

Coaxial

# Voltage Controlled Oscillator

## ZX95-1185+

5V Tuning for PLL IC's 1185 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
- cellular infrastructure



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-1185-S+

### +RoHS Compliant

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

### Electrical Specifications

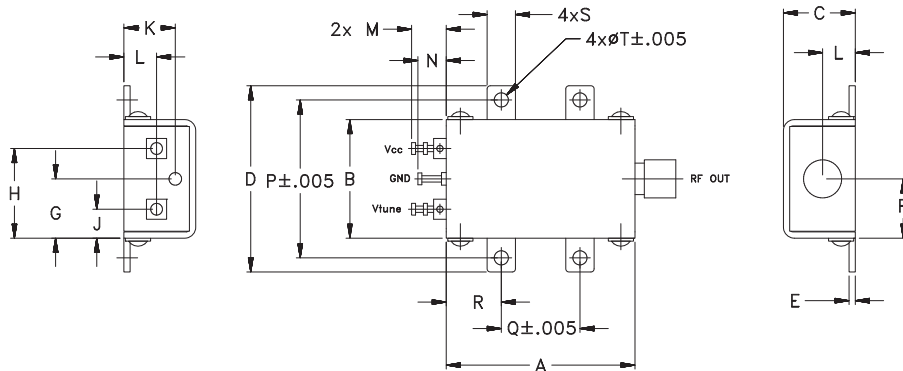
MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies, kHz				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @ 12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER				
	Min.	Max.		Typ.	1	10	100	1000	VOLTAGE RANGE (V)	SENSITIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.			Max.	Typ.	Typ.	Vcc (volts)	Current (mA)
	Typ.																					
ZX95-1185+	1185		+3	-80	-107	-128	-148	0.5	3.9	30	20	100	-90	-18	-12	1	0.3	5	35			

### 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)	6V
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

#### Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document 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)



[www.minicircuits.com](http://www.minicircuits.com) P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

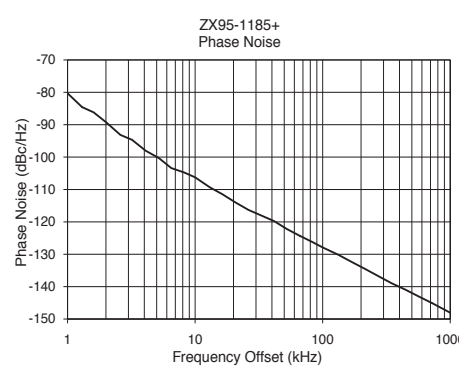
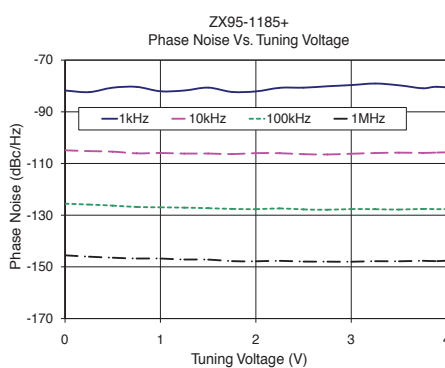
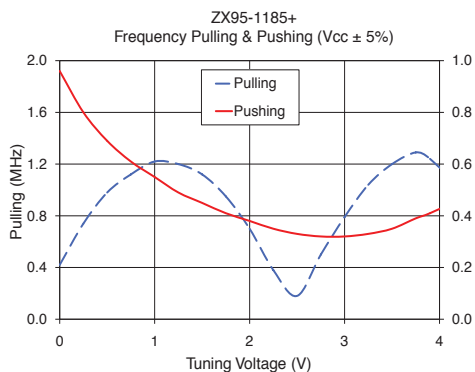
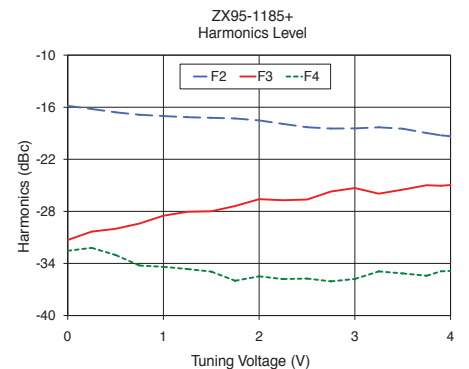
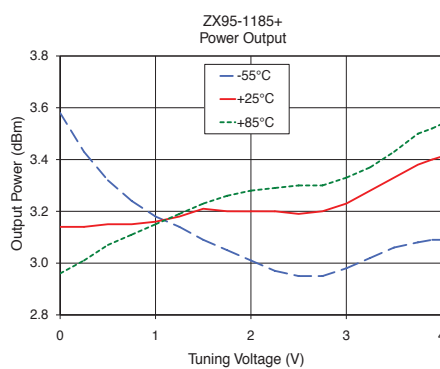
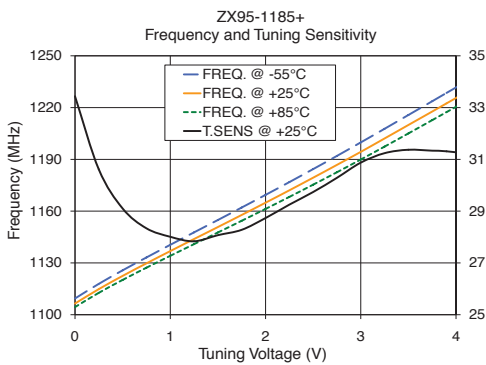
REV A  
M151924  
EDR-11268  
ZX95-1185+  
RAV  
150701  
Page 1 of 2

