

Coaxial

# Voltage Controlled Oscillator

## ZX95-1357+

5V Tuning for PLL IC's 1338 to 1357 MHz

### Features

- linear tuning characteristics
- low phase noise
- low pulling
- low pushing
- protected by US patent 6,790,049

### Applications

- r & d
- lab
- instrumentation
- wireless communications



CASE STYLE: GB956

Connectors	Model	Price	Qty.
SMA	ZX95-1357-S+	\$44.95 ea.	(1-9)

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

### Electrical Specifications

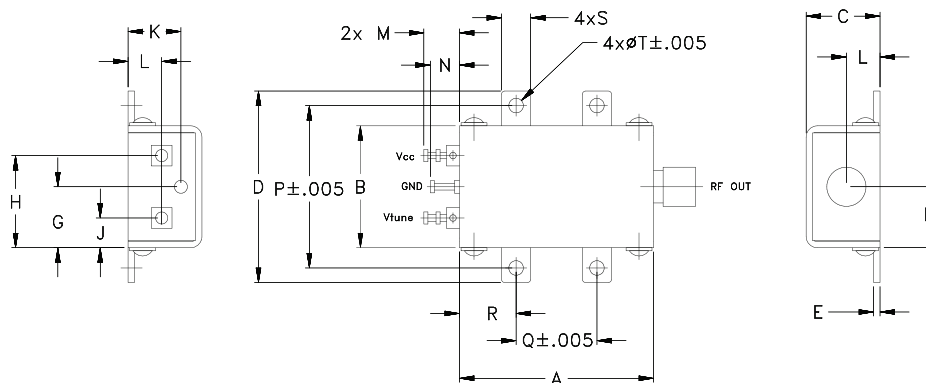
MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies, kHz				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER	
	Min.	Max.		Typ.	1	10	100	1000	VOLTAGE RANGE (V)	SENSITIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.			Typ.	Typ.
ZX95-1357+	1338	1357	0	-86	-110	-131	-151	0.5	5	12	40	50	-90	-22	-13	0.3	0.4	5	37

### Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	6.5V
Absolute Max. Tuning Voltage (Vtune)	7.0V
All specifications	50 ohm system

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

### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	wt.
1.20	.75	.46	1.18	.04	.38	.38	.57	.18	.33	.21	.22	.18	1.00	.50	.35	.18	.106	grams
30.48	19.05	11.68	29.97	1.02	9.65	9.65	14.48	4.57	8.38	5.33	5.59	4.57	25.40	12.70	8.89	4.57	2.69	35.0



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](http://minicircuits.com)

**Notes:** 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp).

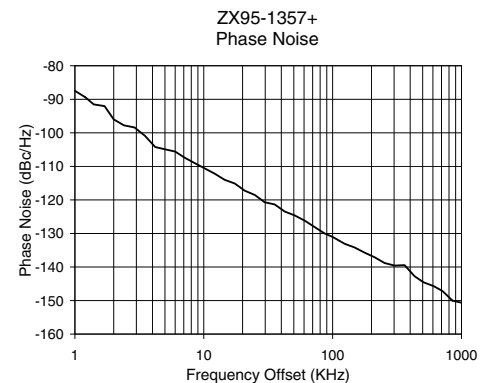
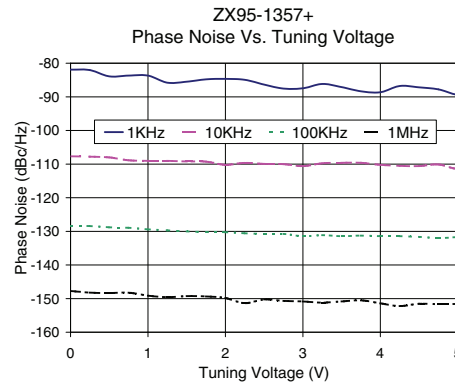
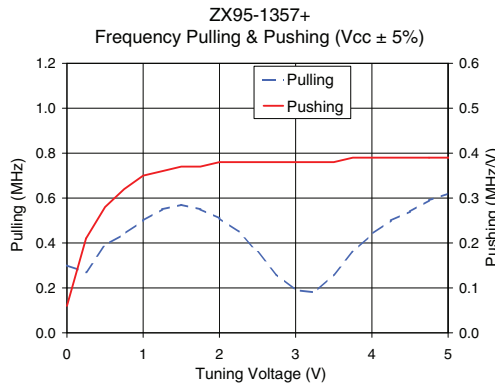
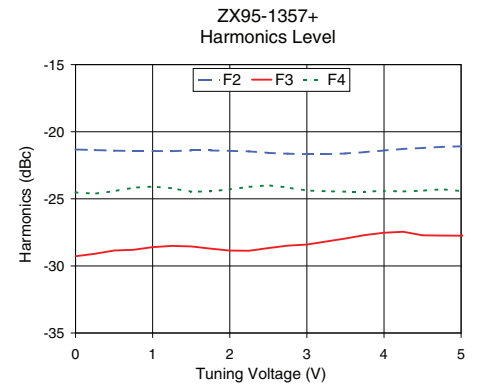
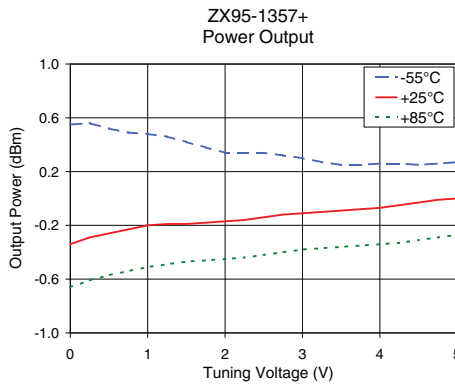
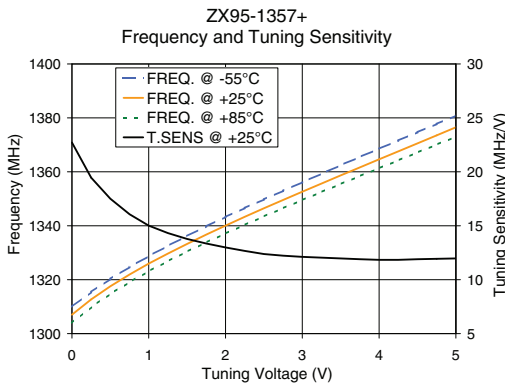
REV. A  
M132384  
EDR-8043F2  
EDR-10689MPF1  
ZX95-1357+  
RAV  
120902  
Page 1 of 2

