

NON-CATALOG

Surface Mount

Voltage Controlled Oscillator

MOS-1560-119+

5V Tuning for PLL ICs 1520 to 1560 MHz



CASE STYLE: CZ682

Features

- linear tuning characteristics
- low phase noise
- low pushing
- aqueous washable

Applications

- wireless communications
- CATV

+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 (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.			Max.	Typ.	Typ.
MOS-1560-119+	1520	1560	+8.5	-83	-110	-131	-151	0.5	5	27	24	60	-90	-18	-10	3	0.5	5	37

Pin Connections

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

Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	6V
Absolute Max. Tuning Voltage (Vtune)	7V
All specifications	50 ohm system

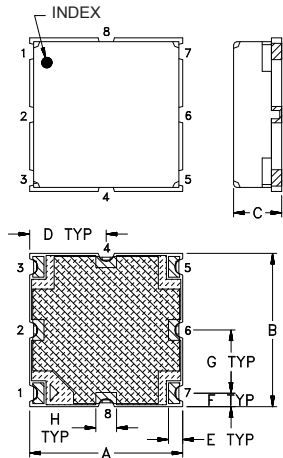
Permanent damage may occur if any of these limits are exceeded.

Tape & Reel: F60

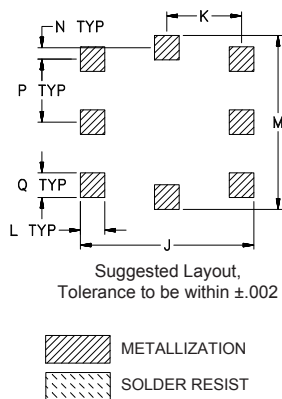
7" Reels with 10, 20, 50, 100 devices
13" Reels with 200, 500, 1000 devices

Environmental Ratings: ENV65

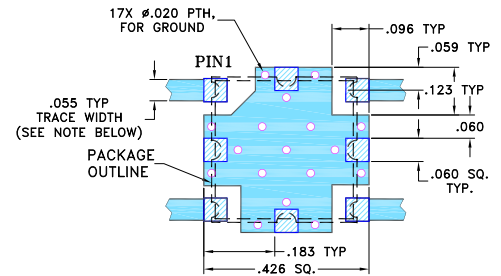
Outline Drawing



PCB Land Pattern



Demo Board MCL P/N: TB-128 Suggested PCB Layout (PL-023)



- NOTE: 1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS 0.030" ± 0.002"; 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	wt.
.375	.375	.131	.188	.035	.033	.154	.050	.425	.183	.060	.425	.028	.154	.060	grams
9.52	9.52	3.33	4.77	0.89	0.84	3.91	1.27	10.80	4.65	1.52	10.80	0.71	3.91	1.52	.60

Notes

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B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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REV. C
M169213
EDR-8566/1F1
MOS-1560-119+
RAV
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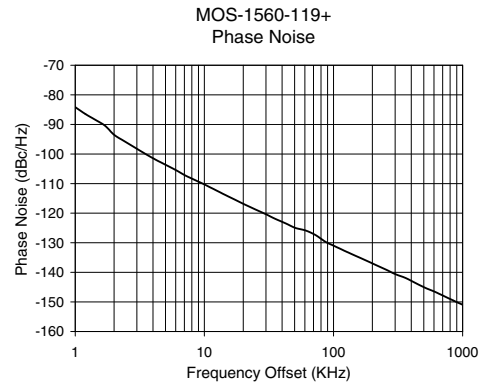
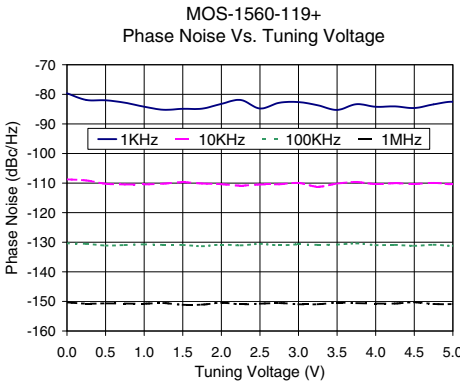
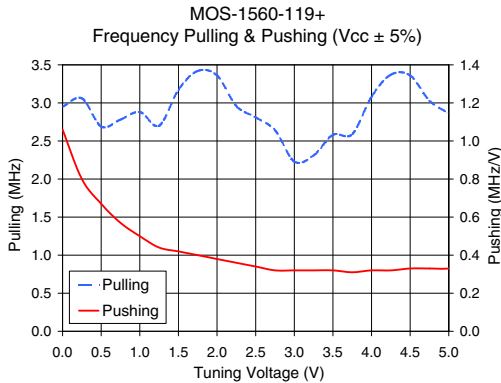
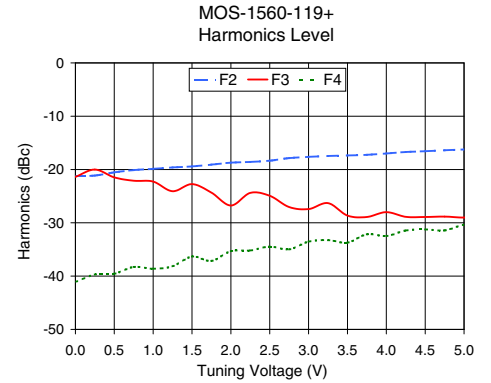
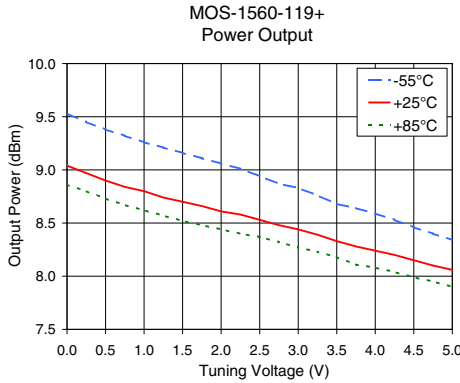
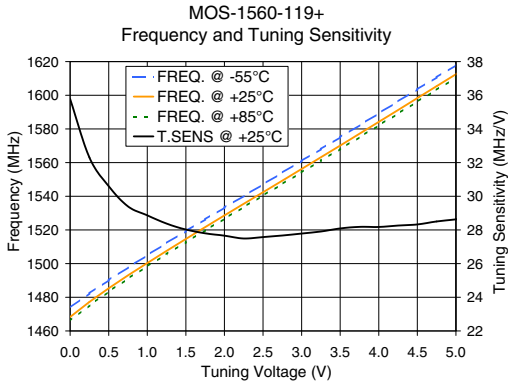
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Performance Data & Curves*

MOS-1560-119+

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 1540 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1KHz	10KHz	100KHz	1MHz		
0.00	35.78	1473.9	1468.3	1466.1	9.53	9.04	8.86	30.25	-21.2	-21.4	-41.1	1.06	2.95	-79.7	-108.7	-130.4	-150.3	1.0	-84.15
0.25	32.30	1482.3	1477.3	1475.2	9.45	8.97	8.80	30.24	-21.1	-20.0	-39.7	0.80	3.06	-81.9	-109.1	-130.6	-150.8	2.0	-93.50
0.50	30.60	1490.2	1485.3	1483.4	9.38	8.90	8.73	30.23	-20.5	-21.5	-39.6	0.67	2.69	-82.0	-110.2	-131.1	-150.7	3.5	-99.99
0.75	29.40	1497.7	1493.0	1491.0	9.32	8.84	8.67	30.23	-20.1	-22.1	-38.3	0.57	2.78	-82.8	-110.5	-130.9	-150.7	6.0	-105.42
1.00	28.87	1505.0	1500.3	1498.4	9.26	8.80	8.62	30.22	-19.9	-22.3	-38.6	0.50	2.88	-84.2	-110.5	-130.7	-150.8	8.5	-108.84
1.50	28.02	1519.3	1514.7	1512.7	9.16	8.70	8.52	30.24	-19.4	-22.7	-36.3	0.42	3.17	-84.9	-109.7	-130.9	-151.1	10.0	-110.27
1.75	27.80	1526.3	1521.7	1519.7	9.11	8.66	8.48	30.25	-19.1	-24.3	-37.2	0.40	3.42	-84.9	-110.2	-131.4	-151.1	20.8	-117.19
2.00	27.66	1533.3	1528.6	1526.7	9.06	8.61	8.44	30.25	-18.7	-26.8	-35.3	0.38	3.36	-83.2	-110.4	-130.8	-150.5	35.5	-121.95
2.25	27.49	1540.2	1535.5	1533.6	9.01	8.58	8.40	30.25	-18.6	-24.4	-35.2	0.36	2.96	-81.9	-110.9	-131.1	-151.0	60.7	-125.84
2.50	27.58	1547.1	1542.4	1540.5	8.94	8.53	8.37	30.25	-18.3	-24.9	-34.5	0.34	2.81	-84.8	-110.5	-130.5	-150.8	86.7	-129.67
3.00	27.79	1561.0	1556.2	1554.2	8.83	8.44	8.27	30.25	-17.6	-27.4	-33.5	0.32	2.23	-82.6	-110.0	-130.7	-150.9	100.0	-130.98
3.25	27.91	1568.0	1563.2	1561.1	8.76	8.39	8.23	30.25	-17.5	-26.3	-33.3	0.32	2.31	-83.7	-111.2	-130.9	-151.0	177.0	-135.91
3.50	28.09	1575.1	1570.1	1568.1	8.68	8.33	8.18	30.24	-17.4	-28.6	-33.7	0.32	2.58	-85.3	-110.2	-130.8	-150.4	211.6	-137.49
3.75	28.18	1582.2	1577.2	1575.1	8.64	8.28	8.11	30.24	-17.3	-28.9	-32.2	0.31	2.59	-83.3	-109.7	-130.4	-150.6	302.4	-140.62
4.00	28.18	1589.3	1584.2	1582.1	8.59	8.24	8.08	30.25	-17.0	-28.0	-32.5	0.32	3.08	-84.2	-110.3	-131.0	-150.7	361.5	-141.89
4.25	28.26	1596.4	1591.2	1589.2	8.53	8.20	8.04	30.24	-16.7	-28.9	-31.5	0.32	3.37	-84.1	-110.0	-130.9	-150.7	507.5	-145.12
4.50	28.33	1603.5	1598.3	1596.2	8.46	8.15	7.99	30.24	-16.6	-28.9	-31.2	0.33	3.36	-84.6	-110.3	-131.2	-150.3	606.7	-146.53
4.75	28.51	1610.7	1605.4	1603.3	8.40	8.10	7.95	30.23	-16.4	-28.8	-31.4	0.33	3.03	-83.4	-109.9	-130.9	-150.9	851.6	-149.58
5.00	28.63	1617.9	1612.5	1610.4	8.34	8.06	7.90	30.23	-16.3	-29.0	-30.4	0.33	2.87	-82.5	-110.4	-131.2	-150.9	1000.0	-150.95

*at 25°C unless mentioned otherwise



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