# Performance Data & Curves\*

# ZX95-1185+

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 1185 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	33.44	1109.4	1106.4	1104.4	3.58	3.14	2.96	25.70	-15.8	-31.3	-32.5	0.96	0.42	-81.78	-104.9	-125.6	-145.5	1.0	-80.28
0.25	30.61	1117.9	1114.8	1112.7	3.43	3.14	3.01	25.73	-16.2	-30.3	-32.2	0.80	0.74	-82.39	-105.2	-125.9	-146.1	1.3	-84.56
0.50	29.10	1125.7	1122.5	1120.1	3.32	3.15	3.07	25.76	-16.6	-30.0	-33.0	0.69	0.98	-80.67	-105.4	-126.3	-146.5	1.6	-86.18
0.75	28.34	1133.2	1129.7	1127.2	3.24	3.15	3.11	25.79	-16.9	-29.4	-34.2	0.61	1.12	-80.36	-106.1	-126.8	-146.8	2.0	-89.20
1.00	28.01	1140.5	1136.8	1134.1	3.18	3.16	3.15	25.82	-17.0	-28.5	-34.4	0.55	1.22	-82.06	-105.9	-127.0	-146.8	2.6	-93.15
1.25	27.83	1147.7	1143.8	1140.9	3.14	3.18	3.19	25.85	-17.2	-28.1	-34.6	0.49	1.20	-81.77	-106.2	-127.1	-147.2	3.2	-94.65
1.50	28.07	1154.9	1150.8	1147.6	3.09	3.21	3.23	25.88	-17.2	-28.0	-34.9	0.45	1.12	-80.64	-106.2	-127.3	-147.2	4.1	-98.03
1.75	28.28	1162.1	1157.8	1154.4	3.05	3.20	3.26	25.91	-17.3	-27.4	-36.0	0.41	0.95	-82.31	-106.4	-127.6	-147.8	5.2	-100.29
2.00	28.73	1169.4	1164.9	1161.3	3.01	3.20	3.28	25.95	-17.5	-26.6	-35.5	0.38	0.70	-82.12	-106.0	-127.7	-147.9	6.5	-103.38
2.25	29.25	1176.8	1172.0	1168.2	2.97	3.20	3.29	25.98	-17.9	-26.7	-35.8	0.35	0.38	-80.72	-106.0	-127.4	-147.7	8.2	-104.74
2.50	29.74	1184.3	1179.4	1175.3	2.95	3.19	3.30	26.01	-18.3	-26.6	-35.7	0.33	0.18	-80.67	-106.4	-127.8	-148.0	10.0	-106.24
2.75	30.29	1192.0	1186.8	1182.5	2.95	3.20	3.30	26.04	-18.5	-25.7	-36.1	0.32	0.50	-80.13	-106.5	-127.9	-148.0	13.0	-109.30
3.00	30.87	1199.8	1194.4	1189.9	2.98	3.23	3.33	26.07	-18.4	-25.3	-35.8	0.32	0.79	-79.67	-106.2	-127.7	-148.0	16.4	-111.48
3.25	31.24	1207.7	1202.1	1197.4	3.02	3.28	3.37	26.10	-18.3	-26.0	-34.9	0.33	1.04	-79.06	-106.0	-127.7	-147.8	20.7	-113.98
3.50	31.37	1215.7	1209.9	1205.0	3.06	3.33	3.43	26.13	-18.5	-25.5	-35.2	0.35	1.20	-79.76	-105.8	-127.8	-147.9	26.2	-116.29
3.75	31.33	1223.7	1217.7	1212.7	3.08	3.38	3.50	26.17	-19.0	-25.0	-35.4	0.39	1.29	-80.91	-105.9	-127.6	-147.7	33.0	-118.02
3.90	31.31	1228.5	1222.4	1217.3	3.09	3.40	3.52	26.19	-19.2	-25.1	-34.9	0.41	1.24	-80.33	-105.8	-127.7	-147.8	41.6	-119.76

\*at 25°C unless mentioned otherwise



### Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- 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.
- C. The parts covered by this specification document 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)