# Performance Data & Curves\*

# ZX95-1357+

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 1348 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	22.71	1309.9	1307.0	1304.0	0.55	-0.34	-0.66	29.98	-21.3	-29.3	-24.5	0.06	0.30	-81.9	-107.7	-128.4	-147.7	1.0	-87.47
0.50	17.50	1320.3	1317.6	1314.7	0.52	-0.26	-0.57	30.05	-21.4	-28.9	-24.4	0.28	0.39	-83.9	-108.0	-128.8	-148.4	2.0	-96.00
0.75	16.07	1324.7	1321.9	1319.1	0.49	-0.23	-0.54	30.08	-21.4	-28.8	-24.2	0.32	0.44	-83.7	-108.9	-128.9	-148.3	3.5	-100.91
1.00	15.01	1328.7	1325.9	1323.1	0.48	-0.20	-0.51	30.10	-21.4	-28.6	-24.1	0.35	0.50	-83.7	-109.0	-129.4	-149.1	6.0	-105.59
1.25	14.32	1332.5	1329.7	1326.9	0.46	-0.19	-0.49	30.13	-21.5	-28.5	-24.2	0.36	0.55	-85.8	-109.0	-129.7	-149.6	8.5	-109.03
1.50	13.77	1336.2	1333.3	1330.4	0.42	-0.19	-0.47	30.15	-21.4	-28.6	-24.5	0.37	0.57	-85.5	-109.2	-130.0	-149.3	10.0	-110.45
1.75	13.35	1339.8	1336.7	1333.8	0.38	-0.18	-0.46	30.17	-21.4	-28.7	-24.5	0.37	0.55	-84.8	-109.3	-130.2	-149.4	20.8	-117.26
2.00	12.99	1343.2	1340.1	1337.1	0.34	-0.17	-0.45	30.20	-21.4	-28.9	-24.3	0.38	0.51	-84.7	-110.2	-130.3	-149.8	35.5	-121.35
2.25	12.67	1346.6	1343.3	1340.3	0.34	-0.16	-0.44	30.22	-21.5	-28.9	-24.1	0.38	0.45	-84.9	-109.6	-130.6	-151.4	60.7	-126.18
2.50	12.38	1349.8	1346.5	1343.4	0.34	-0.14	-0.42	30.24	-21.6	-28.7	-24.0	0.38	0.36	-86.4	-109.9	-130.8	-150.3	86.7	-130.02
2.75	12.23	1353.0	1349.6	1346.5	0.32	-0.12	-0.40	30.25	-21.6	-28.5	-24.2	0.38	0.26	-87.6	-110.0	-130.8	-150.7	100.0	-131.04
3.00	12.11	1356.1	1352.6	1349.5	0.30	-0.11	-0.38	30.27	-21.7	-28.4	-24.4	0.38	0.19	-87.5	-110.6	-131.5	-150.8	148.1	-134.17
3.25	12.04	1359.3	1355.7	1352.5	0.27	-0.10	-0.37	30.29	-21.7	-28.2	-24.4	0.38	0.18	-86.2	-109.8	-131.1	-151.2	177.0	-135.71
3.50	11.97	1362.4	1358.7	1355.5	0.25	-0.09	-0.36	30.31	-21.6	-28.0	-24.5	0.38	0.26	-87.1	-109.6	-131.5	-150.8	211.6	-137.08
3.75	11.90	1365.5	1361.7	1358.4	0.25	-0.08	-0.35	30.33	-21.5	-27.7	-24.5	0.39	0.36	-88.4	-109.6	-131.3	-150.5	302.4	-139.59
4.00	11.84	1368.5	1364.6	1361.3	0.26	-0.07	-0.34	30.34	-21.4	-27.5	-24.4	0.39	0.44	-88.6	-110.2	-131.4	-151.4	361.5	-139.43
4.25	11.84	1371.6	1367.6	1364.2	0.26	-0.05	-0.33	30.35	-21.3	-27.5	-24.5	0.39	0.50	-86.8	-110.5	-131.4	-152.2	507.5	-144.57
4.50	11.90	1374.7	1370.5	1367.2	0.25	-0.03	-0.31	30.37	-21.2	-27.7	-24.4	0.39	0.54	-87.2	-110.6	-131.6	-151.6	606.7	-145.67
4.75	11.93	1377.7	1373.5	1370.1	0.26	-0.01	-0.29	30.38	-21.1	-27.7	-24.3	0.39	0.59	-87.8	-110.1	-132.0	-151.6	851.6	-150.03
5.00	11.97	1380.8	1376.5	1373.0	0.27	0.00	-0.27	30.40	-21.1	-27.8	-24.4	0.39	0.62	-89.4	-111.4	-131.7	-151.6	1000.0	-150.65

\*at 25°C unless mentioned otherwise



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](http://minicircuits.com)

IF/RF MICROWAVE COMPONENTS

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp).