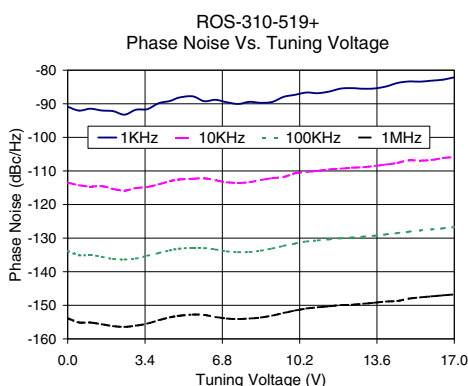
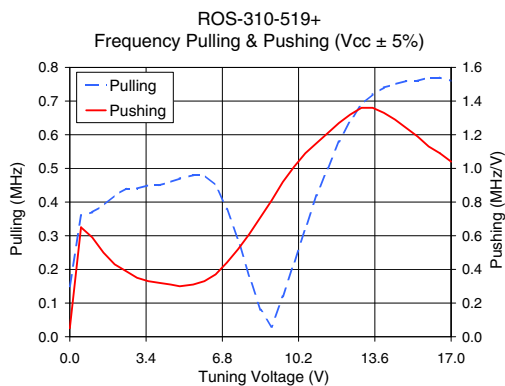
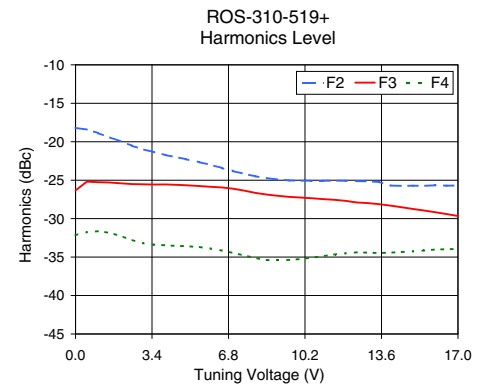
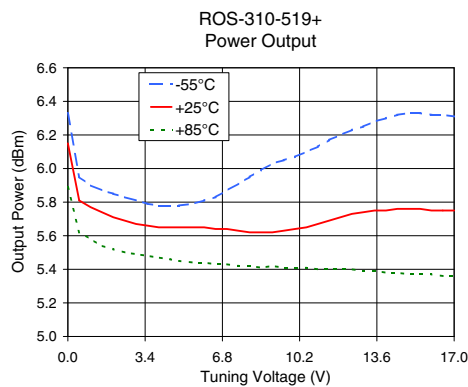
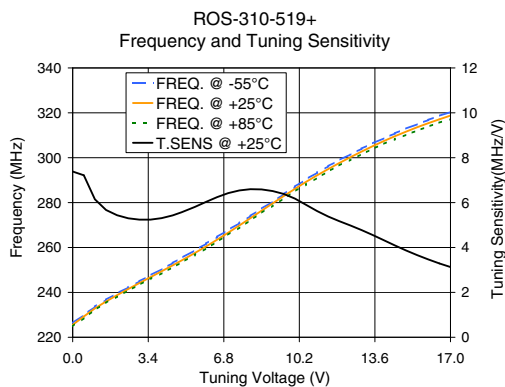
REV. A
M109593
EDR-8302
ROS-310-519+
RAV
071112
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Performance Data & Curves*

ROS-310-519+

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 273 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	7.39	226.3	225.6	224.9	6.33	6.15	5.89	23.49	-18.2	-26.3	-32.2	0.05	0.15	-90.9	-113.5	-133.9	-153.8	1.0	-89.86
0.50	7.22	230.0	229.3	228.6	5.95	5.81	5.62	23.82	-18.4	-25.2	-31.8	0.65	0.36	-92.0	-114.3	-135.1	-155.1	2.0	-97.50
1.00	6.15	233.6	232.9	232.2	5.90	5.77	5.58	23.84	-18.9	-25.3	-31.6	0.59	0.37	-91.5	-114.7	-135.0	-155.1	3.5	-102.82
2.00	5.44	239.5	238.8	238.1	5.85	5.71	5.52	23.91	-20.0	-25.4	-32.3	0.43	0.42	-92.2	-115.4	-136.2	-156.2	6.0	-108.50
3.00	5.24	244.9	244.2	243.4	5.81	5.67	5.49	24.02	-21.0	-25.5	-33.2	0.35	0.44	-91.8	-115.1	-136.1	-156.1	8.5	-111.97
4.00	5.31	250.3	249.4	248.5	5.78	5.65	5.47	24.07	-21.7	-25.6	-33.5	0.32	0.45	-89.8	-114.0	-134.4	-154.5	10.0	-113.35
4.90	5.57	255.3	254.2	253.3	5.78	5.65	5.45	24.04	-22.3	-25.7	-33.6	0.30	0.47	-88.2	-112.5	-133.2	-153.1	20.8	-120.09
6.00	6.03	261.7	260.5	259.6	5.81	5.65	5.44	23.96	-23.0	-25.9	-33.9	0.33	0.48	-89.2	-112.2	-133.0	-152.9	35.5	-124.87
7.00	6.42	267.8	266.6	265.7	5.87	5.64	5.43	23.89	-23.8	-26.1	-34.5	0.44	0.38	-89.6	-113.4	-134.0	-153.9	60.7	-129.30
8.00	6.60	274.1	273.1	272.2	5.95	5.62	5.42	23.85	-24.5	-26.7	-35.1	0.61	0.18	-89.4	-113.4	-134.1	-153.9	86.7	-132.62
9.00	6.51	280.5	279.7	278.7	6.03	5.62	5.42	23.85	-24.9	-27.0	-35.4	0.81	0.03	-89.4	-112.1	-133.1	-153.1	100.0	-133.95
10.00	6.18	287.1	286.1	285.0	6.07	5.64	5.41	23.89	-25.1	-27.3	-35.3	1.01	0.22	-87.3	-110.7	-131.6	-151.6	148.1	-137.27
11.00	5.62	293.4	292.2	291.0	6.13	5.67	5.40	23.97	-25.1	-27.5	-34.9	1.15	0.42	-86.9	-110.0	-130.7	-150.6	177.0	-138.84
12.00	5.17	299.0	297.7	296.5	6.20	5.71	5.40	24.07	-25.1	-27.7	-34.5	1.27	0.58	-85.5	-109.3	-130.0	-150.0	211.6	-140.45
13.00	4.78	304.0	302.7	301.6	6.25	5.74	5.39	24.19	-25.2	-28.0	-34.4	1.36	0.69	-85.5	-108.9	-129.6	-149.5	302.4	-143.59
14.00	4.32	308.7	307.4	306.2	6.30	5.75	5.38	24.30	-25.7	-28.3	-34.4	1.33	0.74	-84.9	-108.1	-128.9	-148.9	361.5	-145.13
15.00	3.87	312.9	311.6	310.2	6.33	5.76	5.37	24.40	-25.7	-28.7	-34.3	1.24	0.76	-83.4	-106.9	-128.1	-148.0	507.5	-148.08
16.00	3.47	316.8	315.4	313.9	6.32	5.75	5.37	24.48	-25.7	-29.2	-34.0	1.13	0.77	-83.1	-106.7	-127.4	-147.3	606.7	-149.64
16.50	3.29	318.7	317.1	315.6	6.32	5.75	5.36	24.51	-25.7	-29.4	-34.0	1.09	0.77	-82.8	-106.2	-127.1	-147.1	851.6	-152.62
17.00	3.13	320.4	318.8	317.2	6.31	5.75	5.36	24.54	-25.7	-29.7	-34.0	1.04	0.76	-82.1	-105.9	-126.7	-146.8	1000.0	-153.76

*at 25°C unless mentioned otherwise



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